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Alexandria, Virginia 22313-1450  
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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
14/257,888	04/21/2014	Jinrong Yang	6755-00105

35690  
MEYERTONS, HOOD, KIVLIN, KOWERT & GOETZEL, P.C.  
P.O. BOX 398  
AUSTIN, TX 78767-0398

**CONFIRMATION NO. 6790**  
**POWER OF ATTORNEY NOTICE**



\*OC000000085472329\*

Date Mailed: 09/01/2016

**NOTICE REGARDING CHANGE OF POWER OF ATTORNEY**

This is in response to the Power of Attorney filed 08/22/2016.

- The Power of Attorney to you in this application has been revoked by the applicant. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at (571) 272-4000 or (571) 272-4200 or 1-888-786-0101.

/zabraha/



# UNITED STATES PATENT AND TRADEMARK OFFICE

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Alexandria, Virginia 22313-1450  
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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
14/257,888	04/21/2014	Jinrong Yang	6755-00105

140443  
MICHAEL BEST & FRIEDRICH LLP (AUS)  
100 E WISCONSIN AVENUE  
Suite 3300  
MILWAUKEE, WI 53202

**CONFIRMATION NO. 6790**  
**POA ACCEPTANCE LETTER**



Date Mailed: 09/01/2016

## NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 08/22/2016.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at (571) 272-4000 or (571) 272-4200 or 1-888-786-0101.

/zabaha/

## POWER OF ATTORNEY BY APPLICANT

I hereby revoke all previous powers of attorney given in the application identified in either the attached transmittal letter or the boxes below.

Application Number	Filing Date
14/257,888	4/21/2014

(Note: The boxes above may be left blank if information is provided on form PTO/AIA/82A.)

☒ I hereby appoint the Patent Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above:

140443

OR

☐ I hereby appoint Practitioner(s) named in the attached list (form PTO/AIA/82C) as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the patent application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above. (Note: Complete form PTO/AIA/82C.)

Please recognize or change the correspondence address for the application identified in the attached transmittal letter or the boxes above to:

☒ The address associated with the above-mentioned Customer Number

OR

☐ The address associated with Customer Number:

OR

Firm or Individual Name				
Address				
City	State	Zip		
Country				
Telephone	Email			

I am the Applicant (if the Applicant is a juristic entity, list the Applicant name in the box):

--

☒ Inventor or Joint Inventor (title not required below)

☐ Legal Representative of a Deceased or Legally Incapacitated Inventor (title not required below)

☐ Assignee or Person to Whom the Inventor is Under an Obligation to Assign (provide signer's title if applicant is a juristic entity)

☐ Person Who Otherwise Shows Sufficient Proprietary Interest (e.g., a petition under 37 CFR 1.46(b)(2) was granted in the application or is concurrently being filed with this document) (provide signer's title if applicant is a juristic entity)

### SIGNATURE of Applicant for Patent

The undersigned (whose title is supplied below) is authorized to act on behalf of the applicant (e.g., where the applicant is a juristic entity).

Signature	Jinrong Yang	Date (Optional)	
Name	Jinrong Yang		
Title	N/A		

**NOTE:** Signature - This form must be signed by the applicant in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. If more than one applicant, use multiple forms.

☒ Total of 1 forms are submitted.

This collection of information is required by 37 CFR 1.131, 1.32, and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

## POWER OF ATTORNEY BY APPLICANT

I hereby revoke all previous powers of attorney given in the application identified in either the attached transmittal letter or the boxes below.

Application Number	Filing Date
14/257,888	4/21/2014

(Note: The boxes above may be left blank if information is provided on form PTO/AIA/82A.)

☒ I hereby appoint the Patent Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above:

140443

OR

☐ I hereby appoint Practitioner(s) named in the attached list (form PTO/AIA/82C) as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the patent application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above. (Note: Complete form PTO/AIA/82C.)

Please recognize or change the correspondence address for the application identified in the attached transmittal letter or the boxes above to:

☒ The address associated with the above-mentioned Customer Number

OR

☐ The address associated with Customer Number:

OR

Firm or  
Individual Name

Address

City

State

Zip

Country

Telephone

Email

I am the Applicant (if the Applicant is a juristic entity, list the Applicant name in the box):

- ☒ Inventor or Joint Inventor (title not required below)
- ☐ Legal Representative of a Deceased or Legally Incapacitated Inventor (title not required below)
- ☐ Assignee or Person to Whom the Inventor is Under an Obligation to Assign (provide signer's title if applicant is a juristic entity)
- ☐ Person Who Otherwise Shows Sufficient Proprietary Interest (e.g., a petition under 37 CFR 1.46(b)(2) was granted in the application or is concurrently being filed with this document) (provide signer's title if applicant is a juristic entity)

### SIGNATURE of Applicant for Patent

The undersigned (whose title is supplied below) is authorized to act on behalf of the applicant (e.g., where the applicant is a juristic entity).

Signature

Date (Optional)

Name

Ramzi Khalil Maalouf

Title

N/A

**NOTE:** Signature - This form must be signed by the applicant in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. If more than one applicant, use multiple forms.

☒ Total of 1 forms are submitted.

This collection of information is required by 37 CFR 1.131, 1.32, and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	26710232
<b>Application Number:</b>	14257888
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	6790
<b>Title of Invention:</b>	SYSTEM AND METHOD FOR MANAGING DISPLAY POWER CONSUMPTION
<b>First Named Inventor/Applicant Name:</b>	Jinrong Yang
<b>Customer Number:</b>	35690
<b>Filer:</b>	Stephen Anthony Mason/Laura Buhs
<b>Filer Authorized By:</b>	Stephen Anthony Mason
<b>Attorney Docket Number:</b>	6755-00105
<b>Receipt Date:</b>	22-AUG-2016
<b>Filing Date:</b>	21-APR-2014
<b>Time Stamp:</b>	15:59:14
<b>Application Type:</b>	Utility under 35 USC 111(a)

### Payment information:

Submitted with Payment	no
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### File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Power of Attorney	19541640_209944-9001-US04_POA-Yang.PDF	546085	no	1
			174c9a23e187e57a0c69b78d2105db5ec76ed033		

### Warnings:

<b>Information:</b>					
2	Power of Attorney	19541633_209944-9001-US04_POA-Maalouf.PDF	760126	no	1
			342244fcd1deae6e6ac1d6bd4da30e5c0681b182		
<b>Warnings:</b>					
<b>Information:</b>					
Total Files Size (in bytes):			1306211		
<p><b>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</b></p> <p><b><u>New Applications Under 35 U.S.C. 111</u></b>  <b>If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</b></p> <p><b><u>National Stage of an International Application under 35 U.S.C. 371</u></b>  <b>If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</b></p> <p><b><u>New International Application Filed with the USPTO as a Receiving Office</u></b>  <b>If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</b></p>					



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Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/257,888	07/07/2015	9075612	6755-00105	6790

35690 7590 06/17/2015  
MEYERTONS, HOOD, KIVLIN, KOWERT & GOETZEL, P.C.  
P.O. BOX 398  
AUSTIN, TX 78767-0398

## ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

### **Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)** (application filed on or after May 29, 2000)

The Patent Term Adjustment is 0 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site <http://pair.uspto.gov> for additional applicants):

Jinrong Yang, Shanghai, CHINA;  
Ramzi Khalil Maalouf, Chevy Chase, MD;

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The USA offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to encourage and facilitate business investment. To learn more about why the USA is the best country in the world to develop technology, manufacture products, and grow your business, visit [SelectUSA.gov](http://SelectUSA.gov).

## PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail** **Mail Stop ISSUE FEE**  
**Commissioner for Patents**  
**P.O. Box 1450**  
**Alexandria, Virginia 22313-1450**  
**or Fax (571)-273-2885**

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

35690 7590 05/28/2015  
**MEYERTONS, HOOD, KIVLIN, KOWERT & GOETZEL, P.C.**  
**P.O. BOX 398**  
**AUSTIN, TX 78767-0398**

## Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/257,888	04/21/2014	Jinrong Yang	6755-00105	6790

TITLE OF INVENTION: SYSTEM AND METHOD FOR MANAGING DISPLAY POWER CONSUMPTION

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$480	\$0	\$0	\$480	08/28/2015

EXAMINER	ART UNIT	CLASS-SUBCLASS
SHAH, PRIYANK J	2692	345-212000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

- (1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
- (2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

- 1 Stephen A. Mason
- 2 Meyertons, Hood, Kivlin, Kowert & Goetzel, P.C.
- 3 \_\_\_\_\_

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☒ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies \_\_\_\_\_

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☒ The director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number 501505 (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ Applicant certifying micro entity status. See 37 CFR 1.29
- ☐ Applicant asserting small entity status. See 37 CFR 1.27
- ☐ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature /Stephen A. Mason/

Typed or printed name Stephen A. Mason

Date May 29, 2015

Registration No. 64,303

## Electronic Patent Application Fee Transmittal

<b>Application Number:</b>	14257888			
<b>Filing Date:</b>	21-Apr-2014			
<b>Title of Invention:</b>	SYSTEM AND METHOD FOR MANAGING DISPLAY POWER CONSUMPTION			
<b>First Named Inventor/Applicant Name:</b>	Jinrong Yang			
<b>Filer:</b>	Stephen Anthony Mason/Dena Poudrier			
<b>Attorney Docket Number:</b>	6755-00105			
Filed as Small Entity				
<b>Filing Fees for    Utility under 35 USC 111(a)</b>				
<b>Description</b>	<b>Fee Code</b>	<b>Quantity</b>	<b>Amount</b>	<b>Sub-Total in USD(\$)</b>
<b>Basic Filing:</b>				
<b>Pages:</b>				
<b>Claims:</b>				
<b>Miscellaneous-Filing:</b>				
<b>Petition:</b>				
<b>Patent-Appeals-and-Interference:</b>				
<b>Post-Allowance-and-Post-Issuance:</b>				
Utility Appl Issue Fee	2501	1	480	480

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				480

## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	22482436
<b>Application Number:</b>	14257888
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	6790
<b>Title of Invention:</b>	SYSTEM AND METHOD FOR MANAGING DISPLAY POWER CONSUMPTION
<b>First Named Inventor/Applicant Name:</b>	Jinrong Yang
<b>Customer Number:</b>	35690
<b>Filer:</b>	Stephen Anthony Mason/Dena Poudrier
<b>Filer Authorized By:</b>	Stephen Anthony Mason
<b>Attorney Docket Number:</b>	6755-00105
<b>Receipt Date:</b>	01-JUN-2015
<b>Filing Date:</b>	21-APR-2014
<b>Time Stamp:</b>	13:44:04
<b>Application Type:</b>	Utility under 35 USC 111(a)

### Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$ 480
RAM confirmation Number	13004
Deposit Account	501505
Authorized User	KOWERT, ROBERT C.

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.20 (Post Issuance fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)

### File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Issue Fee Payment (PTO-85B)	6755-00105-IssueFee.pdf	100394	no	1
			dccd187ac0ba60d26015f905eac8da413be993eb		

#### Warnings:

#### Information:

2	Fee Worksheet (SB06)	fee-info.pdf	30413	no	2
			9505c03d860f84b663f65fe1372bc334c0d33a05		

#### Warnings:

#### Information:

Total Files Size (in bytes):	130807
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**This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.**

#### New Applications Under 35 U.S.C. 111

**If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.**

#### National Stage of an International Application under 35 U.S.C. 371

**If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.**

#### New International Application Filed with the USPTO as a Receiving Office

**If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.**





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## NOTICE OF ALLOWANCE AND FEE(S) DUE

35690 7590 05/28/2015  
MEYERTONS, HOOD, KIVLIN, KOWERT & GOETZEL, P.C.  
P.O. BOX 398  
AUSTIN, TX 78767-0398

EXAMINER

SHAH, PRIYANK J

ART UNIT

PAPER NUMBER

2692

DATE MAILED: 05/28/2015

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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14/257,888

04/21/2014

Jinrong Yang

6755-00105

6790

TITLE OF INVENTION: SYSTEM AND METHOD FOR MANAGING DISPLAY POWER CONSUMPTION

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$480	\$0	\$0	\$480	08/28/2015

**THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.**

**THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.**

### HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.**

# **PART B - FEE(S) TRANSMITTAL**

**Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
or Fax (571)-273-2885**

**INSTRUCTIONS:** This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

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Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

35690 7590 05/28/2015  
MEYERTONS, HOOD, KIVLIN, KOWERT & GOETZEL, P.C.  
P.O. BOX 398  
AUSTIN, TX 78767-0398

## **Certificate of Mailing or Transmission**

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/257,888	04/21/2014	Jinrong Yang	6755-00105	6790

TITLE OF INVENTION: SYSTEM AND METHOD FOR MANAGING DISPLAY POWER CONSUMPTION

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$480	\$0	\$0	\$480	08/28/2015

EXAMINER	ART UNIT	CLASS-SUBCLASS
SHAH, PRIYANK J	2692	345-212000

<b>1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).</b> <input type="checkbox"/> Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached. <input type="checkbox"/> "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. <b>Use of a Customer Number is required.</b>	<b>2. For printing on the patent front page, list</b> (1) The names of up to 3 registered patent attorneys or agents OR, alternatively, 1 _____ (2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 _____ 3 _____
---	---

## **3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)**

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☐ Corporation or other private group entity ☐ Government

## **4a. The following fee(s) are submitted:**

- ☐ Issue Fee  
☐ Publication Fee (No small entity discount permitted)  
☐ Advance Order - # of Copies \_\_\_\_\_

## **4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)**

- ☐ A check is enclosed.  
☐ Payment by credit card. Form PTO-2038 is attached.  
☐ The director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number \_\_\_\_\_ (enclose an extra copy of this form).

## **5. Change in Entity Status (from status indicated above)**

- ☐ Applicant certifying micro entity status. See 37 CFR 1.29  
☐ Applicant asserting small entity status. See 37 CFR 1.27  
☐ Applicant changing to regular undiscounted fee status.

**NOTE:** Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

**NOTE:** If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

**NOTE:** Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

**NOTE:** This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature \_\_\_\_\_ Date \_\_\_\_\_  
Typed or printed name \_\_\_\_\_ Registration No. \_\_\_\_\_



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/257,888	04/21/2014	Jinrong Yang	6755-00105	6790

35690 7590 05/28/2015  
MEYERTONS, HOOD, KIVLIN, KOWERT & GOETZEL, P.C.  
P.O. BOX 398  
AUSTIN, TX 78767-0398

EXAMINER

SHAH, PRIYANK J

ART UNIT PAPER NUMBER

2692

DATE MAILED: 05/28/2015

## Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

## OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

### Privacy Act Statement

**The Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

<b>Notice of Allowability</b>	<b>Application No.</b> 14/257,888	<b>Applicant(s)</b> YANG ET AL.	
	<b>Examiner</b> PRIYANK SHAH	<b>Art Unit</b> 2692	<b>AIA (First Inventor to File) Status</b> Yes

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 05/18/2015.  
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on \_\_\_\_\_.
2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on \_\_\_\_\_; the restriction requirement and election have been incorporated into this action.
3. ☒ The allowed claim(s) is/are 1-18 and 20. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see [http://www.uspto.gov/patents/init\\_events/pph/index.jsp](http://www.uspto.gov/patents/init_events/pph/index.jsp) or send an inquiry to [PPHfeedback@uspto.gov](mailto:PPHfeedback@uspto.gov).
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

**Certified copies:**

- a) ☐ All    b) ☐ Some    \*c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.  
☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.  
**Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |  |
|--|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Examiner's Amendment/Comment                             |
| 2. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br>Paper No./Mail Date _____ | 6. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| 3. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material         | 7. <input type="checkbox"/> Other _____.   |
| 4. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____.                             |  |

/PRIYANK SHAH/  
Primary Examiner, Art Unit 2692

### REASONS FOR ALLOWANCE

1. The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.
2. Claims 1-18 and 20 are allowed.
3. The following is an examiner's statement of reasons for allowance:

In claims 1, 10 and 14, prior art of Gunn (US 2014/0120988 A1) discloses in Fig. 3B, step 336; Figs. 4D, 5D and Fig. 9B disclose displaying peek view image 416 over partial area 810 when the icon 405 is moved over the top region 810 of the display while the touch is being held over the region. However, claims 1, 10 and 14 disclose in response to another particular unlock gesture, transition the phone to an unlocked state and power-off a portion of the display screen. In the instant application, examiner interprets the unlock state as the state as to which all the same operations on respective applications are conducted, consistent with ¶0196 of the specification, whether it be in the full configuration mode or the proportional configuration mode. Gunn is silent as to the transitioning the screen to an unlock state in response to another particular gesture.

Therefore, claims 1-18 and 20 are allowable because prior art fails to teach or suggest, either alone or in combination, in independent claim(s) 1 and 10:

“wherein response another particular unlock gesture of the unlock gestures causes:  
the phone to transition to an unlocked state, and

the display controller to enter a proportional configuration mode that puts at least a portion of the display screen in a powered-off state and another portion of the display screen in the powered-on state.”

4. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PRIYANK SHAH whose telephone number is (571)270-3732. The examiner can normally be reached on Monday-Thursday 10:30am to 7:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Lun Yi Lao can be reached on (571)272-7671. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2692

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/PRIYANK SHAH/  
Primary Examiner, Art Unit 2692



<b>Notice of References Cited</b>	Application/Control No. 14/257,888		Applicant(s)/Patent Under Reexamination YANG ET AL.	
	Examiner PRIYANK SHAH		Art Unit 2692	Page 1 of 1

#### U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-2007/0252822 A1	11-2007	Kim et al.	345/173
*	B	US-7,705,833 B2	04-2010	Kim, Sang-Hoon	345/173
*	C	US-8,217,904 B2	07-2012	Kim, Jin Woong	345/173
*	D	US-2015/0015513 A1	01-2015	KWAK et al.	345/173
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

#### FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

#### NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)  
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1	0	(13/905064).APP.	US-PGPUB; USPAT; USOCR; DERWENT	OR	OFF	2013/08/22 17:47
S2	0	(YANG-JINRONG).in.	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2013/08/22 17:49
S3	0	(YANG-JINRONG or MAALOUF-RAMZI).in.	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2013/08/22 17:49
S4	0	(MAALOUF-RAMZI).in.	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2013/08/22 17:50
S5	0	(MAALOUF-khalil-RAMZI).in.	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2013/08/22 17:52
S6	8	("715".clas. or (345/173,168,169,184 or 178/18.01,18.06).ccls.) and @ad<"20130510" and (maximiz\$3 or extend\$3 or dragg\$3 or slid\$3) with control bar same (divi\$2 or screen or display or active or inactive or dead) (partition or portion or area or section or region)	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2013/08/22 18:36
S7	12	("715".clas. or ("345"/\$ or 178/18.01,18.06).ccls.) and @ad<"20130510" and (maximiz\$3 or extend\$3 or dragg\$3 or slid\$3) with control bar same (divi\$2 or screen or display or active or inactive or dead) (partition or portion or area or section or region)	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2013/08/22 18:37
S8	740	("715".clas. or ("345"/\$ or 178/18.01,18.06).ccls.) and @ad<"20130510" and (maximiz\$3 or extend\$3 or dragg\$3 or slid\$3) with bar same (divi\$2 or screen or display or active or inactive or dead) (partition or portion or area or section or region)	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2013/08/22 18:42
S9	360	("715".clas. or ("345"/\$ or 178/18.01,18.06).ccls.) and	US-PGPUB;	ADJ	ON	2013/08/22 18:54

		@ad<"20130510" and (maximiz\$3 or extend\$3 or dragg\$3 or slid\$3) with bar with (screen or display or active or inactive or dead) (divi\$2 or division or partition\$3 or portion\$3 or area or section or region)	USPAT; EPO; JPO; DERWENT			
S10	101	("715".clas. or ("345"/\$ or 178/18.01,18.06).ccls.) and @ad<"20130510" and (maximiz\$3 or extend\$3 or dragg\$3 or slid\$3) with bar with (power or cut or remov\$3) and (screen or display or active or inactive or dead) (divi\$2 or division or partition\$3 or portion\$3 or area or section or region)	US- PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2013/08/22 18:54
S11	163	("715".clas. or ("345"/\$ or 178/18.01,18.06).ccls.) and @ad<"20130510" and (maximiz\$3 or extend\$3 or dragg\$3 or slid\$3 or mov\$3) with bar with (power or cut or remov\$3) and (screen or display or active or inactive or dead) (divi\$2 or division or partition\$3 or portion\$3 or area or section or region)	US- PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2013/08/22 18:55
S12	181	("715".clas. or ("345"/\$ or 178/18.01,18.06).ccls.) and @ad<"20130510" and (maximiz\$3 or extend\$3 or dragg\$3 or slid\$3 or mov\$3 or contract\$3 or minimiz\$3) with bar with (power or cut or remov\$3) and (screen or display or active or inactive or dead) (divi\$2 or division or partition\$3 or portion\$3 or area or section or region)	US- PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2013/08/22 18:55
S13	375	("715".clas. or ("345"/\$ or 178/18.01,18.06).ccls.) and @ad<"20130510" and (maximiz\$3 or extend\$3 or dragg\$3 or slid\$3 or mov\$3 or contract\$3 or minimiz\$3) with bar with (power or cut or remov\$3)	US- PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2013/08/22 18:56
S14	231	("715".clas. or ("345"/\$ or 178/18.01,18.06).ccls.) and @ad<"20130510" and (maximiz\$3 or extend\$3 or dragg\$3 or slid\$3 or mov\$3 or contract\$3 or minimiz\$3) with bar with (undisplay\$3 or black or blank or power or cut)	US- PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2013/08/22 19:24
S15	2	(12/099391).APP.	US- PGPUB; USPAT; USOCR; DERWENT	OR	OFF	2013/08/22 19:38
S16	2	("20070277123"   "20070277124").PN. OR ("8056016").URPN.	US- PGPUB; USPAT; USOCR	ADJ	ON	2013/08/22 19:38
S17	1	(10/836154).APP.	US- PGPUB; USPAT; USOCR; DERWENT	OR	OFF	2013/08/22 20:02
S18	4	((("20040260756") or ("20080005247"))).PN.	US- PGPUB;	OR	OFF	2013/08/22 20:03

			USPAT; USOCR; DERWENT			
S19	2	("5999938").PN.	US- PGPUB; USPAT; USOCR; DERWENT	OR	OFF	2013/08/22 20:08
S20	2	("20070277123"   "20070277124").PN. OR ("8056016").URPN.	US- PGPUB; USPAT; USOCR	ADJ	ON	2013/08/22 20:18
S21	627	("715".clas. or ("345"/\$ or 178/18.01,18.06).ccls.) and @ad<"20130510" and (maximiz\$3 or extend\$3 or dragg\$3 or slid\$3 or mov\$3 or contract\$3 or minimiz\$3) with bar with (undisplay\$3 or black or blank or power or cut or visible)	US- PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2013/08/22 20:31
S22	774	("715".clas. or ("345"/\$ or 178/18.01,18.06).ccls.) and @ad<"20130510" and (maximiz\$3 or extend\$3 or dragg\$3 or slid\$3 or mov\$3 or contract\$3 or minimiz\$3) with bar with (undisplay\$3 or black or blank or power or cut or visible or cover\$3)	US- PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2013/08/22 20:31
S23	774	("715".clas. or ("345"/\$ or 178/18.01,18.06).ccls.) and @ad<"20130510" and (maximiz\$3 or extend\$3 or dragg\$3 or slid\$3 or mov\$3 or contract\$3 or minimiz\$3) with bar with (undisplay\$3 or black or blank or power or cut or visible or cover\$3 or uncover\$3)	US- PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2013/08/22 20:32
S24	775	("715".clas. or ("345"/\$ or 178/18.01,18.06).ccls.) and @ad<"20130510" and (maximiz\$3 or extend\$3 or dragg\$3 or slid\$3 or mov\$3 or contract\$3 or minimiz\$3) with bar with (undisplay\$3 or black or blank or power or cut or visible or \$2cover\$3 or uncover\$3)	US- PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2013/08/22 20:32
S25	804	("715".clas. or ("345"/\$ or 178/18.01,18.06).ccls.) and @ad<"20130510" and (maximiz\$3 or extend\$3 or dragg\$3 or slid\$3 or mov\$3 or contract\$3 or minimiz\$3) with bar with (undisplay\$3 or black or blank or power or cut or visible or cover\$3 or uncover\$3 or reveal\$3)	US- PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2013/08/22 20:33
S26	784	("715".clas. or ("345"/\$ or 178/18.01,18.06).ccls.) and @ad<"20130510" and (maximiz\$3 or extend\$3 or dragg\$3 or slid\$3 or mov\$3 or contract\$3 or minimiz\$3) with bar with (undisplay\$3 or black or blank or power or visible or cover\$3 or uncover\$3 or reveal\$3)	US- PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2013/08/22 20:33
S27	607	S26 not S13	US- PGPUB; USPAT; EPO; JPO;	ADJ	ON	2013/08/22 20:33

			DERWENT			
S28	607	S26 not S13	US- PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2013/08/22 20:33
S29	1	(13/416317).APP.	US- PGPUB; USPAT; USOCR; DERWENT	OR	OFF	2013/08/22 20:56
S30	3	("4952932"   "7999872"   "8217904").PN. OR ("8432369").URPN.	US- PGPUB; USPAT; USOCR	ADJ	ON	2013/08/22 21:29
S31	31	("4567480"   "4568072"   "4725694"   "4763356").PN. OR ("4952932").URPN.	US- PGPUB; USPAT; USOCR	ADJ	ON	2013/08/22 21:37
S32	3	("4952932"   "7999872"   "8217904").PN. OR ("8432369").URPN.	US- PGPUB; USPAT; USOCR	ADJ	ON	2013/08/22 21:42
S33	16	("20030080947"   "20040015548"   "20060005131"   "20070035616"   "20070146339"   "20070252822"   "5563996"   "6317141"   "6337698"   "6874128"   "7328411"   "7388578").PN. OR ("7705833").URPN.	US- PGPUB; USPAT; USOCR	ADJ	ON	2013/08/22 21:47
S34	8	US-6166736-\$.DID. OR US-20040205711- \$.DID. OR US-5140678-\$.DID. OR US- 5870091-\$.DID.	US- PGPUB; USPAT; JPO; DERWENT	ADJ	ON	2013/08/22 22:26
S35	12	US-6166736-\$.DID. OR US-6628267- \$.DID. OR US-20040177323-\$.DID. OR US-20060123353-\$.DID. OR US- 20070013609-\$.DID. OR US- 20070061867-\$.DID.	US- PGPUB; USPAT; JPO; DERWENT	ADJ	ON	2013/08/22 22:28
S36	10	US-6983331-\$.DID. OR US-7694233- \$.DID. OR US-20060197753-\$.DID. OR US-5712995-\$.DID. OR US-5897644- \$.DID.	US- PGPUB; USPAT; JPO; DERWENT	ADJ	ON	2013/08/22 22:29
S37	4	US-5649133-\$.DID. OR US-7823080- \$.DID.	US- PGPUB; USPAT; JPO; DERWENT	ADJ	ON	2013/08/22 22:30
S38	2	(11/885531).APP.	US- PGPUB; USPAT; USOCR; DERWENT	OR	OFF	2013/08/22 22:33
S39	14	("20020163545"   "20020186257"   "20020198906"   "20030071849"   "20030107593"   "20040212640"   "20040255254"   "20050198584"   "5305435"   "5604861"   "5758111"   "6166736"   "6498613"   "6515684").PN.	US- PGPUB; USPAT; USOCR	ADJ	ON	2013/08/22 22:33

S40	259	("715".clas. or ("345"/\$ or 178/18.01,18.06).ccls.) and @ad<"20130510" and (menu or status or notification or unlock or control) near2 (boundary or border or bar) with (maximiz\$3 or expand\$3 or extend\$3 or drag\$4 or slid\$3 or mov\$3 or contract\$3 or minimiz\$3) same (undisplay\$3 or black or blank or power or visible or cover\$3 or uncover\$3 or reveal\$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2013/08/23 15:19
S41	6	US-8217904-\$.DID. OR US-7999872-\$.DID. OR US-4952932-\$.DID.	US-PGPUB; USPAT; JPO; DERWENT	ADJ	ON	2013/08/23 18:47
S42	0	jp-h08076925-\$.did.	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2013/08/23 18:48
S43	2	jp-08076925-\$.did.	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2013/08/23 18:48
S44	2	jp-0112514-\$.did. or jp-2007318423-\$.did. or jp-272812-\$.did.	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2013/08/23 18:49
S45	2	jp-0112514-\$.did. or jp-2007318423-\$.did. or jp-0272812-\$.did.	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2013/08/23 18:50
S46	1	jp-01125614-\$.did. or jp-02728128-\$.did.	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2013/08/23 18:51
S47	1	jp-01125614-\$.did. or jp-2728128-\$.did.	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2013/08/23 18:51
S48	0	jp-02728128-\$.did.	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2013/08/23 18:51
S49	0	jp-2002728128-\$.did.	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2013/08/23 18:51
S50	0	jp-2728128-\$.did.	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2013/08/23 18:51

S51	800	("715".clas. or ("345"/\$ or 178/18.01,18.06).ccls.) and @ad<"20130510" and (boundary or border or bar) with (maximiz\$3 or expand\$3 or extend\$3 or drag\$4 or slid\$3 or mov\$3 or contract\$3 or minimiz\$3) with (undisplay\$3 or visible or uncover\$3 or reveal\$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2013/08/23 19:01
S52	784	("715".clas. or ("345"/\$ or 178/18.01,18.06).ccls.) and @ad<"20130510" and (maximiz\$3 or extend\$3 or dragg\$3 or slid\$3 or mov\$3 or contract\$3 or minimiz\$3) with bar with (undisplay\$3 or black or blank or power or visible or cover\$3 or uncover\$3 or reveal\$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2013/08/23 19:03
S53	309	S51 not (S40 or S52)	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2013/08/23 19:03
S54	120	@ad<"20130510" and (maximiz\$3 or extend\$3 or dragg\$3 or slid\$3 or mov\$3 or contract\$3 or minimiz\$3) with (boundary or border or bar) with (undisplay\$3 or black or blank or visible or uncover\$3 or reveal\$3) with (apps or applications or icons or widgets) and power	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2013/08/23 20:04
S55	19	@ad<"20130510" and (maximiz\$3 or extend\$3 or dragg\$3 or slid\$3 or mov\$3 or contract\$3 or minimiz\$3) with (boundary or border or bar) with (hidden) with (apps or applications or icons or widgets) and power	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2013/08/23 20:10
S56	3402	@ad<"20130510" and (maximiz\$3 or extend\$3 or dragg\$3 or slid\$3 or mov\$3 or contract\$3 or minimiz\$3) with (boundary or border or bar) and (dark or black) same power	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2013/08/23 20:27
S57	294	("715".clas. or ("345"/\$ or 178/18.01,18.06).ccls.) and @ad<"20130510" and (maximiz\$3 or extend\$3 or dragg\$3 or slid\$3 or mov\$3 or contract\$3 or minimiz\$3) with (boundary or border or bar) and (dark or black) same power	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2013/08/23 20:27
S58	126	("715".clas. or ("345"/\$ or 178/18.01,18.06).ccls.) and @ad<"20130510" and curtain and (dark or black) same power	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2013/08/23 20:44
S59	551	("715".clas. or ("345"/\$ or 178/18.01,18.06).ccls.) and @ad<"20130510" and (curtain or shade) and (dark or black) same power	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2013/08/23 20:46
S60	83	("715".clas. or ("345"/\$ or 178/18.01,18.06).ccls.) and @ad<"20130510" and (curtain or shade) same(dark or black) same power	US-PGPUB; USPAT; EPO; JPO;	ADJ	ON	2013/08/23 20:47

			DERWENT			
S61	82	S60 not S58	US- PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2013/08/23 20:47
S62	2	(12/864738).APP.	US- PGPUB; USPAT; USOCR; DERWENT	OR	OFF	2013/08/24 22:36
S63	3	("4952932"   "7999872"   "8217904").PN. OR ("8432369").URPN.	US- PGPUB; USPAT; USOCR	ADJ	ON	2013/08/24 22:38
S64	131	(715/800.ccls.) and @ad<"20130510" and (boundary or border or bar) with (scal\$3 or expand\$3 or extend\$3 or contract\$3 or minimiz\$3)	US- PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2013/08/25 20:20
S71	0	(YANG-JINRONG or MAALOUF-RAMZI).in.	US- PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2013/11/21 18:47
S72	130	("715".clas. or ("345"/\$ or 178/18.01,18.06).ccls.) and @ad<"20130510" and curtain and (dark or black) same power	US- PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2013/11/21 18:47
S73	765	("715".clas. or ("345"/\$ or 178/18.01,18.06).ccls.) and @ad<"20130510" and (maximiz\$3 or extend\$3 or dragg\$3 or slid\$3) with bar same (divi\$2 or screen or display or active or inactive or dead) (partition or portion or area or section or region)	US- PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2013/11/21 18:47
S74	383	("715".clas. or ("345"/\$ or 178/18.01,18.06).ccls.) and @ad<"20130510" and (maximiz\$3 or extend\$3 or dragg\$3 or slid\$3 or mov\$3 or contract\$3 or minimiz\$3) with bar with (power or cut or remov\$3)	US- PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2013/11/21 18:47
S75	1	(13/905064).APP.	US- PGPUB; USPAT; USOCR; DERWENT	OR	OFF	2014/02/04 16:08
S76	0	(14/058731).APP.	US- PGPUB; USPAT; USOCR; DERWENT	OR	OFF	2014/02/04 16:09
S77	9	("715".clas. or ("345"/\$ or 178/18.01,18.06).ccls.) and @ad<"20130510" and (maximiz\$3 or extend\$3 or dragg\$3 or slid\$3) with bar same (power\$3 or turn\$3 or inactive or dead) (partition or portion or area or section or region)	US- PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2014/02/04 16:27



S78	102	("715".clas. or ("345"/\$ or 178/18.01,18.06).ccls.) and @ad<"20130510" and (maximiz\$3 or extend\$3 or dragg\$3 or slid\$3) same (power\$3 or turn\$3) near2 off with (partition or portion or area or section or region) and touch\$3	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2014/02/04 16:30
S79	10	((("7046239") or ("7389432") or ("8106887"))).PN.	US-PGPUB; USPAT; USOCR; DERWENT	OR	OFF	2014/02/06 18:29
S80	1	(YANG-JINRONG or MAALOUF-RAMZI).in.	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2014/02/25 20:54
S84	2	("20120276977").PN.	US-PGPUB; USPAT; USOCR; DERWENT	OR	OFF	2014/06/12 15:33
S85	22	("20040233146"   "20040257316"   "20050052446"   "20050068311"   "20060061563"   "5321425"   "5598565"   "5880728"   "6900798"   "7017053").PN. OR ("7389432").URPN.	US-PGPUB; USPAT; USOCR	ADJ	ON	2014/09/02 14:30
S86	129	("20010032321"   "20020063671"   "20030071805"   "20060020906"   "20060071899"   "20060125745"   "3795765"   "4817179"   "4952917"   "5029004"   "5166671"   "5270818"   "5359345"   "5488434"   "5524249"   "5572655"   "5592194"   "5598565"   "5615376"   "5619707"   "5625826"   "5642125"   "5675364"   "5719958"   "5745375"   "5781768"   "5796382"   "5796391"   "5808693"   "5822599"   "5880728"   "5881299"   "5914751"   "5943032"   "5956014"   "5961617"   "5991883"   "6026179"   "6029249"   "6031914"   "6043853"   "6069440"   "6076169"   "6100859"   "6104362"   "6111559"   "6144440"   "6177933"   "6177946"   "6232937"   "6278887"   "6297601"   "6323880"   "6345364"   "6356284"   "6362835"   "6366291"   "6396508"   "6396520"   "6408293"   "6411306"   "6411953"   "6414675"   "6452610"   "6453076"   "6473078"   "6473532"   "6496165"   "6529212"   "6552736"   "6587087"   "6606103"   "6611608"   "6621489"   "6628067"   "6657634"   "6661029"   "6661428"   "6667727"   "6677924"   "6677936"   "6683605"   "6691236"   "6693385"   "6701263"   "6711212"   "6724149"   "6724151"   "6731815"   "6744818"   "6762741"   "6768520"   "6774878"   "6788003"   "6788822"   "6791566"   "6801811"   "6809706"   "6812650"   "6816135"   "6819036"   "6822631"	US-PGPUB; USPAT; USOCR	ADJ	ON	2014/09/02 14:40

		"6829005"   "6839048"   "6850214"   "6900798"   "6912664"   "6938176"   "7012588"   "7114086"   "7301522"   "7312771"   "7389432"   "7400314"   "7432897"   "7437438"   "7460103"   "7463235"   "7505034"   "7580031"   "7580033"   "7583260"   "7602388").PN. OR ("7602408"   "7629971"   "7663597"   "7714831"   "7760210"   "7786988").PN. OR ("8207934").URPN.				
S87	2	("20130106684").PN.	US- PGPUB; USPAT; USOCR; DERWENT	OR	OFF	2014/09/02 18:18
S88	2	("20060227122").PN.	US- PGPUB; USPAT; USOCR; DERWENT	OR	OFF	2014/09/02 18:23
S89	3	(YANG-JI NRONG or MAALOUF-RAMZI).in.	US- PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2014/09/02 23:29
S90	2	("20080158117").PN.	US- PGPUB; USPAT; USOCR; DERWENT	OR	OFF	2014/09/17 11:53
S91	2	("7895531").PN.	US- PGPUB; USPAT; USOCR; DERWENT	OR	OFF	2014/11/22 16:19
S93	1	(14/257888).APP.	US- PGPUB; USPAT; USOCR; DERWENT	OR	OFF	2014/11/26 12:19
S94	8	((("7580031") or ("20080158117") or ("20080225033") or ("20130332886"))).PN.	US- PGPUB; USPAT; USOCR; DERWENT	OR	OFF	2014/11/26 13:17
S95	1	(13/817847).APP.	US- PGPUB; USPAT; USOCR; DERWENT	OR	OFF	2014/11/26 13:31
S96	1	(13/661614).APP.	US- PGPUB; USPAT; USOCR; DERWENT	OR	OFF	2014/11/26 13:35
S98	3	(G06F1/3265 OR G06F1/3259).cpc. and @ad<"20130510" and (maximiz\$3 or extend\$3 or dragg\$3 or slid\$3 or mov\$3) with bar with (power or cut or remov\$3) and (screen or display or active or	US- PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2014/12/01 12:16

		inactive or dead) (divi\$2 or division or partition\$3 or portion\$3 or area or section or region)				
S99	3	(G06F1/3265 OR G06F1/3259).cpc. and @ad<"20130510" and (maximiz\$3 or extend\$3 or dragg\$3 or slid\$3 or mov\$3 or contract\$3 or minimiz\$3) with bar with (power or cut or remov\$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2014/12/01 12:16
S100	1	(G06F1/3265 OR G06F1/3259).cpc. and @ad<"20130510" and @ad<"20130510" and (maximiz\$3 or extend\$3 or dragg\$3 or slid\$3 or mov\$3 or contract\$3 or minimiz\$3) with bar with (undisplay\$3 or black or blank or power or visible or cover\$3 or uncover\$3 or reveal\$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2014/12/01 12:16
S101	8	((("20080225033") or ("20140192063") or ("20140122911") or ("20130145303")).PN.	US-PGPUB; USPAT; USOCR; DERWENT	OR	OFF	2015/01/11 21:42
S102	2	("20060132474").PN.	US-PGPUB; USPAT; USOCR; DERWENT	OR	OFF	2015/01/11 21:45
S103	1	(11/020397).APP.	US-PGPUB; USPAT; USOCR; DERWENT	OR	OFF	2015/01/11 21:48
S104	8	US-6633274-\$.DID. OR US-7123247-\$.DID. OR US-7190338-\$.DID. OR US-7239742-\$.DID.	US-PGPUB; USPAT; JPO; DERWENT	ADJ	ON	2015/01/11 21:49
S105	89	("5844539"   "5867140"   "6236388"   "6393145"   "6486862"   "6804029"   "6831662"   "7034816"   "7043276"   "7068253").PN. OR ("7239742").URPN.	US-PGPUB; USPAT; USOCR	ADJ	ON	2015/01/11 21:51
S106	61	("20020040442"   "20020119788"   "20020173295"   "20020180723"   "20030126330"   "20030200481"   "20040203768"   "20040257316"   "20050044423"   "20050110717"   "20050124389"   "20050283724"   "20060101293"   "20060123081"   "20060132474"   "20060206733"   "20060236144"   "20060267972"   "20070004393"   "20070021108"   "20070073725"   "20070082712"   "20070226649"   "20080055318"   "20080220715"   "20080243808"   "20080253345"   "20080261593"   "20080288955"   "20090019131"   "20090070030"   "20090070606"   "20090138276"   "20090163226"   "20090165145"   "20090286557"   "20090322800"   "20100062788"   "20100277512"   "20100298048"   "20100318903"   "20110074765"   "20110080419"   "6240521"   "6272545"	US-PGPUB; USPAT; USOCR	ADJ	ON	2015/01/11 21:58

		"6282508"   "6530083"   "6603469"   "6633274"   "6753842"   "6795062"   "6910139"   "6973333"   "7123247"   "7190338"   "7239742"   "7424674"   "7463255"   "7581180"   "7782333"   "8254957").PN. OR ("8803868").URPN.				
S107	58	("20020040442"   "20020119788"   "20020173295"   "20020180723"   "20030126330"   "20030200481"   "20040203768"   "20040257316"   "20050044423"   "20050110717"   "20050124389"   "20050283724"   "20060123081"   "20060132474"   "20060206733"   "20060236144"   "20060267972"   "20070004393"   "20070021108"   "20070073725"   "20070082712"   "20070226649"   "20080055318"   "20080220715"   "20080243808"   "20080253345"   "20080261593"   "20080288955"   "20090019131"   "20090070030"   "20090070606"   "20090163226"   "20090165145"   "20090286557"   "20090322800"   "20100062788"   "20100277512"   "20100298048"   "20100318903"   "20110074765"   "20110080419"   "6240521"   "6272545"   "6282508"   "6530083"   "6603469"   "6633274"   "6753842"   "6795062"   "6910139"   "7123247"   "7190338"   "7239742"   "7424674"   "7463255"   "7581180"   "7782333"   "8254957").PN. OR ("8446398").URPN.	US- PGPUB; USPAT; USOCR	ADJ	ON	2015/01/11 22:01
S108	2	("20130063384").PN.	US- PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2015/01/29 22:33
S109	2	("20120249466").PN.	US- PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2015/01/29 22:34
S110	1	(13/681442).APP.	US- PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2015/01/29 22:36
S111	2950	(AMI YA-Koichi or KUNO-Takatsugu or MURAKAMI-Hiroshi or TANAKA-Yusaku or IWAMOTO-Hiroshi or SAWADA- Kenichi).in. and @ad<"20111121"	US- PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2015/01/29 23:14
S112	67	(AMI YA-Koichi or KUNO-Takatsugu or MURAKAMI-Hiroshi or TANAKA-Yusaku or IWAMOTO-Hiroshi or SAWADA- Kenichi).in. and @ad<"20111121" and first near2 (display or screen)	US- PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2015/01/29 23:14
S113	28	(AMI YA-Koichi or KUNO-Takatsugu or	US-	ADJ	ON	2015/01/29

		MURAKAMI -Hiroshi or TANAKA-Yusaku or IWAMOTO-Hiroshi or SAWADA-Kenichi).in. and @ad<"20111121" and (mobile or handheld or phone)	PGPUB; USPAT; EPO; JPO; DERWENT			23:15
S114	10	((("7506261") or ("20120139952")).PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2015/01/29 23:32
S115	1	(12/575310).APP.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2015/01/29 23:45
S116	1	(13/905064).APP.	US-PGPUB; USPAT; USOCR; DERWENT	OR	OFF	2015/02/06 18:23
S117	1	(13/830452).APP.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2015/02/07 18:24
S118	1	(G06F1/3265 OR G06F1/3259).cpc. and @ad<"20130510" and @ad<"20130510" and (maximiz\$3 or extend\$3 or dragg\$3 or slid\$3 or mov\$3 or contract\$3 or minimiz\$3) with bar with (undisplay\$3 or black or blank or power or visible or cover\$3 or uncover\$3 or reveal\$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2015/02/16 14:52
S119	5	(YANG-JINRONG or MAALOUF-RAMZI).in. and power.clm.	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2015/02/16 14:52
S120	2	("20130002597").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2015/03/13 11:58
S121	2	("8149215").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2015/03/17 17:50
S122	53	US-5616078-\$.DID. OR US-5563986-\$.DID. OR US-6272231-\$.DID. OR US-6385331-\$.DID. OR US-6434255-\$.DID. OR US-6750848-\$.DID. OR US-6863609-\$.DID. OR US-7301526-\$.DID. OR US-7401783-\$.DID. OR US-7379566-\$.DID. OR US-7519223-\$.DID. OR US-20020071277-\$.DID. OR US-20070164989-\$.DID. OR US-20080013826-\$.DID. OR US-	US-PGPUB; USPAT; JPO; DERWENT	ADJ	ON	2015/03/17 18:02

		20080019589-\$.DID. OR US- 20080040692-\$.DID. OR US- 20080005418-\$.DID. OR US- 20080136916-\$.DID. OR US- 20080158096-\$.DID. OR US- 20080174570-\$.DID. OR US- 20080266530-\$.DID. OR US- 20080276196-\$.DID. OR US- 20090031240-\$.DID. OR US- 20090079813-\$.DID. OR US- 20090265627-\$.DID. OR US-1694045- \$.DID. OR JP-20020607-\$.DID. OR JP- 20021206-\$.DID. OR JP-20041111-\$.DID. OR JP-20070517-\$.DID. OR JP-20080424- \$.DID. OR US-2020097-\$.DID. OR US- 1331018-\$.DID.				
S123	0	(13/769067).APP.	US- PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2015/03/17 18:10
S124	1	S122 and (disabl\$3 or deactivat\$3 or turn\$4 off or defus\$3 or selectiv\$3) sensor	US- PGPUB; USPAT; JPO; DERWENT	ADJ	ON	2015/03/17 19:00
S125	3	S122 and (disabl\$3 or deactivat\$3 or turn\$4 off or defus\$3 or selectiv\$3) near3 sensor	US- PGPUB; USPAT; JPO; DERWENT	ADJ	ON	2015/03/17 19:00
S126	5	S122 and (disabl\$3 or deactivat\$3 or turn\$4 off or defus\$3 or selectiv\$3) near3 (sensor or detect\$3)	US- PGPUB; USPAT; JPO; DERWENT	ADJ	ON	2015/03/17 19:01
S127	176	amazon.as. and gestur\$3	US- PGPUB; USPAT; JPO; DERWENT	ADJ	ON	2015/03/17 19:14
S128	17	amazon.as. and gestur\$3 and (disabl\$3 or deactivat\$3 or turn\$4 off or defus\$3 or selectiv\$3) near3 (sensor or detect\$3)	US- PGPUB; USPAT; JPO; DERWENT	ADJ	ON	2015/03/17 19:15
S129	16	amazon.as. and gestur\$3 and (disabl\$3 or deactivat\$3 or turn\$4 off or defus\$3 or selectiv\$3) near3 (sens43 or detect\$3)	US- PGPUB; USPAT; JPO; DERWENT	ADJ	ON	2015/03/17 19:17
S130	16	amazon.as. and gestur\$3 and (disabl\$3 or deactivat\$3 or turn\$4 off or defus\$3 or selectiv\$3) near3 (sens43 or detect\$3)	US- PGPUB; USPAT; JPO; DERWENT	ADJ	ON	2015/03/17 19:17
S131	17	amazon.as. and gestur\$3 and (disabl\$3 or deactivat\$3 or turn\$4 off or defus\$3 or selectiv\$3) near3 (sens\$3 or detect\$3)	US- PGPUB; USPAT; JPO;	ADJ	ON	2015/03/17 19:18

			DERWENT			
S132	375	G06F3/017.cpc. and (disabl\$3 or deactivat\$3 or turn\$4 off or defus\$3 or selectiv\$3) near3 (sens\$3 or detect\$3)	US-PGPUB; USPAT; JPO; DERWENT	ADJ	ON	2015/03/17 19:20
S133	250	G06F3/017.cpc. and @ad<"20121002" and (disabl\$3 or deactivat\$3 or turn\$4 off or defus\$3 or selectiv\$3) near3 (sens\$3 or detect\$3)	US-PGPUB; USPAT; JPO; DERWENT	ADJ	ON	2015/03/17 19:21
S134	252	G06F3/017.cpc. and @ad<"20121002" and (disabl\$3 or deactivat\$3 or turn\$4 off or defus\$3 or selectiv\$3) near3 (sens\$3 or detect\$3 or image capture)	US-PGPUB; USPAT; JPO; DERWENT	ADJ	ON	2015/03/17 19:21
S135	2	("20130258129").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2015/03/17 22:10
S136	3	amazon.as. and gestur\$3 and user orientation	US-PGPUB; USPAT; JPO; DERWENT	ADJ	ON	2015/03/17 22:13
S137	88	amazon.as. and gestur\$3 and user with (orientation or presence)	US-PGPUB; USPAT; JPO; DERWENT	ADJ	ON	2015/03/17 22:15
S138	67	amazon.as. and gestur\$3 and user with (orientation or presence) and @ad<"20121002"	US-PGPUB; USPAT; JPO; DERWENT	ADJ	ON	2015/03/17 22:17
S139	1	(13/438290).APP.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2015/03/18 13:11
S140	2	("6246862").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2015/03/18 14:22
S141	2	("20080158172").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2015/03/18 14:22
S143	1	(14/062034).APP.	US-PGPUB; USPAT; USOCR; EPO; JPO;	OR	OFF	2015/05/14 15:53

			DERWENT			
S145	2	("20140191960").PN.	US- PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2015/05/14 19:42
S146	181	(G06F3/038.cpc. or 345/156-179.ccls.) and display with (divid\$3 or partition\$3) with (input\$4 or cursor or pointer) near2 (area or region)	US- PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2015/05/14 23:42
S147	6	("7231609"   "7934156"   "8477139"   "8742885"   "8773378"   "8907906").PN.	US- PGPUB; USPAT	ADJ	ON	2015/05/14 23:51
S148	57	("20020198906"   "20050005249"   "20050195217"   "20060020906"   "20060227122"   "20070252822"   "20080158117"   "20080158189"   "20080189645"   "20080225033"   "20090058842"   "20090115767"   "20090119589"   "20090256814"   "20100088634"   "20100138767"   "20100164857"   "20100167792"   "20100241888"   "20100275047"   "20100315371"   "20110149820"   "20120054674"   "20120117507"   "20120131497"   "20120324260"   "20120329533"   "20130080960"   "20130106684"   "20130130745"   "20130152014"   "20130332886"   "20140095914"   "20140120988"   "20140143575"   "20140333550"   "20140333602"   "20140340384"   "4952932"   "6944017"   "7046239"   "7389432"   "7580031"   "7952932"   "8046617"   "8046721"   "8217904"   "8281252"   "8316254"   "8359410"   "8432369"   "8433373"   "8434153"   "8519964"   "8593427"   "8717328"   "8774868").PN.	US- PGPUB; USPAT	ADJ	ON	2015/05/14 23:54
S149	474	(G06F3/038.cpc. or (345/156-179 or 715/856).ccls.) and display with (divid\$3 or partition\$3) and (cursor or pointer or arrow) near2 (area or region or zone or portion or section)	US- PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2015/05/15 13:20
S150	359	(G06F3/038.cpc. or (345/156-179 or 715/856).ccls.) and display with (divid\$3 or partition\$3) and (cursor or pointer or arrow) near2 (area or region or zone or portion or section) and (touch\$3 or touch sensitive or touchscreen)	US- PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2015/05/15 13:21
S151	1614	715/856.ccls.	US- PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2015/05/15 13:28
S152	470	((G06F3/04886).cpc.) and (cursor or pointer or arrow) near2 (area or region or zone or portion or section) and (touch\$3 or touch sensitive or touchscreen)	US- PGPUB; USPAT; EPO; JPO;	ADJ	ON	2015/05/15 13:34



			DERWENT			
S153	206	((G06F3/04886).cpc.) and (cursor or pointer or arrow) near (area or region or zone or portion or section) and (touch\$3 or touch sensitive or touchscreen)	US- PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2015/05/15 13:34
S154	11	("20030095110"   "20030210280"   "20050085280"   "20060274051"   "20070049358"   "20070135104"   "20080070648"   "20080207272"   "20100281416"   "7599830"   "8456426").PN. OR ("9013410").URPN.	US- PGPUB; USPAT; USOCR	ADJ	ON	2015/05/15 13:41
S155	10	("20030095110"   "20030210280"   "20050085280"   "20060274051"   "20070049358"   "20070135104"   "20080070648"   "20080207272"   "20100281416"   "7599830").PN. OR ("8896542").URPN.	US- PGPUB; USPAT; USOCR	ADJ	ON	2015/05/15 13:46
S156	2	("20140306897").PN.	US- PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2015/05/15 14:00
S157	2	("20060197753").PN.	US- PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2015/05/15 14:01
S158	6189	apple.as. and (pointer or cursor)	US- PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2015/05/15 14:02
S159	694	apple.as. and (pointer or cursor) and 345/173,174.ccls.	US- PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2015/05/15 14:02
S160	244	apple.as. and (pointer or cursor) and 345/173,174.ccls. and @ad<"20080101"	US- PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2015/05/15 14:02
S161	156	apple.as. and (pointer or cursor) and 345/173,174.ccls. and @ad<"20080101" and (gui or graphical user interface)	US- PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2015/05/15 14:02
S162	30	("20040135919"   "20050068304"   "20060026521"   "20060026535"   "20060026536"   "20060033724"   "20060053387"   "20060085757"   "20060097991"   "20060181517"   "20060197750"   "20060197753"   "5483261"   "5488204"   "5825352"   "5835079"   "5880411"   "6009153"   "6188391"   "6310610"   "6323846"   "6690387"   "7010333"   "7015894"	US- PGPUB; USPAT; USOCR	ADJ	ON	2015/05/15 14:04

		"7046230"   "7176894"   "7184064"   "7620174"   "7663607").PN. OR ("8471822").URPN.				
S163	0	(11/038590).CCLS.	US- PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2015/05/15 14:52
S164	2	(11/038590).APP.	US- PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2015/05/15 14:52
S165	1239	(G06F3/038.cpc. or (345/156-179 or 715/856).ccls.) and (cursor or pointer or arrow) with (control\$4 or manipulats\$3) with (gui or graphical user interface)	US- PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2015/05/15 15:07
S166	124	(G06F3/038.cpc. or (345/156-179 or 715/856).ccls.) and (cursor or pointer or arrow) with (control\$4 or manipulats\$3) with (gui or graphical user interface) same virtual	US- PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2015/05/15 15:09
S167	2	(10/188182).APP.	US- PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2015/05/15 15:53
S168	12	((10/722948) or (10/643256) or (10/654108) or (10/903964) or (11/038590) or (11/057050) or (11/115539)).APP.	US- PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2015/05/15 16:00
S169	23	(G06F3/038.cpc. or (345/156-179 or 715/856).ccls.) and (cursor or pointer or arrow) with (control\$4 or manipulats\$3) with virtual near2 (wheel or navigation or fourway or (four) (way or button) or ball or roller ball or rollerball)	US- PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2015/05/15 16:04
S170	28	(G06F3/038 or G06F3/048).cpc. or (345/156-179 or 715/856).ccls.) and (cursor or pointer or arrow) with (control\$4 or manipulats\$3) with ((virtual or gui or graphic\$4) near2 (wheel or navigation\$3 or fourway or (four) (way or button) or ball or roller ball or rollerball)	US- PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2015/05/15 16:09
S171	5	S170 not S169	US- PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2015/05/15 16:10
S172	45	(G06F3/038 or G06F3/048).cpc. or (345/156-179 or 715/856).ccls.) and (cursor or pointer or arrow) with (control\$4 or manipulats\$3) with ((virtual or gui or graphic\$4) near2 (wheel or	US- PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2015/05/15 16:23

		navigation\$3 or fourway or (four) (way or button) or ball or roller ball or rollerball)				
S173	34	(G06F3/038 or G06F3/048).cpc. or (345/156-179 or 715/856).ccls.) and (cursor or pointer or arrow) with (control\$4 or manipulats\$3) with ((virtual or gui or graphic\$4 user interface) near2 (wheel or navigation\$3 or fourway or (four) (way or button) or ball or roller ball or rollerball)	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2015/05/15 16:23
S174	46	(G06F3/038 or G06F3/048).cpc. or (345/156-179 or 715/856).ccls.) and (cursor or pointer or arrow) with (control\$4 or manipulats\$3) with ((virtual or gui or graphic\$4 user interface or graphic\$3) near2 (wheel or navigation\$3 or fourway or (four) (way or button) or ball or roller ball or rollerball)	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2015/05/15 16:24
S175	18	S174 not S170	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2015/05/15 16:24
S176	18	S174 not S170	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2015/05/15 16:24
S177	0	"14687236"	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2015/05/15 16:50
S178	2	(12/810840).APP.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2015/05/15 17:39
S179	11	(G06F2203/04806).cpc. and gestur\$3 and (area or partition or region) near2 (touch\$3 pad or touchpad) and (zoom\$3 or enlarg\$3 or magnification or magnif\$4)	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2015/05/15 22:44
S180	697	(G06F2203/04806).cpc. and gestur\$3 and (zoom\$3 or enlarg\$3 or magnification or magnif\$4)	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2015/05/15 22:47
S181	697	(G06F2203/04806).cpc. and gestur\$3 and (zoom\$3 or enlarg\$3 or magnification or magnif\$4)	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2015/05/15 22:47
S182	1	(11/018590).APP.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2015/05/15 22:52

S183	5	(MODE BASED GRAPHICAL USER INTERFACES).ti.	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2015/05/15 22:54
S184	2	("20040008221").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2015/05/16 23:06
S185	6989	(G06F3/1423-3/1462).cpc.	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2015/05/16 23:07
S186	2244	(G06F3/1423).cpc.	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2015/05/16 23:07
S187	382	(G06F3/1462).cpc.	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2015/05/16 23:07
S188	22	(G06F3/1423-3/1462).cpc. and G06F2203/04806.cpc. and (zoom\$3 or enlarg\$3 or magnification or magnif\$4)	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2015/05/16 23:08
S189	4	((("20090009652") or ("20040008221"))).PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2015/05/16 23:44
S190	200	(345/173.ccls. or (G06F2200/1637 or G06F3/0481).cpc.) and (cursor or pointer) near2 (speed or velocity) and gestur\$3	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2015/05/18 14:00
S191	2	("20080119237").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2015/05/18 16:08
S192	1	(11/018590).APP.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2015/05/18 17:40
S193	2	(10/903964).APP.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2015/05/18 17:40

S194	519	(G06F2203/04806).cpc. and gestur\$3 same (zoom\$3 or enlarg\$3 or magnification or magnif\$4)	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2015/05/18 17:54
S195	0	chandhari.in. and gestur\$3 same (zoom\$3 or enlarg\$3 or magnification or magnif\$4)	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2015/05/18 17:58
S196	0	chandhri.in. and gestur\$3 same (zoom\$3 or enlarg\$3 or magnification or magnif\$4)	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2015/05/18 17:58
S197	1	chandhri.in. and (zoom\$3 or enlarg\$3 or magnification or magnif\$4)	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2015/05/18 18:02
S198	2	(11/519460).APP.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2015/05/18 18:10
S199	15	((("7084856") or ("20030076301") or ("20030055446") or ("7046230"))).PN. or ((10/259159) or (10/643256) or (10/188182) or (10/722948)).APP.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2015/05/18 18:11
S200	3	("8812887").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2015/05/19 15:31
S201	2	("20100164857").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2015/05/19 15:36
S202	2	(@ad<"20140421" or @prad<"20140421") and (unlock\$3 or un lock\$3) with gestur\$3 with (partial or partition\$3) near2 (display or mode or area or portion\$3 or section\$2 or region or zone)	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2015/05/19 15:44
S203	1563	(@ad<"20140421" or @prad<"20140421") and (unlock\$3 or un lock\$3) with (partial or partition\$3) near2 (display or mode or area or portion\$3 or section\$2 or region or zone)	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2015/05/19 16:04
S204	2	(@ad<"20140421" or @prad<"20140421") and (unlock\$3 or un lock\$3) with (partial or partition\$3) near2 (display or mode or area or portion\$3 or section\$2 or region or zone) same	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2015/05/19 16:06

		(swip\$3 or gestur\$3 or flick\$3 or pinch\$3)				
S205	9	((@ad<"20140421" or @prad<"20140421") and (unlock\$3 or un lock\$3) same (partial or partition\$3) near2 (display or mode or area or portion\$3 or section\$2 or region or zone) same (swip\$3 or gestur\$3 or flick\$3 or pinch\$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2015/05/19 16:07
S206	77	((@ad<"20140421" or @prad<"20140421") and (unlock\$3 or un lock\$3) same (partial or partition\$3) near2 (display or mode or area or portion\$3 or section\$2 or region or zone) and (swip\$3 or gestur\$3 or flick\$3 or pinch\$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2015/05/19 16:14
S207	100	((@ad<"20140421" or @prad<"20140421") and (unlock\$3 or un lock\$3) and (partial or partition\$3) near2 (display or mode or area or portion\$3 or section\$2 or region or zone) same (swip\$3 or gestur\$3 or flick\$3 or pinch\$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2015/05/19 16:36
S208	90	S207 not S206	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2015/05/19 16:36
S209	68	((@ad<"20140421" or @prad<"20140421") and (partial or partition\$3) near2 (display or mode or area or portion\$3 or section\$2 or region or zone) same (swip\$3 or gestur\$3 or flick\$3 or pinch\$3) with \$2lock\$3	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2015/05/19 17:11
S210	1932	((@ad<"20140421" or @prad<"20140421") and (partial or partition\$3) near2 (display or mode or area or portion\$3 or section\$2 or region or zone) and (swip\$3 or gestur\$3 or flick\$3 or pinch\$3) with \$2lock\$3	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2015/05/19 17:11
S211	234	((@ad<"20140421" or @prad<"20140421") and (partial or partition\$3) near2 (display or mode or area or portion\$3 or section\$2 or region or zone) same2 (swip\$3 or gestur\$3 or flick\$3 or pinch\$3) with \$2lock\$3	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2015/05/19 17:12
S212	11	((@ad<"20140421" or @prad<"20140421") and (partial or partition\$3) near2 (display or mode or area or portion\$3 or section\$2 or region or zone) same2 (swip\$3 or gestur\$3 or flick\$3 or pinch\$3) with (sleep\$3 or idle)	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2015/05/19 17:25
S214	1	((@ad<"20140421" or @prad<"20140421") and (partial or partition\$3) near2 (display or mode or area or portion\$3 or section\$2 or region or zone) same (swip\$3 or gestur\$3 or flick\$3 or pinch\$3) with (sleep\$3 or idle or wak\$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2015/05/19 17:25
S215	15	((@ad<"20140421" or @prad<"20140421") and (partial or	US-PGPUB;	ADJ	ON	2015/05/19 17:26

		partition\$3) near2 (display or mode or area or portion\$3 or section\$2 or region or zone) same2 (swip\$3 or gestur\$3 or flick\$3 or pinch\$3) with (sleep\$3 or idle or wak\$3)	USPAT; EPO; JPO; DERWENT			
S216	39	US-8433373-\$.DID. OR US-8593427-\$.DID. OR US-8717328-\$.DID. OR US-8316254-\$.DID. OR US-8774868-\$.DID. OR US-8519964-\$.DID. OR US-8434153-\$.DID. OR US-20140333550-\$.DID. OR US-20140095914-\$.DID. OR US-20140333602-\$.DID. OR US-20100275047-\$.DID. OR US-20100167792-\$.DID. OR US-20130130745-\$.DID. OR US-20140340384-\$.DID. OR US-20110149820-\$.DID. OR US-20100241888-\$.DID. OR US-20140143575-\$.DID. OR US-20090115767-\$.DID. OR US-20120329533-\$.DID. OR US-20120324260-\$.DID. OR US-1331018-\$.DID.	US- PGPUB; USPAT; JPO; DERWENT	ADJ	ON	2015/05/19 18:41
S217	42	((("8433373") or ("8593427") or ("8717328") or ("8316254") or ("8774868") or ("8519964") or ("8434153") or ("20140333550") or ("20140095914") or ("20140333602") or ("20100275047") or ("20100167792") or ("20130130745") or ("20140340384") or ("20110149820") or ("20100241888") or ("20140143575") or ("20090115767") or ("20120329533") or ("20120324260"))).PN.	US- PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2015/05/21 14:31

EAST Search History (I nterference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L35	443	((maximiz\$3 or extend\$3 or dragg\$3 or slid\$3 or mov\$3 or contract\$3 or minimiz\$3) with unlock\$3 and (power or cut or remov\$3 or sleep) and (display or screen or panel or touch\$3)).clm.	USPAT; UPAD	ADJ	ON	2015/05/21 17:49
S65	5276	((maximiz\$3 or extend\$3 or dragg\$3 or slid\$3 or mov\$3 or contract\$3 or minimiz\$3) with bar with (undisplay\$3 or black or blank or power or cut or visible or cover\$3 or uncover\$3 or reveal\$3)).clm.	USPAT; UPAD	ADJ	ON	2013/09/28 15:25
S66	4494	((maximiz\$3 or extend\$3 or dragg\$3 or slid\$3 or mov\$3 or contract\$3 or minimiz\$3) with bar with (power or cut or remov\$3)).clm.	USPAT; UPAD	ADJ	ON	2013/09/28 15:25
S67	2751	S65 and S66	USPAT; UPAD	ADJ	ON	2013/09/28 15:26
S68	468	((maximiz\$3 or extend\$3 or dragg\$3 or slid\$3 or mov\$3 or contract\$3 or minimiz\$3) with bar with (power or cut or remov\$3) and (display or screen or panel or touch\$3)).clm.	USPAT; UPAD	ADJ	ON	2013/09/28 15:27
S69	0	((maximiz\$3 or extend\$3 or dragg\$3 or slid\$3) with control bar with (divi\$2 or screen or display or active or inactive or dead)	USPAT; UPAD	ADJ	ON	2013/09/28 15:27

		(partition or portion or area or section or region)).clm.				
S70	1	((maximiz\$3 or extend\$3 or dragg\$3 or slid\$3) with control bar with (divi\$2 or screen or display or active or inactive or dead) with(partition or portion or area or section or region)).clm.	USPAT; UPAD	ADJ	ON	2013/09/28 15:29
S81	1906	((maximiz\$3 or extend\$3 or dragg\$3 or slid\$3 or mov\$3 or contract\$3 or minimiz\$3) with bar and (power or cut or remov\$3 or sleep) and (display or screen or panel or touch\$3)).clm.	USPAT; UPAD	ADJ	ON	2014/02/25 20:53
S82	473	((maximiz\$3 or extend\$3 or dragg\$3 or slid\$3 or mov\$3 or contract\$3 or minimiz\$3) with bar with (power or cut or remov\$3) and (display or screen or panel or touch\$3)).clm.	USPAT; UPAD	ADJ	ON	2014/02/25 20:53
S83	473	S82 and S81	USPAT; UPAD	ADJ	ON	2014/02/25 20:53
S97	0	"Term Removed"	UPAD	OR	OFF	2014/11/26 12:19
S142	0	"13438290"	USPAT; UPAD	ADJ	ON	2015/03/18 13:11

5/ 21/ 2015 6:04:04 PM  
C:\ Users\ pshah1\ Desktop\ Documents\ EAST\ Workspaces\ 13905064.w sp






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 Alexandria, Virginia 22313-1450  
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## BIB DATA SHEET

CONFIRMATION NO. 6790

SERIAL NUMBER	FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.	
14/257,888	04/21/2014	345	2692	6755-00105	
<b>RULE</b>					
<b>APPLICANTS</b> <b>INVENTORS</b> Jinrong Yang, Shanghai, CHINA; Ramzi Khalil Maalouf, Chevy Chase, MD; <b>** CONTINUING DATA *****</b> This application is a CIP of 14/058,731 10/21/2013 PAT 8717328 which is a CON of 13/905,064 05/29/2013 PAT 8593427 which claims benefit of 61/822,267 05/10/2013 and claims benefit of 61/826,673 05/23/2013 <b>** FOREIGN APPLICATIONS *****</b> <b>** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ** * SMALL ENTITY **</b> 05/07/2014					
Foreign Priority claimed <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 35 USC 119(a-d) conditions met <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Verified and Acknowledged <u>/PRIYANK J SHAH/</u> Examiner's Signature	<input type="checkbox"/> Met after Allowance Initials	<b>STATE OR COUNTRY</b> CHINA	<b>SHEETS DRAWINGS</b> 47	<b>TOTAL CLAIMS</b> 20	<b>INDEPENDENT CLAIMS</b> 3
<b>ADDRESS</b> MEYERTONS, HOOD, KIVLIN, KOWERT & GOETZEL, P.C. P.O. BOX 398 AUSTIN, TX 78767-0398 UNITED STATES					
<b>TITLE</b> SYSTEM AND METHOD FOR MANAGING DISPLAY POWER CONSUMPTION					
<b>FILING FEE RECEIVED</b> 730	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:		<input type="checkbox"/> All Fees <input type="checkbox"/> 1.16 Fees (Filing) <input type="checkbox"/> 1.17 Fees (Processing Ext. of time) <input type="checkbox"/> 1.18 Fees (Issue) <input type="checkbox"/> Other _____ <input type="checkbox"/> Credit		


<b>Issue Classification</b> 	<b>Application/Control No.</b> 14257888	<b>Applicant(s)/Patent Under Reexamination</b> YANG ET AL.	
	<b>Examiner</b> PRIYANK SHAH	<b>Art Unit</b> 2692	

CPC						
Symbol					Type	Version
G06F		1	/	3265	F	2013-01-01
Y02B		60	/	32	A	2013-01-01
Y02B		60	/	1242	A	2013-01-01
G06F		1	/	3262	I	2013-01-01
G06F		2203	/	04803	A	2013-01-01
G06F		3	/	04886	I	2013-01-01
Y02B		60	/	148	A	2013-01-01
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CPC Combination Sets				
Symbol	Type	Set	Ranking	Version

NONE  (Assistant Examiner) _____ (Date) _____		<b>Total Claims Allowed:</b> 19	
/PRIYANK SHAH/ Primary Examiner.Art Unit 2692  (Primary Examiner) _____ (Date) _____		O.G. Print Claim(s) 1	O.G. Print Figure 35



<b>Issue Classification</b> 	<b>Application/Control No.</b> 14257888	<b>Applicant(s)/Patent Under Reexamination</b> YANG ET AL.
	<b>Examiner</b> PRIYANK SHAH	<b>Art Unit</b> 2692

<input type="checkbox"/> Claims renumbered in the same order as presented by applicant															
<input type="checkbox"/> CPA															
<input type="checkbox"/> T.D.															
<input type="checkbox"/> R.1.47															
Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
1	1	17	17												
2	2	18	18												
3	3		19												
4	4	19	20												
5	5														
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8	8														
9	9														
10	10														
11	11														
12	12														
13	13														
14	14														
15	15														
16	16														

NONE	<b>Total Claims Allowed:</b> 19	
(Assistant Examiner)	(Date)	
/PRIYANK SHAH/ Primary Examiner.Art Unit 2692	5/21/2015	O.G. Print Claim(s) 1
(Primary Examiner)	(Date)	O.G. Print Figure 35

Doc code: IDS

PTO/SB/08a (01-10)

Doc description: Information Disclosure Statement (IDS) Filed

Approved for use through 07/31/2012. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> ( Not for submission under 37 CFR 1.99)	Application Number		14257888
	Filing Date		2014-04-21
	First Named Inventor	Jinrong Yang	
	Art Unit	2692	
	Examiner Name	SHAH, PRIYANK J	
	Attorney Docket Number	6755-00105	

U.S.PATENTS						
Examiner Initial*	Cite No	Patent Number	Kind Code <sup>1</sup>	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	8433373		2013-04-30	Song, et al.	
	2	8593427		2013-11-26	Yang , et al.	
	3	8717328		2014-05-06	Yang , et al.	
	4	8316254		2012-11-20	Kaneko , et al.	
	5	8774868		2014-07-08	Niu , et al.	
	6	8519964		2013-08-27	Platzer , et al.	
	7	8434153		2013-04-30	Sundaramurthy , et al.	
If you wish to add additional U.S. Patent citation information please click the Add button.						
U.S.PATENT APPLICATION PUBLICATIONS						

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**  
( Not for submission under 37 CFR 1.99)

Application Number	14257888
Filing Date	2014-04-21
First Named Inventor	Jinrong Yang
Art Unit	2692
Examiner Name	SHAH, PRIYANK J
Attorney Docket Number	6755-00105

Examiner Initial*	Cite No	Publication Number	Kind Code <sup>1</sup>	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20140333550		2014-11-13	Yang; Jinrong ; et al.	
	2	20140095914		2014-04-03	Andou; Hideaki ; et al.	
	3	20140333602		2014-11-13	Yang; Jinrong ; et al.	
	4	20100275047		2010-10-28	KANEKO; Yoshihiro ; et al.	
	5	20100167792		2010-07-01	Chen; Xudong ; et al.	
	6	20130130745		2013-05-23	Niu; Chao ; et al.	
	7	20140340384		2014-11-20	Chang; Hsin-Yi ; et al.	
	8	20110149820		2011-06-23	Lee; Je-Hun ; et al.	
	9	20100241888		2010-09-23	Kaneko; Yoshihiro ; et al.	
	10	20140143575		2014-05-22	Ansley; Carol	

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**  
( Not for submission under 37 CFR 1.99)

Application Number	14257888
Filing Date	2014-04-21
First Named Inventor	Jinrong Yang
Art Unit	2692
Examiner Name	SHAH, PRIYANK J
Attorney Docket Number	6755-00105

11	20090115767		2009-05-07	Chang; Hsin-Yi ; et al.	
12	20120329533		2012-12-27	Chen; Chun-ying ; et al.	
13	20120324260		2012-12-20	Kezuka; Hideo ; et al.	

If you wish to add additional U.S. Published Application citation information please click the Add button.

**FOREIGN PATENT DOCUMENTS**

Examiner Initial*	Cite No	Foreign Document Number <sup>3</sup>	Country Code <sup>2</sup>	Kind Code <sup>4</sup>	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	T <sup>5</sup>
	1							<input type="checkbox"/>

If you wish to add additional Foreign Patent Document citation information please click the Add button

**NON-PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>5</sup>
	1		<input type="checkbox"/>

If you wish to add additional non-patent literature document citation information please click the Add button

**EXAMINER SIGNATURE**

Examiner Signature	/PRIYANK SHAH/	Date Considered	05/21/2015
--------------------	----------------	-----------------	------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**  
( Not for submission under 37 CFR 1.99)

Application Number		14257888
Filing Date		2014-04-21
First Named Inventor	Jinrong Yang	
Art Unit		2692
Examiner Name	SHAH, PRIYANK J	
Attorney Docket Number		6755-00105

<sup>1</sup> See Kind Codes of USPTO Patent Documents at [www.USPTO.GOV](http://www.USPTO.GOV) or MPEP 901.04. <sup>2</sup> Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>3</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>4</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>5</sup> Applicant is to place a check mark here if English language translation is attached.



# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

( Not for submission under 37 CFR 1.99)

Application Number	14257888
Filing Date	2014-04-21
First Named Inventor	Jinrong Yang
Art Unit	2692
Examiner Name	SHAH, PRIYANK J
Attorney Docket Number	6755-00105

## CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

☐ That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

**OR**

☒ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

☐ See attached certification statement.

☒ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☐ A certification statement is not submitted herewith.

### SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Stephen A. Mason/	Date (YYYY-MM-DD)	2015-03-03
Name/Print	Stephen A. Mason	Registration Number	64303


This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

## Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
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3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

<b>Search Notes</b>  	<b>Application/Control No.</b>  14257888	<b>Applicant(s)/Patent Under Reexamination</b>  YANG ET AL.
	<b>Examiner</b>  PRIYANK SHAH	<b>Art Unit</b>  2692

CPC- SEARCHED		
Symbol	Date	Examiner
G09G2340/145	6/14/2014	PS
G09G2330/021	6/14/2014	PS
G09G2310/04	6/14/2014	PS
G06F1/3265	6/14/2014	PS

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
345	173,168,169,184	6/14/2014	PS
178	18.01,18.06	6/14/2014	PS
715	764,780,800	6/14/2014	PS

SEARCH NOTES		
Search Notes	Date	Examiner
Class 345 and text modified	6/14/2014	PS
Search history of 13905064	6/14/2014	PS
Forward and backwards citations search	6/14/2014	PS
Inventor name and claim search	6/14/2014	PS
Updated Inventor name and claim search	9/3/2014	PS
Updated search history and notice of references cited	9/3/2014	PS
Updated search history and notice of references cited	2/9/2015	PS
Updated Inventor name and claim search	2/9/2015	PS
Updated Inventor name and claim search	5/21/2015	PS
Updated search history and notice of references cited	5/21/2015	PS

INTERFERENCE SEARCH
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	/PRIYANK SHAH/ Primary Examiner.Art Unit 2692
--	--

US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner
	Interference search attached	5/21/2015	PS

	/PRIYANK SHAH/ Primary Examiner.Art Unit 2692
--	--



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www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/257,888	04/21/2014	Jinrong Yang	6755-00105	6790

35690 7590 05/19/2015  
MEYERTONS, HOOD, KIVLIN, KOWERT & GOETZEL, P.C.  
P.O. BOX 398  
AUSTIN, TX 78767-0398

EXAMINER
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SHAH, PRIYANK J

ART UNIT	PAPER NUMBER
----------	--------------

2692

NOTIFICATION DATE	DELIVERY MODE
-------------------	---------------

05/19/2015

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patent\_docketing@intprop.com  
ptomhkg@gmail.com

<b><i>Applicant-Initiated Interview Summary</i></b>	<b>Application No.</b> 14/257,888	<b>Applicant(s)</b> YANG ET AL.	
	<b>Examiner</b> PRIYANK SHAH	<b>Art Unit</b> 2692	

All participants (applicant, applicant's representative, PTO personnel):

(1) PRIYANK SHAH. (3) STEPHEN MASON.

(2) SCOTT WAITE. (4) \_\_\_\_\_.

Date of Interview: 14 May 2014.

Type:    ☒ Telephonic    ☐ Video Conference  
           ☐ Personal [copy given to: ☐ applicant    ☐ applicant's representative]

Exhibit shown or demonstration conducted:    ☐ Yes    ☒ No.  
     If Yes, brief description: N/A.

Issues Discussed    ☐101    ☐112    ☐102    ☒103    ☐Others  
 (For each of the checked box(es) above, please describe below the issue and detailed description of the discussion)

Claim(s) discussed: 1.

Identification of prior art discussed: Gunn et al. (US 2014/0120988 A1).

**Substance of Interview**  
 (For each issue discussed, provide a detailed description and indicate if agreement was reached. Some topics may include: identification or clarification of a reference or a portion thereof, claim interpretation, proposed amendments, arguments of any applied references etc...)

Applicant discussed the general concepts of the application and possible amendment incorporated from paragraphs 0070, 0187, 0196, 0210 and 0212 of the application into the independent claims to overcome the prior art of Gunn. Examiner indicated the possible language appears to overcome the prior art of Gunn, however, further evaluation was necessary in view of an official amendment submission.

**Applicant recordation instructions:** The formal written reply to the last Office action must include the substance of the interview. (See MPEP section 713.04). If a reply to the last Office action has already been filed, applicant is given a non-extendable period of the longer of one month or thirty days from this interview date, or the mailing date of this interview summary form, whichever is later, to file a statement of the substance of the interview

**Examiner recordation instructions:** Examiners must summarize the substance of any interview of record. A complete and proper recordation of the substance of an interview should include the items listed in MPEP 713.04 for complete and proper recordation including the identification of the general thrust of each argument or issue discussed, a general indication of any other pertinent matters discussed regarding patentability and the general results or outcome of the interview, to include an indication as to whether or not agreement was reached on the issues raised.

☐ Attachment

/PRIYANK SHAH/ Primary Examiner, Art Unit 2692	
---	--

## Summary of Record of Interview Requirements

### Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

#### Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews

Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,  
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

#### Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

Date \_\_\_\_\_



**In the Claims:**

1. (Currently amended) A portable phone comprising:  
a display comprising a display screen;  
one or more processors; and  
a memory comprising program instructions, wherein the program instructions are executed by the one or more processors to implement:  
a power management module configured to manage power consumption of the display, wherein when the display is not in a sleep mode the power management module directs a display controller to display a set of a plurality of graphical indications in color in a full configuration mode that puts substantially all of the display screen in a powered-on state;  
wherein when the display is in a sleep mode, the power management module directs the display controller to display a subset of the plurality of graphical indications, the subset comprising an unlock image comprising at least one of, time, date, or an indication of an email, text message, or voice message, and wherein the subset of the plurality of graphical indications are displayed in a portion of the display screen and are displayed in black, white or grayscale, instead of displayed in color; and  
a user interface module configured to respond, when the portable phone is in a locked state, to unlock gestures associated with the unlock image,  
wherein ~~response to~~ a particular unlock gesture of the unlock gestures causes;  
the phone to transition to an unlocked state, and  
the display controller to enter the full configuration mode;[[,]] and  
wherein ~~response to~~ another particular unlock gesture of the unlock gestures causes;  
the phone to transition to an unlocked state, and

the display controller to enter a proportional configuration mode that puts at least a portion of the display screen in a powered-off state and another portion of the display screen in the powered-on state.

2. (Previously presented) The portable phone of claim 1, wherein when the other portion of the display screen is in the powered-on state, the other portion of the display screen is configured to perform display functions and receive user input.

3. (Previously presented) The portable phone of claim 2, wherein the powered-on state configures the other portion of the display screen to function in a grayscale color mode.

4. (Previously presented) The portable phone of claim 3, wherein the powered-off state configures the portion of the of the display screen to not perform display functions and to not receive user input.

5. (Currently amended) The portable phone of claim 1, wherein the power management module is further configured to instruct the display controller to function in a full display mode, wherein the full display mode configures substantially all of an available area of the display screen in [[a]] the powered-on state when the display controller of the portable phone is in the full display mode.

6. (Previously presented) The portable phone of claim 1, wherein the power management module is further configured to manage the display of the portable phone when the display is in a powered-off mode, the power management module configured to direct the display controller to display at least one of a time, date or an indication of one or more messages while the display controller is in the powered-off mode.

7. (Previously presented) The portable phone of claim 1, wherein the power management module is further configured to direct the display controller to transition

between modes based on a configurable battery power threshold, wherein the power management module is further configured to:

- determine that a battery power of the portable phone reaches the configurable battery power threshold; and
- subsequent to said determine, instruct the display controller to change from a full configuration mode to the proportional configuration mode.

8. (Previously presented) The portable phone of claim 7, wherein the configurable battery power threshold is a configurable setting in a user interface of the portable phone.

9. (Previously presented) The portable phone of claim 1, wherein the display is a touch-sensitive display, and wherein to respond to unlock gestures the user interface module is further configured to:

- detect a contact with the touch-sensitive display at a first predefined location corresponding to an unlock image; and
- continuously move the unlock image on the touch-sensitive display in accordance with movement of the contact while continuous contact with the display screen is maintained as part of the gestures, wherein the unlock image is a graphical, interactive user-interface object with which a user interacts in order to unlock the portable phone.

10. (Currently amended) A method comprising:

managing a display of a portable phone, wherein managing the display comprises:

- directing, by a power management module, the display, wherein when the display is not in a sleep mode, the power management module directs the display to display a set of a plurality of graphical indications in color in a full configuration mode that puts substantially all of the display of the portable phone in a powered-on state;

- when the display is in a sleep mode,

directing the display, by the power management module, to display a subset of the plurality of graphical indications, the subset comprising an unlock image comprising at least one of, time, date, or an indication of an email, text message, or voice message, and wherein the subset of the plurality of graphical indications are displayed in a portion of the display and are displayed in black, white or grayscale, instead of displayed in color; and

responding, by a user interface module when the portable phone is in a locked state, to unlock gestures associated with the unlock image, wherein responding to a particular unlock gesture of the unlock gestures comprises:

transitioning the portable phone to an unlocked state, and

causing the display to enter the full configuration mode,

and

wherein responding to another particular unlock gesture of the unlock gestures comprises:

transitioning the portable phone to an unlocked state, and

causing the display to enter a proportional configuration mode that puts at least a portion of the display in a powered-on state and another portion of the display in the powered-off state.

11. (Previously presented) The method of claim 10, wherein said responding to the other particular unlock gesture further comprises causing the other portion of the display to not perform display functions and not receive user input.

12. (Previously presented) The method of claim 11, wherein said responding to the particular unlock gesture further comprises causing the portion of the display to perform display functions and receive user input.

13. (Previously presented) The method of claim 12, further comprising instructing the display to function in a full configuration mode, wherein the full configuration mode configures substantially all of the display in a powered-on state.

14. (Currently amended) A portable phone comprising:

a display;

one or more processors; and

a memory comprising program instructions, wherein the program instructions are executable by the one or more processors to implement:

a power management module configured to manage power consumption of the display, wherein when the display is not in a sleep mode the power management module directs the display to display a set of a plurality of graphical indications in color in a full configuration mode that puts substantially all of the display ~~screen~~ in a powered-on state;

wherein when the display is in a sleep mode, the power management module directs the display to display a subset of the plurality of graphical indications, the subset comprising an unlock image comprising at least one of, time, date, or an indication of an email, text message, or voice message, and wherein the subset of the plurality of graphical indications are displayed in a portion of the display and are displayed in black, white or grayscale, instead of displayed in color; and

a user interface module configured to respond, when the portable phone is in a locked state, to unlock gestures associated with the unlock image,

wherein a particular unlock gesture of the unlock gestures causes:

the portable phone to transition to an unlocked state, and

the display to enter the full configuration mode;[[,]] and

wherein another particular unlock gesture of the unlock gestures causes;

the portable phone to transition to an unlocked state, and  
the display to enter a proportional configuration mode that  
puts at least a portion of the display in a powered-on  
state and another portion of the display in ~~[[the]]~~ a  
powered-off state.

15. (Previously presented) The portable phone of claim 14, wherein the powered-on state of the proportional configuration mode configures the portion of the display to perform display functions and receive user input.

16. (Previously presented) The portable phone of claim 15, wherein the locked state of the portable phone configures the display to function in a grayscale color mode.

17. (Previously presented) The portable phone of claim 16, wherein the powered-off state of the proportional configuration mode configures the other portion of the display to not perform display functions and to not receive user input.

18. (Currently amended) The portable phone of claim 14, wherein the power management module is further configured to instruct the display to function in a full display mode, wherein the full display mode configures substantially all of the display in ~~[[a]]~~ the powered-on state.

19. (Canceled)

20. (Previously presented) The portable phone of claim 14, wherein the power management module is further configured to direct the display to change between modes based on a configurable battery power threshold, wherein the power management module is further configured to:

determine that a battery power of the portable phone has reached the configurable  
battery power threshold; and

subsequent to said determination, instruct the display to shift from the full configuration mode to the proportional configuration mode.

## **REMARKS**

Claims 1-18 and 20 remain pending in the application. Reconsideration is respectfully requested in light of the amendments and the following remarks.

### **Telephone Interview Summary**

A telephone interview was conducted on May 14, 2015 between Examiner Shah and Applicants' attorney. Differences between the claims and the cited references were discussed, as elaborated upon below. Examiner Shah appreciated the differences presented by Applicants' attorney, agreed that Applicants' claims distinguish over the currently-cited references and suggested that Applicants file a formal response such that the claims could be considered for allowance.

A further telephone interview is hereby formally requested if any issues remain preventing allowance. Applicants' attorney may be reached at 512-853-8850.

### **Claims 1-18 and 20 Are Patentable over Any Combination of the Cited References:**

The Office Action rejected claims 1-6 and 9-18 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Plut (U.S. Publication 2006/0020906) in view of Gunn, et al. (U.S. Publication 2014/0120988) (hereinafter "Gunn"), claims 7 and 20 as allegedly being unpatentable over Plut in view of Gunn, and in further view of Proctor (U.S. Publication 2006/0227122), and claim 8 allegedly being unpatentable over Plut in view of Gunn, in further view of Proctor, and still in further view of Weast, et al. (U.S. Publication 2013/0106684) (hereinafter "Weast"). Applicants respectfully traverse the rejection for at least the following reasons.

### **Independent Claim 1**



During the interview, Examiner Shah agreed that none of the currently-cited references teach or suggest an unlock gesture that cause **both**: (a) the phone to transition to an unlocked state, and (b) a determination of whether to put a display controller in one of a proportional configuration mode or a full configuration mode.

Thus, for at least the reasons presented above, the rejection of claim 1 is unsupported by the teachings of the cited references; reversal of the rejection is respectfully requested.

### **Independent Claims 10 and 14**

Claims 10 and 14 include aspects similar to claim 1 (e.g., *wherein responding to a particular unlock gesture of the unlock gestures comprises: transitioning the portable phone to an unlocked state, and causing the display to enter the full configuration mode*) and are similarly rejected. Applicants assert that the rejection of claims 10 and 14 is unsupported by the teachings of the cited references for at least reasons similar to those presented above with respect to claim 1. Reversal of the rejection of claims 10 and 14 is respectfully requested.

Numerous other ones of the dependent claims recite further distinctions over the cited references. However, since Applicants have shown that the independent claims are patentable, a further discussion of the dependent claims is not necessary at this time. Withdrawal of the rejection of these claims is respectfully requested. Applicants reserve the right to make further arguments.

## CONCLUSION

Applicants submit the application is in condition for allowance, and an early notice to that effect is respectfully requested.

If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C. Deposit Account No. 501505/6755-00105/RCK.

Respectfully submitted,

/Stephen A. Mason/  
Stephen A. Mason, Reg. #64,303  
Attorney for Applicants

Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C.  
P.O. Box 398  
Austin, TX 78767-0398  
Phone: (512) 853-8850

Date: May 18, 2015

## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	22378773
<b>Application Number:</b>	14257888
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	6790
<b>Title of Invention:</b>	SYSTEM AND METHOD FOR MANAGING DISPLAY POWER CONSUMPTION
<b>First Named Inventor/Applicant Name:</b>	Jinrong Yang
<b>Customer Number:</b>	35690
<b>Filer:</b>	Stephen Anthony Mason/Dena Poudrier
<b>Filer Authorized By:</b>	Stephen Anthony Mason
<b>Attorney Docket Number:</b>	6755-00105
<b>Receipt Date:</b>	18-MAY-2015
<b>Filing Date:</b>	21-APR-2014
<b>Time Stamp:</b>	17:28:02
<b>Application Type:</b>	Utility under 35 USC 111(a)

### Payment information:

Submitted with Payment	no
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### File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		RespOA2-00105.pdf	114703 4bb3a2683b8f43580a8e6c121e21d9617c5be45c	yes	11

	Multipart Description/PDF files in .zip description		
	Document Description	Start	End
	Amendment/Req. Reconsideration-After Non-Final Reject	1	1
	Claims	2	8
	Applicant Arguments/Remarks Made in an Amendment	9	11
Warnings:			
Information:			
Total Files Size (in bytes):		114703	
<p>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</p> <p><b><u>New Applications Under 35 U.S.C. 111</u></b> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><b><u>National Stage of an International Application under 35 U.S.C. 371</u></b> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><b><u>New International Application Filed with the USPTO as a Receiving Office</u></b> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>			

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

<b>PATENT APPLICATION FEE DETERMINATION RECORD</b> Substitute for Form PTO-875	Application or Docket Number <b>14/257,888</b>	Filing Date <b>04/21/2014</b>	<input type="checkbox"/> To be Mailed
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ENTITY: ☐ LARGE ☒ SMALL ☐ MICRO**APPLICATION AS FILED – PART I**

(Column 1)

(Column 2)

FOR	NUMBER FILED	NUMBER EXTRA	RATE (\$)	FEE (\$)
<input type="checkbox"/> BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	
<input type="checkbox"/> SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A	
<input type="checkbox"/> EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X \$ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X \$ =	
<input type="checkbox"/> APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			
<input type="checkbox"/> MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	

**APPLICATION AS AMENDED – PART II**

(Column 1)

(Column 2)

(Column 3)

AMENDMENT	05/18/2015	CLAIMS REMAINING AFTER AMENDMENT	MINUS	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)
	Total (37 CFR 1.16(i))	* 19	Minus	** 20	= 0	X \$40 =	0
	Independent (37 CFR 1.16(h))	* 3	Minus	***3	= 0	X \$210 =	0
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))						
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
TOTAL ADD'L FEE						<b>0</b>	

(Column 1)

(Column 2)

(Column 3)

AMENDMENT	CLAIMS REMAINING AFTER AMENDMENT	MINUS	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)
	Total (37 CFR 1.16(i))	*	Minus	**	=	X \$ =
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X \$ =
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))					
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					
TOTAL ADD'L FEE						

\* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

\*\* If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

\*\*\* If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

LIE  
/MARGARET BYARS/

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> ( Not for submission under 37 CFR 1.99)	Application Number		14257888
	Filing Date		2014-04-21
	First Named Inventor	Jinrong Yang	
	Art Unit	2692	
	Examiner Name	SHAH, PRIYANK J	
	Attorney Docket Number	6755-00105	

U.S.PATENTS						
Examiner Initial*	Cite No	Patent Number	Kind Code <sup>1</sup>	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	8433373		2013-04-30	Song, et al.	
	2	8593427		2013-11-26	Yang , et al.	
	3	8717328		2014-05-06	Yang , et al.	
	4	8316254		2012-11-20	Kaneko , et al.	
	5	8774868		2014-07-08	Niu , et al.	
	6	8519964		2013-08-27	Platzer , et al.	
	7	8434153		2013-04-30	Sundaramurthy , et al.	
If you wish to add additional U.S. Patent citation information please click the Add button.						
U.S.PATENT APPLICATION PUBLICATIONS						

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**  
( Not for submission under 37 CFR 1.99)

Application Number		14257888
Filing Date		2014-04-21
First Named Inventor	Jinrong Yang	
Art Unit		2692
Examiner Name	SHAH, PRIYANK J	
Attorney Docket Number		6755-00105

Examiner Initial*	Cite No	Publication Number	Kind Code <sup>1</sup>	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20140333550		2014-11-13	Yang; Jinrong ; et al.	
	2	20140095914		2014-04-03	Andou; Hideaki ; et al.	
	3	20140333602		2014-11-13	Yang; Jinrong ; et al.	
	4	20100275047		2010-10-28	KANEKO; Yoshihiro ; et al.	
	5	20100167792		2010-07-01	Chen; Xudong ; et al.	
	6	20130130745		2013-05-23	Niu; Chao ; et al.	
	7	20140340384		2014-11-20	Chang; Hsin-Yi ; et al.	
	8	20110149820		2011-06-23	Lee; Je-Hun ; et al.	
	9	20100241888		2010-09-23	Kaneko; Yoshihiro ; et al.	
	10	20140143575		2014-05-22	Ansley; Carol	

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> ( Not for submission under 37 CFR 1.99)	Application Number		14257888
	Filing Date		2014-04-21
	First Named Inventor	Jinrong Yang	
	Art Unit	2692	
	Examiner Name	SHAH, PRIYANK J	
	Attorney Docket Number	6755-00105	

	11	20090115767		2009-05-07	Chang; Hsin-Yi ; et al.	
	12	20120329533		2012-12-27	Chen; Chun-ying ; et al.	
	13	20120324260		2012-12-20	Kezuka; Hideo ; et al.	

If you wish to add additional U.S. Published Application citation information please click the Add button.

#### FOREIGN PATENT DOCUMENTS

Examiner Initial*	Cite No	Foreign Document Number <sup>3</sup>	Country Code <sup>2</sup>	Kind Code <sup>4</sup>	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	T <sup>5</sup>
	1							<input type="checkbox"/>

If you wish to add additional Foreign Patent Document citation information please click the Add button

#### NON-PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>5</sup>
	1		<input type="checkbox"/>

If you wish to add additional non-patent literature document citation information please click the Add button

#### EXAMINER SIGNATURE

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**  
( Not for submission under 37 CFR 1.99)

Application Number	14257888
Filing Date	2014-04-21
First Named Inventor	Jinrong Yang
Art Unit	2692
Examiner Name	SHAH, PRIYANK J
Attorney Docket Number	6755-00105

<sup>1</sup> See Kind Codes of USPTO Patent Documents at [www.USPTO.GOV](http://www.USPTO.GOV) or MPEP 901.04. <sup>2</sup> Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>3</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>4</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>5</sup> Applicant is to place a check mark here if English language translation is attached.

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**  
( Not for submission under 37 CFR 1.99)

Application Number	14257888
Filing Date	2014-04-21
First Named Inventor	Jinrong Yang
Art Unit	2692
Examiner Name	SHAH, PRIYANK J
Attorney Docket Number	6755-00105

**CERTIFICATION STATEMENT**

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

☐ That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

**OR**

☒ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

☐ See attached certification statement.

☒ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☐ A certification statement is not submitted herewith.

**SIGNATURE**

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Stephen A. Mason/	Date (YYYY-MM-DD)	2015-03-03
Name/Print	Stephen A. Mason	Registration Number	64303

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

## Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
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6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Patent Application Fee Transmittal				
Application Number:		14257888		
Filing Date:		21-Apr-2014		
Title of Invention:		SYSTEM AND METHOD FOR MANAGING DISPLAY POWER CONSUMPTION		
First Named Inventor/Applicant Name:		Jinrong Yang		
Filer:		Stephen Anthony Mason/Dena Poudrier		
Attorney Docket Number:		6755-00105		
Filed as Small Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
<b>Miscellaneous:</b>				
Submission- Information Disclosure Stmt	2806	1	90	90
<b>Total in USD (\$)</b>				<b>90</b>

## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	21656214
<b>Application Number:</b>	14257888
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	6790
<b>Title of Invention:</b>	SYSTEM AND METHOD FOR MANAGING DISPLAY POWER CONSUMPTION
<b>First Named Inventor/Applicant Name:</b>	Jinrong Yang
<b>Customer Number:</b>	35690
<b>Filer:</b>	Stephen Anthony Mason/Dena Poudrier
<b>Filer Authorized By:</b>	Stephen Anthony Mason
<b>Attorney Docket Number:</b>	6755-00105
<b>Receipt Date:</b>	03-MAR-2015
<b>Filing Date:</b>	21-APR-2014
<b>Time Stamp:</b>	15:52:20
<b>Application Type:</b>	Utility under 35 USC 111(a)

### Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$90
RAM confirmation Number	2613
Deposit Account	501505
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)

### File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Form (SB08)	IDS_6755-00105.pdf	69707	no	6
			431f2b28895f9e5dec7dc2bc31ddbe25ce845890		

#### Warnings:

#### Information:

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2	Fee Worksheet (SB06)	fee-info.pdf	30691	no	2
			8eed3a38bcf9926b37912b81a2d63305f07b38c5		

#### Warnings:

#### Information:

<b>Total Files Size (in bytes):</b>	100398
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**This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.**

#### New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

#### National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

#### New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/257,888	04/21/2014	Jinrong Yang	6755-00105	6790

35690 7590 02/18/2015  
MEYERTONS, HOOD, KIVLIN, KOWERT & GOETZEL, P.C.  
P.O. BOX 398  
AUSTIN, TX 78767-0398

EXAMINER
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SHAH, PRIYANK J

ART UNIT	PAPER NUMBER
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2692

NOTIFICATION DATE	DELIVERY MODE
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02/18/2015

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patent\_docketing@intprop.com  
ptomhkg@gmail.com



<b>Office Action Summary</b>	<b>Application No.</b> 14/257,888	<b>Applicant(s)</b> YANG ET AL.	
	<b>Examiner</b> PRIYANK SHAH	<b>Art Unit</b> 2692	<b>AIA (First Inventor to File) Status</b> Yes

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12/11/2014.  
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on \_\_\_\_; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims\*

- 5) ☒ Claim(s) 1-18 and 20 is/are pending in the application.  
5a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 6) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 7) ☒ Claim(s) 1-18 and 20 is/are rejected.
- 8) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 9) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

\* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see [http://www.uspto.gov/patents/init\\_events/pph/index.jsp](http://www.uspto.gov/patents/init_events/pph/index.jsp) or send an inquiry to [PPHfeedback@uspto.gov](mailto:PPHfeedback@uspto.gov).

### Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

#### Certified copies:

- a) ☐ All    b) ☐ Some\*\*    c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\*\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b)  
Paper No(s)/Mail Date \_\_\_\_.
- 3) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Other: \_\_\_\_.

### **DETAILED ACTION**

1. The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.
2. In the event the determination of the status of the application as subject to AIA 35 U.S.C. 102 and 103 (or as subject to pre-AIA 35 U.S.C. 102 and 103) is incorrect, any correction of the statutory basis for the rejection will not be considered a new ground of rejection if the prior art relied upon, and the rationale supporting the rejection, would be the same under either status.

### ***Response to Amendment***

3. Acknowledgement is made of amendment filed on 12/31/2014, in which claims 1-18 and 20 are amended, claim 19 is canceled and rejection of claims 1-18 and 20 are traversed and still pending.

### ***Claim Objections***

4. **Claims 5 and 18 objected to** because of the following informalities: claims 5 and 18, line 4 recites "a powered-on state". However, Examiner believes the limitation should read "*the* powered-on state". Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent for a claimed invention may not be obtained, notwithstanding that the claimed invention is not identically disclosed as set forth in section 102 of this title, if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 1-6 and 9-18 are rejected under 35 U.S.C. 103** as being unpatentable over Plut (US 2006/0020906 A1, hereinafter referred as Plut) in view of Gunn et al. (US 2014/0120988 A1, hereinafter referred as Gunn).

**Regarding claim 1**, Plut discloses a portable phone (¶0106 discloses The present invention finds use with computer systems such as desktop and laptop computers, personal digital assistants (PDAs), cellular telephones, digital cameras, portable computer systems, and the like) comprising:

a display comprising a display screen (23) (Figs. 2A-2B and ¶0047 disclose Pixel dimensions and resolution may characterize display area 23);

one or more processors (302) (Fig. 5 and ¶0107 discloses Computer system 300 comprises a processor, or CPU, 302); and

a memory (314) comprising program instructions, wherein the program instructions are executed by the one or more processors (302) to implement (Fig. 5 and ¶0118 discloses System bus 312 permits digital communication between system processor 302 and ROM 314, as well as permits communication between other components within system 300 and processor 302 and/or ROM 314):

a power management module configured to manage power consumption of the display wherein when the display is not in a sleep mode (¶0024 discloses inactivity in the display area) the power management module directs a display controller (346) to display a set of a plurality of graphical indications (26) in color in a full configuration mode that puts substantially all of to the display screen in a powered-on state (Fig. 2A and ¶0049 discloses FIG. 2A illustrates display area 23 before alteration of video

Art Unit: 2692

information in display area 23, while FIG. 2B shows display area 23 after alteration of video information; ¶0024 discloses decreasing the brightness and luminance, altering color for the video information, etc.);

wherein when the display is in a sleep mode, the plurality of graphical indications are displayed in a portion of the display screen and are displayed in black, white or grayscale, instead of displayed in color (¶0073 discloses Video information alterations may be applied in a number of color schemes, as one of skill in the art will appreciate. An HSL color scheme characterizes video output according to... degree of separation from gray having the same color (saturation)).

Plut doesn't explicitly disclose when the display is in a sleep mode, the power management module directs the display controller to display a subset of the plurality of graphical indications, the subset comprising an unlock image comprising at least one of, time, date, or an indication of an email, text message, or voice message, and wherein the subset of the plurality of graphical indications are displayed in a portion of the display screen, a user interface module configured to respond, when the portable phone is in a locked state, to unlock gestures associated with the unlock image, wherein response to a particular unlock gesture of the unlock gestures causes the display controller to enter the full configuration mode, and wherein response to another particular unlock gesture of the unlock gestures causes the display controller to enter a proportional configuration mode that puts at least a portion of the display screen in a powered-off state and another portion of the display screen in the powered-on state.

However, in a similar field of endeavor, Gunn discloses the present invention relates generally to the field of electronic devices having notification features to provide specialized information to a user. Specifically, Gunn discloses when the display is in a sleep mode (¶0015 and ¶0046 discloses mobile devices are in a powered-down or 'off' much or most of the time (e.g., in a 'sleep mode')), the power management module directs the display controller to display a subset of the plurality of graphical indications, the subset comprising an unlock image comprising at least one of, time, date, or an indication of an email, text message, or voice message (Figs. 4B, 4C, 5B, 5C, ¶0015, ¶0046 and ¶0059 disclose icons such as email messages, short message service (SMS) text messages, various updates or alerts, or other forms including the time are displayed in the off mode), and wherein the subset of the plurality of graphical indications are displayed in a portion of the display screen (Abstract discloses displaying partial screen information at the display during a sleep mode of the electronic device), a user interface module configured to respond, when the portable phone is in a locked state, to unlock gestures associated with the unlock image, wherein response to a particular unlock gesture of the unlock gestures causes the display controller to enter the full configuration mode (Fig. 3 and ¶0043-¶0045 discloses a 'fully awake' or 'on' mode of operation during which the processors 203 are operating (that is, the application processors are up and running); Fig. 9b, step 918 or 922 and ¶0095 discloses unlocking operation can be performed in regards to the steps 918 and 920 when the user releases one or more of the icons 405, 407 over partial region 810), and wherein response to another particular unlock gesture of the unlock gestures causes

the display controller to enter a proportional configuration mode (Fig. 3B, step 336; Figs. 4D, 5D and Fig. 9B disclose displaying peek view image 416 over partial area 810) that puts at least a portion of the display screen in a powered-off state and another portion of the display screen in the powered-on state (¶0016 and ¶0017 disclose even while the mobile device application processor and display are technically in a powered-down or 'off' state, by implementing Smart Partial OLED display technology; Fig. 3B, step 336; Figs. 4D, 5D, Fig. 9B and ¶0090 discloses the display entering a peek view mode to display notification details 416 over partial region 810 in response to the user continuously performing a touch and hold gesture over icon 404).

Therefore, it would have been obvious to one of ordinary skill in the art before the effective filing date of the invention to modify Plut by specifically providing an unlock gesture to configure the display to show the peek view of a notification over a partial region or another unlock gesture to awake the display from sleep mode, as taught by Gunn, for the purpose of displaying the most relevant information at just the right time while conserving power (¶0015).

**Regarding claim 2**, Plut doesn't explicitly disclose the portable phone of claim 1, wherein when the other portion of the display screen is in the powered-on state, the other portion of the display screen is configured to perform display functions and receive user input.

However, Gunn discloses in Fig. 9B, steps 920, ¶0092 and ¶0093 discloses if the user holds their touch for a specific ('long') amount of time and ultimately releases their

touch after sliding the finger 512 to the hit area corresponding to the icon 405 proximate the top partial area 910 of the touch screen display 105.

Therefore, it would have been obvious to one of ordinary skill in the art before the effective filing date of the invention to modify Plut by specifically providing an unlock gesture to configure the display to show the peek view of a notification over a partial region or another unlock gesture to awake the display from sleep mode, as taught by Gunn, for the purpose of opening the notification in an intent to respond to the message.

**Regarding claim 3,** Plut discloses the portable phone of claim 2, wherein the powered-on state configures the other portion of the display screen to function in a grayscale color mode (§0073 discloses Video information alterations may be applied in a number of color schemes, as one of skill in the art will appreciate. An HSL color scheme characterizes video output according to... degree of separation from gray having the same color (saturation)).

**Regarding claim 4,** Plut doesn't explicitly disclose the portable phone of claim 3, wherein the powered-off state configures the portion of the of the display screen to not perform display functions and to not receive user input.

However, Gunn discloses in §0015 and §0046 mobile devices are in a powered-down or 'off' much or most of the time (e.g., in a 'sleep mode'). Additionally, §0016 and §0017 disclose even while the mobile device application processor and display are technically in a powered-down or 'off' state, by implementing Smart Partial OLED display technology. Gunn inherently discloses not receiving user input outside the

partial display area since graphical user interface elements are not displayed, and thus, cannot be touched.

Therefore, it would have been obvious to one of ordinary skill in the art before the effective filing date of the invention to modify Plut by specifically providing an unlock gesture to configure the display to show the peek view of a notification over a partial region or another unlock gesture to awake the display from sleep mode, as taught by Gunn, for the purpose of displaying the most relevant information at just the right time while conserving power (¶0015).

**Regarding claim 5**, Plut doesn't explicitly disclose the portable phone of claim 1, wherein the power management module is further configured to instruct the display controller to function in a full display mode, wherein the full display mode configures substantially all of an available area of the display screen in a powered-on state when the display controller of the portable phone is in the full display mode.

However, Gunn discloses in ¶0045 full screen information is displayed, where the full screen information includes data corresponding to substantially all pixels capable of being displayed by the display in the fully awake mode.

Therefore, it would have been obvious to one of ordinary skill in the art before the effective filing date of the invention to modify Plut by specifically providing an unlock gesture to configure the display to show the peek view of a notification over a partial region or another unlock gesture to awake the display from sleep mode, as taught by Gunn, for the purpose of displaying the most relevant information at just the right time while conserving power (¶0015).



**Regarding claim 6,** Plut doesn't explicitly disclose the portable phone of claim 1, wherein the power management module is further configured to manage the display of the portable phone when the display is in a powered-off mode, the power management module configured to direct the display controller to display at least one of a time, date or an indication of one or more messages while the display controller is in the powered-off mode.

However, Gunn discloses in ¶0015 and ¶0046 mobile devices are in a powered-down or 'off' much or most of the time (e.g., in a 'sleep mode'). Additionally, ¶0016 and ¶0017 disclose even while the mobile device application processor and display are technically in a powered-down or 'off' state, by implementing Smart Partial OLED display technology. Figs. 4B, 4C, 5B, 5C, ¶0015, ¶0046 and ¶0059 disclose icons such as email messages, short message service (SMS) text messages, various updates or alerts, or other forms including the time are displayed in the off mode

Therefore, it would have been obvious to one of ordinary skill in the art before the effective filing date of the invention to modify Plut by specifically providing one or more messages, as taught by Gunn, for the purpose of displaying the most relevant information at just the right time while conserving power (¶0015).

**Regarding claim 9,** Plut doesn't explicitly disclose the portable phone of claim 1, wherein the display is a touch-sensitive display, and wherein to respond to unlock gestures the user interface module is further configured to: detect a contact with the touch-sensitive display at a first predefined location corresponding to an unlock image; and continuously move the unlock image on the touch-sensitive display in accordance

with movement of the contact while continuous contact with the display screen is maintained as part of the gestures, wherein the unlock image is a graphical, interactive user-interface object with which a user interacts in order to unlock the portable phone.

However, Gunn discloses in Fig. 3 and ¶¶0043-¶¶0045 a 'fully awake' or 'on' mode of operation during which the processors 203 are operating (that is, the application processors are up and running). Fig. 9b, step 918 or 922 and ¶¶0095 discloses unlocking operation can be performed in regards to the steps 918 and 920 when the user releases one or more of the icons 405, 407 over partial region 810. Figs. 4D, 5D, 9B and ¶¶0064 discloses ii) then manipulates the finger 512 to slide upward or downward (e.g., in accordance with either of the arrows 515 of FIG. 5D) until the finger reaches an appropriate one of the image portions of the peek view image corresponding to the hit area that was originally touched (e.g., reaches one of the icons 405, 407 as shown in the peek view 414), and (iii) then releases the hit area by removing the finger 512 from the touch screen display.

Therefore, it would have been obvious to one of ordinary skill in the art before the effective filing date of the invention to modify Plut by specifically providing an unlocking gesture, as taught by Gunn, for the purpose of displaying the most relevant information at just the right time while conserving power (¶¶0015).

**Regarding claims 10-13**, these method claims have similar limitations as respective apparatus claims 1, 4, 2 and 5, and therefore rejected on similar grounds.

**Regarding claims 14-18**, these apparatus claims have similar limitations as respective apparatus claims 1-5, and therefore rejected on similar grounds.

7. **Claims 7 and 20 are rejected under 35 U.S.C. 103** as being unpatentable over Plut in view of Gunn, and in further view of Proctor (US 2006/0227122 A1, hereinafter referred as Proctor).

**Regarding claim 7,** Plut as modified doesn't explicitly disclose the portable phone of claim 1, wherein the power management module is further configured to direct the display controller to transition between modes based on a configurable battery power threshold, wherein the power management module is further configured to: determine that a battery power of the portable phone reaches the configurable battery power threshold; and subsequent to said determine, instruct the display controller to change from a full configuration mode to the proportional configuration mode.

However, in a similar field of endeavor, Proctor discloses an electronic device has a single display panel that operates in multiple modes to support different display capabilities. Specifically, Proctor discloses the portable phone of claim 1, wherein the power management module is further configured to direct the display controller (406) to transition between modes based on a configurable battery power threshold (§0030 discloses Current battery level may also be used to decide when to switch modes. For example, when the battery level depletes to a specified threshold level, the device may switch from full display mode to partial display mode), wherein the power management module is further configured to: determine that a battery power of the portable phone reaches the configurable battery power threshold (§0030 discloses when the battery level depletes to a specified threshold level, the device may switch from full display mode to partial display mode); and subsequent to said determine, instruct the display

controller to change from a full configuration mode to the proportional configuration mode (§0056 and §0060 discloses driver 420 toggles between the two modes in response to any number of events, including an activity time-out, a software-generated event, battery level, or a user command).

Therefore, it would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to further modify Plut by specifically providing battery power threshold is a configurable setting, as taught by Proctor, for the purpose of having user level interaction with the electronic device for displaying partial display mode.

**Regarding claim 20**, this apparatus claim has similar limitations as apparatus claim 7, and therefore rejected on similar grounds.

8. **Claim 8 is rejected under 35 U.S.C. 103** as being unpatentable over Plut in view of Gunn, in further view of Proctor, and still in further view of Weast et al. (US 2013/0106684 A1, hereinafter referred as Weast).

**Regarding claim 8**, Plut as modified doesn't explicitly disclose the portable phone of claim 7, wherein the configurable battery power threshold is a configurable setting in a user interface of the portable phone.

However, in a similar field of endeavor, Weast discloses a wearable device assembly has a housing supporting a controller, display and indicator system thereon. In addition, Weast reference is reasonably pertinent to the problem faced by the inventor, in which §0225 discloses the device may time-out from the information display loop by deactivating one or more displays (e.g., to conserve power) and/or other device

components. Specifically, ¶0247 discloses For example, if a battery level is below a threshold amount (e.g., 30%), the device may automatically remove some of the options and/or displays. Other threshold amounts may be used. The threshold may also be user-configurable. Additionally, the functions that are removed at different threshold battery levels may also be configured/selected by the user (e.g. battery power threshold is a configurable setting).

Therefore, it would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to further modify Plut by specifically providing battery power threshold is a configurable setting, as taught by Weast, for the purpose of having user level interaction with the electronic device for displaying partial display mode.

### ***Response to Arguments***

9. Applicant's arguments with respect to claims 1-18 and 20 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PRIYANK SHAH whose telephone number is (571)270-3732. The examiner can normally be reached on Monday-Thursday 10:30am to 7:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lun Yi Lao can be reached on (571)272-7671. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 14/257,888  
Art Unit: 2692

Page 15

/PRIYANK SHAH/  
Primary Examiner, Art Unit 2692

<b>Notice of References Cited</b>	Application/Control No. 14/257,888	Applicant(s)/Patent Under Reexamination YANG ET AL.	
	Examiner PRIYANK SHAH	Art Unit 2692	Page 1 of 1

**U.S. PATENT DOCUMENTS**

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-2014/0120988 A1	05-2014	Gunn et al.	455/566
	B	US-			
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

**FOREIGN PATENT DOCUMENTS**

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

**NON-PATENT DOCUMENTS**

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)  
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.



## EAST Search History

## EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S98	3	(G06F1/3265 OR G06F1/3259).cpc. and @ad<"20130510" and (maximiz\$3 or extend\$3 or dragg\$3 or slid\$3 or mov\$3) with bar with (power or cut or remov\$3) and (screen or display or active or inactive or dead) (divi\$2 or division or partition\$3 or portion\$3 or area or section or region)	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2014/12/01 12:16
S99	3	(G06F1/3265 OR G06F1/3259).cpc. and @ad<"20130510" and (maximiz\$3 or extend\$3 or dragg\$3 or slid\$3 or mov\$3 or contract\$3 or minimiz\$3) with bar with (power or cut or remov\$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2014/12/01 12:16
S100	1	(G06F1/3265 OR G06F1/3259).cpc. and @ad<"20130510" and @ad<"20130510" and (maximiz\$3 or extend\$3 or dragg\$3 or slid\$3 or mov\$3 or contract\$3 or minimiz\$3) with bar with (undisplay\$3 or black or blank or power or visible or cover\$3 or uncover\$3 or reveal\$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2014/12/01 12:16
S101	8	((("20080225033") or ("20140192063") or ("20140122911") or ("20130145303")).PN.	US-PGPUB; USPAT; USOCR; DERWENT	OR	OFF	2015/01/11 21:42
S102	2	("20060132474").PN.	US-PGPUB; USPAT; USOCR; DERWENT	OR	OFF	2015/01/11 21:45
S103	1	(11/020397).APP.	US-PGPUB; USPAT; USOCR; DERWENT	OR	OFF	2015/01/11 21:48
S104	8	US-6633274-\$.DID. OR US-7123247-\$.DID. OR US-7190338-\$.DID. OR US-7239742-\$.DID.	US-PGPUB; USPAT; JPO; DERWENT	ADJ	ON	2015/01/11 21:49
S105	89	("5844539"   "5867140"   "6236388"   "6393145"   "6486862"   "6804029"   "6831662"   "7034816"   "7043276"   "7068253").PN. OR ("7239742").URPN.	US-PGPUB; USPAT; USOCR	ADJ	ON	2015/01/11 21:51
S106	61	("20020040442"   "20020119788"   "20020173295"   "20020180723"   "20030126330"   "20030200481"   "20040203768"   "20040257316"   "20050044423"   "20050110717"   "20050124389"   "20050283724"	US-PGPUB; USPAT; USOCR	ADJ	ON	2015/01/11 21:58


		"20060101293"   "20060123081"   "20060132474"   "20060206733"   "20060236144"   "20060267972"   "20070004393"   "20070021108"   "20070073725"   "20070082712"   "20070226649"   "20080055318"   "20080220715"   "20080243808"   "20080253345"   "20080261593"   "20080288955"   "20090019131"   "20090070030"   "20090070606"   "20090138276"   "20090163226"   "20090165145"   "20090286557"   "20090322800"   "20100062788"   "20100277512"   "20100298048"   "20100318903"   "20110074765"   "20110080419"   "6240521"   "6272545"   "6282508"   "6530083"   "6603469"   "6633274"   "6753842"   "6795062"   "6910139"   "6973333"   "7123247"   "7190338"   "7239742"   "7424674"   "7463255"   "7581180"   "7782333"   "8254957").PN. OR ("8803868").URPN.				
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S108	2	("20130063384").PN.	US- PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2015/01/29 22:33
S109	2	("20120249466").PN.	US- PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2015/01/29 22:34
S110	1	(13/681442).APP.	US- PGPUB;	OR	OFF	2015/01/29 22:36

			USPAT; USOCR; EPO; JPO; DERWENT			
S111	2950	(AMIYA-Koichi or KUNO-Takatsugu or MURAKAMI-Hiroshi or TANAKA-Yusaku or IWAMOTO-Hiroshi or SAWADA-Kenichi).in. and @ad<"20111121"	US- PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2015/01/29 23:14
S112	67	(AMIYA-Koichi or KUNO-Takatsugu or MURAKAMI-Hiroshi or TANAKA-Yusaku or IWAMOTO-Hiroshi or SAWADA-Kenichi).in. and @ad<"20111121" and first near2 (display or screen)	US- PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2015/01/29 23:14
S113	28	(AMIYA-Koichi or KUNO-Takatsugu or MURAKAMI-Hiroshi or TANAKA-Yusaku or IWAMOTO-Hiroshi or SAWADA-Kenichi).in. and @ad<"20111121" and (mobile or handheld or phone)	US- PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2015/01/29 23:15
S114	10	(( "7506261" ) or ( "20120139952" ) ).PN.	US- PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2015/01/29 23:32
S115	1	(12/575310).APP.	US- PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2015/01/29 23:45

EAST Search History (Interference)

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2/ 9/ 2015 12:30:32 PM  
C:\ Users\ pshah1\ Desktop\ Documents\ EAST\ Workspaces\ 13905064.wsp

<b>Search Notes</b>  	<b>Application/Control No.</b>  14257888	<b>Applicant(s)/Patent Under Reexamination</b>  YANG ET AL.
	<b>Examiner</b>  PRIYANK SHAH	<b>Art Unit</b>  2692

CPC- SEARCHED		
Symbol	Date	Examiner
G09G2340/145	6/14/2014	PS
G09G2330/021	6/14/2014	PS
G09G2310/04	6/14/2014	PS
G06F1/3265	6/14/2014	PS

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
345	173,168,169,184	6/14/2014	PS
178	18.01,18.06	6/14/2014	PS
715	764,780,800	6/14/2014	PS

SEARCH NOTES		
Search Notes	Date	Examiner
Class 345 and text modified	6/14/2014	PS
Search history of 13905064	6/14/2014	PS
Forward and backwards citations search	6/14/2014	PS
Inventor name and claim search	6/14/2014	PS
Updated Inventor name and claim search	9/3/2014	PS
Updated search history and notice of references cited	9/3/2014	PS
Updated search history and notice of references cited	2/9/2015	PS
Updated Inventor name and claim search	2/9/2015	PS

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner

	/PRIYANK SHAH/ Primary Examiner.Art Unit 2692
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## REQUEST FOR CONTINUED EXAMINATION(RCE)TRANSMITTAL (Submitted Only via EFS-Web)

Application Number	14/257,888	Filing Date	2014-04-21	Docket Number (if applicable)	6755-00105	Art Unit	2692
First Named Inventor	Jinrong Yang			Examiner Name	Shah, Priyank J		

**This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application.**

Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. The Instruction Sheet for this form is located at WWW.USPTO.GOV

### SUBMISSION REQUIRED UNDER 37 CFR 1.114

Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).

☒ Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.

☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on \_\_\_\_\_

☐ Other \_\_\_\_\_

☐ Enclosed

☐ Amendment/Reply

☐ Information Disclosure Statement (IDS)

☐ Affidavit(s)/ Declaration(s)

☐ Other \_\_\_\_\_

### MISCELLANEOUS

☐ Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of months \_\_\_\_\_  
(Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)

☐ Other \_\_\_\_\_

### FEES

**The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.**

☒ The Director is hereby authorized to charge any underpayment of fees, or credit any overpayments, to  
Deposit Account No 501505

### SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

☒ Patent Practitioner Signature

☐ Applicant Signature

Signature of Registered U.S. Patent Practitioner			
Signature	/Stephen A. Mason/	Date (YYYY-MM-DD)	2014-12-11
Name	Stephen A. Mason	Registration Number	64303

This collection of information is required by 37 CFR 1.114. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450.

*If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.*

## Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

## Electronic Patent Application Fee Transmittal

<b>Application Number:</b>	14257888			
<b>Filing Date:</b>	21-Apr-2014			
<b>Title of Invention:</b>	SYSTEM AND METHOD FOR MANAGING DISPLAY POWER CONSUMPTION			
<b>First Named Inventor/Applicant Name:</b>	Jinrong Yang			
<b>Filer:</b>	Stephen Anthony Mason/Dena Poudrier			
<b>Attorney Docket Number:</b>	6755-00105			
Filed as Small Entity				
<b>Filing Fees for    Utility under 35 USC 111(a)</b>				
<b>Description</b>	<b>Fee Code</b>	<b>Quantity</b>	<b>Amount</b>	<b>Sub-Total in USD(\$)</b>
<b>Basic Filing:</b>				
<b>Pages:</b>				
<b>Claims:</b>				
<b>Miscellaneous-Filing:</b>				
<b>Petition:</b>				
<b>Patent-Appeals-and-Interference:</b>				
<b>Post-Allowance-and-Post-Issuance:</b>				
<b>Extension-of-Time:</b>				



Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
<b>Miscellaneous:</b>				
Request for Continued Examination	2801	1	600	600
<b>Total in USD (\$)</b>				<b>600</b>

## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	20934346
<b>Application Number:</b>	14257888
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	6790
<b>Title of Invention:</b>	SYSTEM AND METHOD FOR MANAGING DISPLAY POWER CONSUMPTION
<b>First Named Inventor/Applicant Name:</b>	Jinrong Yang
<b>Customer Number:</b>	35690
<b>Filer:</b>	Stephen Anthony Mason/Dena Poudrier
<b>Filer Authorized By:</b>	Stephen Anthony Mason
<b>Attorney Docket Number:</b>	6755-00105
<b>Receipt Date:</b>	11-DEC-2014
<b>Filing Date:</b>	21-APR-2014
<b>Time Stamp:</b>	14:36:34
<b>Application Type:</b>	Utility under 35 USC 111(a)

### Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$600
RAM confirmation Number	866
Deposit Account	501505
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)

### File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Request for Continued Examination (RCE)	RCE-Transmittal.pdf	79071	no	3
			de5101a9709f0a3bcea68eb46c4b8e542ad8a9b		

#### Warnings:

This is not a USPTO supplied RCE SB30 form.

#### Information:

2	Fee Worksheet (SB06)	fee-info.pdf	30573	no	2
			346ff9bcd3d583e6c35f7a203fe0f7bd876f5ac6		

#### Warnings:

#### Information:

Total Files Size (in bytes):			109644
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**This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.**

#### New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

#### National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

#### New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/257,888	04/21/2014	Jinrong Yang	6755-00105	6790

35690 7590 12/03/2014  
MEYERTONS, HOOD, KIVLIN, KOWERT & GOETZEL, P.C.  
P.O. BOX 398  
AUSTIN, TX 78767-0398

EXAMINER
SHAH, PRIYANK J

ART UNIT	PAPER NUMBER
2692	

NOTIFICATION DATE	DELIVERY MODE
12/03/2014	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patent\_docketing@intprop.com  
ptomhkg@gmail.com

<b>Advisory Action</b> <b>Before the Filing of an Appeal Brief</b>	<b>Application No.</b> 14/257,888	<b>Applicant(s)</b> YANG ET AL.	
	<b>Examiner</b> PRIYANK SHAH	<b>Art Unit</b> 2692	<b>AIA (First Inventor to File) Status</b> Yes

**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED \_\_\_\_\_ FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

**NO NOTICE OF APPEAL FILED**

1. ☒ The reply was filed after a final rejection. No Notice of Appeal has been filed. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance;  
 (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114 if this is a utility or plant application. Note that RCEs are not permitted in design applications. The reply must be filed within one of the following time periods:

a) ☐ The period for reply expires \_\_\_\_\_ months from the mailing date of the final rejection.

b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action; or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

c) ☐ A prior Advisory Action was mailed more than 3 months after the mailing date of the final rejection in response to a first after-final reply filed within 2 months of the mailing date of the final rejection. The current period for reply expires \_\_\_\_\_ months from the mailing date of the prior Advisory Action or SIX MONTHS from the mailing date of the final rejection, whichever is earlier.

*Examiner Note:* If box 1 is checked, check either box (a), (b) or (c). ONLY CHECK BOX (b) WHEN THIS ADVISORY ACTION IS THE FIRST RESPONSE TO APPLICANT'S FIRST AFTER-FINAL REPLY WHICH WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. ONLY CHECK BOX (c) IN THE LIMITED SITUATION SET FORTH UNDER BOX (c). See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) or (c) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**NOTICE OF APPEAL**

2. ☐ The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

**AMENDMENTS**

3. ☒ The proposed amendments filed after a final rejection, but prior to the date of filing a brief, will not be entered because

a) ☒ They raise new issues that would require further consideration and/or search (see NOTE below);

b) ☐ They raise the issue of new matter (see NOTE below);

c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or

d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).

5. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.

6. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).

7. ☒ For purposes of appeal, the proposed amendment(s): (a) ☒ will not be entered, or (b) ☐ will be entered, and an explanation of how the new or amended claims would be rejected is provided below or appended.

**AFFIDAVIT OR OTHER EVIDENCE**

8. ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on \_\_\_\_\_.

9. ☐ The affidavit or other evidence filed after final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).

10. ☐ The affidavit or other evidence filed after the date of filing the Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).

11. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

**REQUEST FOR RECONSIDERATION/OTHER**

12. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:  
Futher search is required due to newly amended subject matter.

13. ☒ Note the attached Information *Disclosure Statement*(s). (PTO/SB/08) Paper No(s). \_\_\_\_\_

14. ☐ Other: \_\_\_\_\_.

**STATUS OF CLAIMS**

15. The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: \_\_\_\_\_.

Claim(s) objected to: \_\_\_\_\_.

Claim(s) rejected: 1-20.

Claim(s) withdrawn from consideration: \_\_\_\_\_.

**PATENT**  
**6755-00105**

Application No.: 14/257,888  
Filed: April 21, 2014  
Inventors:  
Jinrong Yang  
Ramzi Khalil Maalouf

Title: System and Method for  
Managing Display Power  
Consumption

§ § § § § § § § § §

Examiner: Shah, Priyank J  
Group/Art Unit: 2692  
Atty. Dkt. No: 6755-00105

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Patent and Trademark Office on the date shown below

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Stephen A. Mason

Printed Name

/Stephen A. Mason/

November 25, 2014

Signature

Date \_\_\_\_\_

## Page 114 of 380

Receipt date: 11/04/2014

Doc code: IDS

Doc description: Information Disclosure Statement (IDS) Filed

14257888 - GAIL: 2692

P.O. 05/05a (01-16)

Approved for use through 07/31/2012. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> ( Not for submission under 37 CFR 1.99)	Application Number		14257888	
	Filing Date		2014-04-21	
	First Named Inventor	Jinrong Yang		
	Art Unit	2692		
	Examiner Name	SHAH, PRIYANK J		
	Attorney Docket Number	6755-00105		

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	1	20080158117		2008-07-03	Wong; Yoon Kean ; et al.	
	2	20080225033		2008-09-18	Hector; Jason R.	
	3	20130332886		2013-12-12	Cranfill; Elizabeth C. ; et al.	

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<b>Receipt date: 11/04/2014</b>  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <b>( Not for submission under 37 CFR 1.99)</b>	Application Number		14257888	14257888 - GAU: 2692
	Filing Date		2014-04-21	
	First Named Inventor	Jinrong Yang		
	Art Unit	2692		
	Examiner Name	SHAH, PRIYANK J		
	Attorney Docket Number	6755-00105		

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Examiner Signature	/Priyank Shah/		Date Considered	11/26/2014
<p>*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</p>				
<p><sup>1</sup> See Kind Codes of USPTO Patent Documents at <a href="http://www.USPTO.GOV">www.USPTO.GOV</a> or MPEP 901.04. <sup>2</sup> Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>3</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>4</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>5</sup> Applicant is to place a check mark here if English language translation is attached.</p>				



<b>Receipt date: 11/04/2014</b>  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <b>( Not for submission under 37 CFR 1.99)</b>	Application Number		14257888	14257888 - GAU: 2692
	Filing Date		2014-04-21	
	First Named Inventor	Jinrong Yang		
	Art Unit	2692		
	Examiner Name	SHAH, PRIYANK J		
	Attorney Docket Number	6755-00105		

### CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

☐ That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

**OR**

☒ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

☐ See attached certification statement.

☒ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☐ A certification statement is not submitted herewith.

### SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Stephen A. Mason/	Date (YYYY-MM-DD)	2014-11-04
Name/Print	Stephen A. Mason	Registration Number	64303

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
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4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

**PATENT**  
**6755-00105**

[illegible]

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## Page 119 of 380

**In the Claims:**

1. (Currently amended) A portable phone ~~multifunction device~~ comprising:  
a display comprising a display screen;  
one or more processors; and  
a memory comprising program instructions, wherein the program instructions are executed by the one or more processors to implement:  
a power management module configured to manage power consumption of the display ~~a display controller of the multifunction device~~, wherein when the display is not in a sleep mode the power management module directs a display controller to display a set of a plurality of graphical indications in color in a full configuration mode that puts substantially all of ~~to manage the display the power management module is further configured to instruct the display controller to function in a proportional configuration mode, wherein the proportional configuration mode configures a portion of the display screen in a powered-on state and another portion of the display screen in a powered-off state;~~  
wherein when the display is in a sleep mode, the power management module directs the display controller to display a subset of the plurality of graphical indications, the subset comprising an unlock image comprising at least one of, time, date, or an indication of an email, text message, or voice message, and wherein the subset of the plurality of graphical indications are displayed in a portion of the display screen and are displayed in black, white or grayscale, instead of displayed in color; and ~~the portion of the display screen that is configured in the powered-on state comprises two or more isolated portions in the powered-on state, the two or more isolated portions in the powered-on state being non-contiguous with respect to one another and separated by at least some of the portion of the display screen that is in the powered-off state~~  
a user interface module configured to respond, when the portable phone is in a locked state, to unlock gestures associated with the unlock image,

wherein response to a particular unlock gesture of the unlock gestures causes the display controller to enter the full configuration mode, and wherein response to another particular unlock gesture of the unlock gestures causes the display controller to enter a proportional configuration mode that puts at least a portion of the display screen in a powered-off state and another portion of the display screen in the powered-on state.

2. (Currently amended) The portable phone ~~multifunction device~~ of claim 1, wherein when the other portion of the display screen is in the powered-on state, the other portion of the display screen is configured to perform display functions and receive user input.

3. (Currently amended) The portable phone ~~multifunction device~~ of claim 2, wherein the powered-on state configures the other portion of the display screen to function in a grayscale color mode.

4. (Currently amended) The portable phone ~~multifunction device~~ of claim 3, wherein the powered-off state configures the ~~other~~ portion of the of the display screen to not perform display functions and to not receive user input.

5. (Currently amended) The portable phone ~~multifunction device~~ of claim 1, wherein the power management module is further configured to instruct the display controller to function in a full display mode, wherein the full display mode configures substantially all of an available area of the display screen in a powered-on state when the display controller of the portable phone ~~device~~ is in the full display mode.

6. (Currently amended) The portable phone ~~multifunction device~~ of claim 1, wherein the power management module is further configured to manage the display of the portable phone ~~multifunction device~~ when the display is in a powered-off mode, the

power management module configured to direct the display controller to display at least one of a time, date or ~~and~~ an indication of one or more messages while the display controller is in the powered-off mode.

7. (Currently amended) The portable phone ~~multifunction device~~ of claim 1, wherein the power management module is further configured to direct the display controller to transition between modes based on a configurable battery power threshold, wherein the power management module is further configured to:

determine that a battery power of the portable phone ~~multifunction device~~ reaches the configurable battery power threshold; and  
subsequent to said determine, instruct the display controller to change from a full configuration mode to the proportional configuration mode.

8. (Currently amended) The portable phone ~~multifunction device~~ of claim 7, wherein the configurable battery power threshold is a configurable setting in a user interface of the portable phone ~~multifunction device~~.

9. (Currently amended) The portable phone ~~multifunction device~~ of claim 1, wherein the ~~device is set to a lock state, wherein the~~ display is a touch-sensitive display, and wherein to respond to unlock gestures the ~~program instructions are further executable by the one or more processors to implement a~~ user interface module is further configured to:

detect a contact with the touch-sensitive display at a first predefined location corresponding to an unlock image; and  
continuously move the unlock image on the touch-sensitive display in accordance with movement of the contact while continuous contact with the display screen is maintained as part of the gestures, wherein the unlock image is a graphical, interactive user-interface object with which a user interacts in order to unlock the ~~device~~ portable phone.;  
~~unlock the multifunction device into the proportional configuration mode when the move of the unlock image on the touch sensitive display results in~~

~~movement of the unlock image from the first predefined location to a predefined unlock region on the touch sensitive display; and  
unlock the multifunction device into the full configuration mode when the move of the unlock image on the touch sensitive display results in movement of the unlock image from the first predefined location to another predefined unlock region on the touch sensitive display.~~

10. (Currently amended) A method comprising:

managing a display of a portable phone ~~multifunction device~~, wherein managing the display comprises:

directing, instructing by a power management module, the display,  
wherein when the display is not in a sleep mode, the power  
management module directs the display to display a set of a  
plurality of graphical indications in color in a full configuration  
mode that puts substantially all of the device to transition from  
functioning in a full configuration mode to functioning in a  
proportional configuration mode, wherein the proportional  
configuration mode configures a portion of a display screen of the  
device portable phone in a powered-on state and another portion of  
the display screen of the device in a powered-off state;

when the display is in a sleep mode,

directing the display, by the power management module, to display  
a subset of the plurality of graphical indications, the subset  
comprising an unlock image comprising at least one of,  
time, date, or an indication of an email, text message, or  
voice message, and wherein the subset of the plurality of  
graphical indications are displayed in a portion of the  
display and are displayed in black, white or grayscale,  
instead of displayed in color; and wherein the portion of the  
display screen that is configured in the powered-on state  
comprises two or more isolated portions in the powered-on

~~state, the two or more isolated portions in the powered-on state being non-contiguous with respect to one another and separated by at least some of the portion of the display screen that is in the powered-off state~~

responding, by a user interface module when the portable phone is in a locked state, to unlock gestures associated with the unlock image, wherein responding to a particular unlock gesture of the unlock gestures comprises causing the display to enter the full configuration mode, and wherein responding to another particular unlock gesture of the unlock gestures comprises causing the display to enter a proportional configuration mode that puts at least a portion of the display in a powered-on state and another portion of the display in the powered-off state.

11. (Currently amended) The method of claim 10, wherein said responding to the other particular unlock gesture further comprises causing ~~instructing the device to function in a proportional configuration mode~~ causes the other portion of the display to not perform display functions and not receive user input.

12. (Currently amended) The method of claim 11, wherein said responding to the particular unlock gesture further comprises causing ~~instructing the display to function in a proportional configuration mode~~ causes the portion of the display to perform display functions and receive user input.

13. (Currently amended) The method of claim 12, further comprising instructing the display ~~screen~~ to function in a full configuration mode, wherein the full configuration mode configures substantially all ~~each portion~~ of the display ~~screen~~ in a powered-on state.

14. (Currently amended) A portable phone ~~multifunction device~~ comprising:



a display-screen;

one or more processors; and

a memory comprising program instructions, wherein the program instructions are executable by the one or more processors to implement:

a power management module configured to manage power consumption of the display ~~a display screen of the multifunction device~~, wherein when the display is not in a sleep mode the power management module directs the display to display a set of a plurality of graphical indications in color in a full configuration mode that puts substantially all to manage the display screen the power management module is further configured to instruct the display screen to function in a proportional configuration mode, wherein ~~the proportional configuration mode configures a portion of the display screen in a powered-on state and another portion of the display screen in a powered-off state~~;

wherein when the display is in a sleep mode, the power management module directs the display to display a subset of the plurality of graphical indications, the subset comprising an unlock image comprising at least one of, time, date, or an indication of an email, text message, or voice message, and wherein the subset of the plurality of graphical indications are displayed in a portion of the display and are displayed in black, white or grayscale, instead of displayed in color; and the portion of the display screen that is configured in the powered-on state comprises two or more isolated portions in the powered-on state, the two or more isolated portions in the powered-on state being non-contiguous with respect to one another and separated by at least some of the portion of the display screen that is in the powered-off state

a user interface module configured to respond, when the portable phone is in a locked state, to unlock gestures associated with the unlock image, wherein a particular unlock gesture of the unlock gestures causes the display to enter the full configuration mode, and

wherein another particular unlock gesture of the unlock gestures causes the display to enter a proportional configuration mode that puts at least a portion of the display in a powered-on state and another portion of the display in the powered-off state.

15. (Currently amended) The portable phone ~~multifunction device~~ of claim 14, wherein the powered-on state of the proportional configuration mode configures the portion of the display to perform display functions and receive user input.

16. (Currently amended) The portable phone ~~multifunction device~~ of claim 15, wherein the locked ~~powered-on~~ state of the portable phone ~~proportional configuration mode~~ configures the ~~portion of the~~ display to function in a grayscale color mode.

17. (Currently amended) The portable phone ~~multifunction device~~ of claim 16, wherein the powered-off state of the proportional configuration mode configures the other portion of the of the display ~~screen~~ to not perform display functions and to not receive user input.

18. (Currently amended) The portable phone ~~multifunction device~~ of claim 14, wherein the power management module is further configured to instruct the display ~~screen~~ to function in a full display mode, wherein the full display mode configures substantially all of the display in a powered-on state ~~when the display screen of the device is in the display mode.~~

19. (Canceled)

20. (Currently amended) The portable phone ~~multifunction device~~ of claim 14, wherein the power management module is further configured to direct the display ~~screen~~ to change between modes based on a configurable battery power threshold, wherein the power management module is further configured to:

determine that a battery power of the portable phone multifunction device has reached the configurable battery power threshold; and subsequent to said ~~determine~~ determination, instruct the display ~~screen~~ to shift from the full configuration mode to the proportional configuration mode.

## **REMARKS**

Claims 19 is canceled. Claims 1-18 and 20 remain pending in the application. Reconsideration is respectfully requested in light of the amendments and the following remarks.

### **Claims 1-20 Are Patentable over Any Combination of the Cited References:**

The Office Action rejected claims 1-3, 5, 6, 10, 14-16, 18 and 19 under 35 U.S.C. § 102(a)(1) or 102(a)(2) as allegedly being anticipated by Plut (U.S. Publication 2006/0020906) and claims 4, 11-13 and 17 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Plut in view of Katsu, et al. (U.S. Publication 2010/0315371) (hereinafter “Katsu”), claim 7 and 20 as allegedly being unpatentable over Plut in view of Proctor, claim 8 as allegedly being unpatentable over Plut in view of Proctor and in further view of Weast, et al. (U.S. Publication 2013/0106684) (hereinafter “Weast”), claim 9 as allegedly being unpatentable over Proctor in view of Katsu and McRae, et al. (U.S. Publication 2013/0080960) (hereinafter “McRae”). Applicants respectfully traverse the rejection for at least the following reasons.

### **Independent Claim 1 Is Patentable over Plut**

The cited references fail to anticipate “A portable phone ~~multifunction device~~ comprising: a display comprising a display screen; one or more processors; and a memory comprising program instructions, wherein the program instructions are executed by the one or more processors to implement: a power management module configured to manage power consumption of the display, wherein when the display is not in a sleep mode the power management module directs a display controller to display a set of a plurality of graphical indications in color in a full configuration mode that puts substantially all of the display screen in a powered-on state; wherein when the display is in a sleep mode, the power management module directs the display controller to display a subset of the plurality of graphical indications, the subset comprising an unlock image

comprising at least one of, time, date, or an indication of an email, text message, or voice message, and wherein the subset of the plurality of graphical indications are displayed in a portion of the display screen and are displayed in black, white or grayscale, instead of displayed in color; and a user interface module configured to respond, when the portable phone is in a locked state, to unlock gestures associated with the unlock image, wherein response to a particular unlock gesture of the unlock gestures causes the display controller to enter the full configuration mode, and wherein response to another particular unlock gesture of the unlock gestures causes the display controller to enter a proportional configuration mode that puts at least a portion of the display screen in a powered-off state and another portion of the display screen in the powered-on state,” as recited in claim 1.

In particular, Applicants’ attorney has reviewed Plut and the reference fails to teach or suggest *a user interface module configured to respond, when the portable phone is in a locked state, to unlock gestures associated with the unlock image, wherein response to a particular unlock gesture of the unlock gestures causes the display controller to enter the full configuration mode, and wherein response to another particular unlock gesture of the unlock gestures causes the display controller to enter a proportional configuration mode that puts at least a portion of the display screen in a powered-off state and another portion of the display screen in the powered-on state.*

For at least these reasons, withdrawal of the rejection is respectfully requested. At least for reasons similar to those presented above in regard to claim 1, the rejection of claims 10 and 14 is unsupported by the cited references and removal thereof is respectfully requested.

Numerous dependent claims recite further distinctions over the cited references. However, since Applicants have shown that the independent claims are patentable, and because Mr. Shah has indicated that the currently-cited references are distinguished by the claims presented herein, a further discussion of the dependent claims is not necessary

at this time. Withdrawal of the rejection of these claims is respectfully requested. Applicants reserve the right to make further arguments.

## CONCLUSION

Applicants submit the application is in condition for allowance, and an early notice to that effect is respectfully requested.

If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C. Deposit Account No. 501505/6755-00105/RCK.

Respectfully submitted,

/Stephen A. Mason/  
Stephen A. Mason, Reg. #64,303  
Attorney for Applicants

Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C.  
P.O. Box 398  
Austin, TX 78767-0398  
Phone: (512) 853-8850

Date: November 25, 2014

## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	20797811
<b>Application Number:</b>	14257888
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	6790
<b>Title of Invention:</b>	SYSTEM AND METHOD FOR MANAGING DISPLAY POWER CONSUMPTION
<b>First Named Inventor/Applicant Name:</b>	Jinrong Yang
<b>Customer Number:</b>	35690
<b>Filer:</b>	Robert C. Kowert/Dena Poudrier
<b>Filer Authorized By:</b>	Robert C. Kowert
<b>Attorney Docket Number:</b>	6755-00105
<b>Receipt Date:</b>	25-NOV-2014
<b>Filing Date:</b>	21-APR-2014
<b>Time Stamp:</b>	15:12:53
<b>Application Type:</b>	Utility under 35 USC 111(a)

### Payment information:

Submitted with Payment	no
------------------------	----

### File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		RespFOA-00105.pdf	140706 5776fdb374bf1f4170ee34e3b22db34bac40ac09	yes	13



	Multipart Description/PDF files in .zip description		
	Document Description	Start	End
	Response After Final Action	1	1
	Claims	2	9
	Applicant Arguments/Remarks Made in an Amendment	10	13
Warnings:			
Information:			
Total Files Size (in bytes):		140706	
<p>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</p> <p><b><u>New Applications Under 35 U.S.C. 111</u></b> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><b><u>National Stage of an International Application under 35 U.S.C. 371</u></b> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><b><u>New International Application Filed with the USPTO as a Receiving Office</u></b> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>			

<b>PATENT APPLICATION FEE DETERMINATION RECORD</b> Substitute for Form PTO-875	Application or Docket Number <b>14/257,888</b>	Filing Date <b>04/21/2014</b>	<input type="checkbox"/> To be Mailed
---	---	----------------------------------	---------------------------------------

ENTITY: ☐ LARGE ☒ SMALL ☐ MICRO

**APPLICATION AS FILED – PART I**

(Column 1)

(Column 2)

FOR	NUMBER FILED	NUMBER EXTRA	RATE (\$)	FEE (\$)
<input type="checkbox"/> BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	
<input type="checkbox"/> SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	
<input type="checkbox"/> EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X \$ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X \$ =	
<input type="checkbox"/> APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			
<input type="checkbox"/> MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	

**APPLICATION AS AMENDED – PART II**

(Column 1)

(Column 2)

(Column 3)

AMENDMENT	11/25/2014	CLAIMS REMAINING AFTER AMENDMENT	MINUS	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)
	Total (37 CFR 1.16(i))	* 19	Minus	** 20	= 0	X \$40 =	0
	Independent (37 CFR 1.16(h))	* 3	Minus	***3	= 0	X \$210 =	0
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))						
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
						TOTAL ADD'L FEE	0

(Column 1)

(Column 2)

(Column 3)

AMENDMENT	CLAIMS REMAINING AFTER AMENDMENT	MINUS	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)
	Total (37 CFR 1.16(i))	*	Minus	**	=	X \$ =
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X \$ =
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))					
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					
						TOTAL ADD'L FEE

\* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

\*\* If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

\*\*\* If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

LIE  
/DEBRA SAVOY/

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



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P.O. Box 1450  
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www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
14/257,888	04/21/2014	Jinrong Yang	6755-00105

**CONFIRMATION NO. 6790**

## PUBLICATION NOTICE



\*OC000000071833426\*

35690  
MEYERTONS, HOOD, KIVLIN, KOWERT & GOETZEL, P.C.  
P.O. BOX 398  
AUSTIN, TX 78767-0398

**Title:**SYSTEM AND METHOD FOR MANAGING DISPLAY POWER CONSUMPTION

**Publication No.**US-2014-0333602-A1

**Publication Date:**11/13/2014

## NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

The publication may be accessed through the USPTO's publically available Searchable Databases via the Internet at [www.uspto.gov](http://www.uspto.gov). The direct link to access the publication is currently <http://www.uspto.gov/patft/>.

The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Office of Public Records. The Office of Public Records can be reached by telephone at (703) 308-9726 or (800) 972-6382, by facsimile at (703) 305-8759, by mail addressed to the United States Patent and Trademark Office, Office of Public Records, Alexandria, VA 22313-1450 or via the Internet.

In addition, information on the status of the application, including the mailing date of Office actions and the dates of receipt of correspondence filed in the Office, may also be accessed via the Internet through the Patent Electronic Business Center at [www.uspto.gov](http://www.uspto.gov) using the public side of the Patent Application Information and Retrieval (PAIR) system. The direct link to access this status information is currently <http://pair.uspto.gov/>. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of PAIR.

Further assistance in electronically accessing the publication, or about PAIR, is available by calling the Patent Electronic Business Center at 1-866-217-9197.

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> ( Not for submission under 37 CFR 1.99)	Application Number		14257888
	Filing Date		2014-04-21
	First Named Inventor	Jinrong Yang	
	Art Unit	2692	
	Examiner Name	SHAH, PRIYANK J	
	Attorney Docket Number	6755-00105	

U.S.PATENTS						Remove
Examiner Initial*	Cite No	Patent Number	Kind Code <sup>1</sup>	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	7580031		2009-08-25	Plut	

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U.S.PATENT APPLICATION PUBLICATIONS						Remove
Examiner Initial*	Cite No	Publication Number	Kind Code <sup>1</sup>	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20080158117		2008-07-03	Wong; Yoon Kean ; et al.	
	2	20080225033		2008-09-18	Hector; Jason R.	
	3	20130332886		2013-12-12	Cranfill; Elizabeth C. ; et al.	

If you wish to add additional U.S. Published Application citation information please click the Add button.

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Examiner Initial*	Cite No	Foreign Document Number <sup>3</sup>	Country Code <sup>2</sup> i	Kind Code <sup>4</sup>	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T <sup>5</sup>
	1							<input type="checkbox"/>

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> ( Not for submission under 37 CFR 1.99)	Application Number		14257888
	Filing Date		2014-04-21
	First Named Inventor	Jinrong Yang	
	Art Unit	2692	
	Examiner Name	SHAH, PRIYANK J	
	Attorney Docket Number	6755-00105	

If you wish to add additional Foreign Patent Document citation information please click the Add button				Add
<b>NON-PATENT LITERATURE DOCUMENTS</b>				Remove
Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>5</sup>	
	1		<input type="checkbox"/>	
If you wish to add additional non-patent literature document citation information please click the Add button				
<b>EXAMINER SIGNATURE</b>				
Examiner Signature		Date Considered		
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.				
<sup>1</sup> See Kind Codes of USPTO Patent Documents at <a href="http://www.USPTO.GOV">www.USPTO.GOV</a> or MPEP 901.04. <sup>2</sup> Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>3</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>4</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>5</sup> Applicant is to place a check mark here if English language translation is attached.				

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**  
( Not for submission under 37 CFR 1.99)

Application Number	14257888
Filing Date	2014-04-21
First Named Inventor	Jinrong Yang
Art Unit	2692
Examiner Name	SHAH, PRIYANK J
Attorney Docket Number	6755-00105

**CERTIFICATION STATEMENT**

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

☐ That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

**OR**

☒ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

☐ See attached certification statement.

☒ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☐ A certification statement is not submitted herewith.

**SIGNATURE**

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Stephen A. Mason/	Date (YYYY-MM-DD)	2014-11-04
Name/Print	Stephen A. Mason	Registration Number	64303

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
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3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

## Electronic Patent Application Fee Transmittal

<b>Application Number:</b>	14257888			
<b>Filing Date:</b>	21-Apr-2014			
<b>Title of Invention:</b>	SYSTEM AND METHOD FOR MANAGING DISPLAY POWER CONSUMPTION			
<b>First Named Inventor/Applicant Name:</b>	Jinrong Yang			
<b>Filer:</b>	Stephen Anthony Mason/Jane Maher			
<b>Attorney Docket Number:</b>	6755-00105			
Filed as Large Entity				
<b>Utility under 35 USC 111(a) Filing Fees</b>				
<b>Description</b>	<b>Fee Code</b>	<b>Quantity</b>	<b>Amount</b>	<b>Sub-Total in USD(\$)</b>
<b>Basic Filing:</b>				
<b>Pages:</b>				
<b>Claims:</b>				
<b>Miscellaneous-Filing:</b>				
<b>Petition:</b>				
<b>Patent-Appeals-and-Interference:</b>				
<b>Post-Allowance-and-Post-Issuance:</b>				
<b>Extension-of-Time:</b>				



Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
<b>Miscellaneous:</b>				
Submission- Information Disclosure Stmt	1806	1	180	180
<b>Total in USD (\$)</b>				<b>180</b>

## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	20597669
<b>Application Number:</b>	14257888
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	6790
<b>Title of Invention:</b>	SYSTEM AND METHOD FOR MANAGING DISPLAY POWER CONSUMPTION
<b>First Named Inventor/Applicant Name:</b>	Jinrong Yang
<b>Customer Number:</b>	35690
<b>Filer:</b>	Stephen Anthony Mason/Jane Maher
<b>Filer Authorized By:</b>	Stephen Anthony Mason
<b>Attorney Docket Number:</b>	6755-00105
<b>Receipt Date:</b>	04-NOV-2014
<b>Filing Date:</b>	21-APR-2014
<b>Time Stamp:</b>	10:24:59
<b>Application Type:</b>	Utility under 35 USC 111(a)

### Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$ 180
RAM confirmation Number	8071
Deposit Account	501505
Authorized User	

### File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi-Part (if appl.)	Pages (if appl.)
				142 of 180	

1	Information Disclosure Statement (IDS) Form (SB08)	IDS_6755-00105.pdf	527809 ffb0adb89a47b3808944dbadf1cf4d043530cfb1	no	4
<b>Warnings:</b>					
<b>Information:</b>					
2	Fee Worksheet (SB06)	fee-info.pdf	30344 19efc0c87249a57e07e2a6522d7f4ae788ef38ba	no	2
<b>Warnings:</b>					
<b>Information:</b>					
<b>Total Files Size (in bytes):</b>			558153		
<p><b>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</b></p> <p><b><u>New Applications Under 35 U.S.C. 111</u></b>  <b>If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</b></p> <p><b><u>National Stage of an International Application under 35 U.S.C. 371</u></b>  <b>If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</b></p> <p><b><u>New International Application Filed with the USPTO as a Receiving Office</u></b>  <b>If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</b></p>					



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/257,888	04/21/2014	Jinrong Yang	6755-00105	6790
35690	7590	09/25/2014		
MEYERTONS, HOOD, KIVLIN, KOWERT & GOETZEL, P.C. P.O. BOX 398 AUSTIN, TX 78767-0398			EXAMINER SHAH, PRIYANK J	
			ART UNIT 2692	PAPER NUMBER
			NOTIFICATION DATE 09/25/2014	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patent\_docketing@intprop.com  
ptomhkg@gmail.com

<b>Office Action Summary</b>	<b>Application No.</b> 14/257,888	<b>Applicant(s)</b> YANG ET AL.	
	<b>Examiner</b> PRIYANK SHAH	<b>Art Unit</b> 2692	<b>AIA (First Inventor to File) Status</b> Yes

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08/25/2014.  
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on \_\_\_\_; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims\*

- 5) ☒ Claim(s) 1-20 is/are pending in the application.  
5a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 6) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 7) ☒ Claim(s) 1-20 is/are rejected.
- 8) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 9) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

\* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see [http://www.uspto.gov/patents/init\\_events/pph/index.jsp](http://www.uspto.gov/patents/init_events/pph/index.jsp) or send an inquiry to [PPHfeedback@uspto.gov](mailto:PPHfeedback@uspto.gov).

### Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

#### Certified copies:

- a) ☐ All    b) ☐ Some\*\*    c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\*\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 3) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b)<br>Paper No(s)/Mail Date <u>08/29/2014</u> . | 4) <input type="checkbox"/> Other: ____.  |

### **DETAILED ACTION**

1. The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.
2. In the event the determination of the status of the application as subject to AIA 35 U.S.C. 102 and 103 (or as subject to pre-AIA 35 U.S.C. 102 and 103) is incorrect, any correction of the statutory basis for the rejection will not be considered a new ground of rejection if the prior art relied upon, and the rationale supporting the rejection, would be the same under either status.
3. Previously objected claim 12 is overcome by amendment.

### ***Response to Amendment***

4. Acknowledgement is made of amendment filed on 08/25/2014, in which claims 1, 9-12, 14 are amended, claims 1-20 are traversed and claims 1-20 are still pending.

### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a)(1) the claimed invention was patented, described in a printed publication, or in public use, on sale or otherwise available to the public before the effective filing date of the claimed invention.

(a)(2) the claimed invention was described in a patent issued under section 151, or in an application for patent published or deemed published under section 122(b), in which the patent or application, as the case may be, names another inventor and was effectively filed before the effective filing date of the claimed invention.

6. **Claims 1-3, 5, 6, 10, 14-16, 18 and 19 are rejected under 35 U.S.C. 102(a)(1) or 102(a)(2)** as being anticipated by Plut (US 2006/0020906 A1, hereinafter referred as Plut).

**Regarding claim 1**, Plut discloses a multifunction device (¶0106 discloses The present invention finds use with computer systems such as desktop and laptop computers, personal digital assistants (PDAs), cellular telephones, digital cameras, portable computer systems, and the like) comprising:

a display comprising a display screen (23) (Figs. 2A-2B and ¶0047 disclose Pixel dimensions and resolution may characterize display area 23);

one or more processors (302) (Fig. 5 and ¶0107 discloses Computer system 300 comprises a processor, or CPU, 302); and

a memory (314) comprising program instructions, wherein the program instructions are executed by the one or more processors (302) to implement (Fig. 5 and ¶0118 discloses System bus 312 permits digital communication between system processor 302 and ROM 314, as well as permits communication between other components within system 300 and processor 302 and/or ROM 314):

a power management module configured to manage a display controller (346) of the multifunction device (Fig. 5 and ¶0113 discloses Video adapter 346 is responsible for assisting processor 302 with video graphics processing including power conservation alterations described herein), wherein to manage the display the power management module is further configured to instruct the display controller (346) to function in a proportional configuration mode (¶0005 discloses the power conservation

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systems and methods alter video information outside a graphical user interface item and preserve video information for the graphical user interface item; and ¶0006 discloses the graphical user interface item may include a toggle, toolbar, icon, clock, and/or other small graphics component relevant to usage of the electronics device), wherein the proportional configuration mode configures a portion of the display screen (23) in a powered-on state and another portion of the display screen (23) in a powered-off state (¶0049 discloses FIG. 2A illustrates display area 23 before alteration of video information in display area 23, while FIG. 2B shows display area 23 after alteration of video information. As shown in FIG. 2B, video information in background 28 has been turned to black);

wherein the portion of the display screen (23) that is configured in the powered-on state comprises two or more isolated portions in the powered-on state, the two or more isolated portions in the powered-on state being non-contiguous with respect to one another and separated by at least some of the portion of the display screen (23) that is in the powered-off state (¶0024 discloses For example, luminance for the video information outside the graphical user interface item may be reduced to black; and ¶0049 discloses FIG. 2A illustrates display area 23 before alteration of video information in display area 23, while FIG. 2B shows display area 23 after alteration of video information. As shown in FIG. 2B, video information in background 28 has been turned to black).

**Regarding claim 2,** Plut discloses the multifunction device of claim 1, wherein when the portion of the display screen (23) is in the powered-on state, the portion of the



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display screen (23) is configured to perform display functions and receive user input (¶0114 discloses a stylus working in cooperation with a position-sensing display on a PDA; Figs. 2A-2B and ¶0050 disclose Notably, the present invention conserves power without substantially compromising usability of electronics device 20. More specifically, the video information is altered such that the person may still see icons 26 and toolbars 30 in display area 23. Thus, a user may still perceive visual information relevant for interaction after returning to the display after a period of non-usage).

**Regarding claim 3,** Plut discloses the multifunction device of claim 2, wherein the powered-on state configures the portion of the display screen (23) to function in a grayscale color mode (¶0073 discloses Video information alterations may be applied in a number of color schemes, as one of skill in the art will appreciate. An HSL color scheme characterizes video output according to... degree of brightness for the color ranging from black to white (luminance)).

**Regarding claim 5,** Plut discloses the multifunction device of claim 1, wherein the power management module is further configured to instruct the display controller (346) to function in a full display mode (Fig. 5 and ¶0113 discloses Display device 308 may also digitally communicate with system bus 306 via a separate video interface, such as a video adapter 346), wherein the full display mode configures all of an available area of the display screen (23) in a powered-on state when the display controller (346) of the device is in the full display mode (¶0049 discloses FIG. 2A illustrates display area 23 before alteration of video information in display area 23).

**Regarding claim 6,** Plut discloses the multifunction device of claim 1, wherein the power management module is further configured to manage the display of the multifunction device when the display is in a powered-off mode, the power management module configured to direct the display controller (346) to display at least one of a time, date (Fig. 2A-2B 3B) and an indication of one or more messages while the display controller (346) is in the powered-off mode (¶0048 discloses bottom toolbar 30b that includes a clock; and ¶0050 discloses the video information is altered such that the person may still see icons 26 and toolbars 30 in display area 23).

**Regarding claim 10,** Plut discloses a method comprising:  
managing a display of a multifunction device (¶0106 discloses present invention finds use with computer systems such as desktop and laptop computers, personal digital assistants (PDAs), cellular telephones, digital cameras, portable computer systems, and the like), wherein managing the display comprises:

instructing the device to transition from functioning in a full configuration mode to functioning in a proportional configuration mode (¶0005 discloses the power conservation systems and methods alter video information outside a graphical user interface item and preserve video information for the graphical user interface item; and ¶0006 discloses the graphical user interface item may include a toggle, toolbar, icon, clock, and/or other small graphics component relevant to usage of the electronics device), wherein the proportional configuration mode configures a portion of a display screen (23) of the device in a powered-on state and another portion of the display screen (23) of the device in a powered-off state (¶0049 discloses FIG. 2A illustrates

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display area 23 before alteration of video information in display area 23, while FIG. 2B shows display area 23 after alteration of video information. As shown in FIG. 2B, video information in background 28 has been turned to black);

wherein the portion of the display screen (23) that is configured in the powered-on state comprises two or more isolated portions in the powered-on state, the two or more isolated portions in the powered-on state being non-contiguous with respect to one another and separated by at least some of the portion of the display screen (23) that is in the powered-off state (¶0024 discloses For example, luminance for the video information outside the graphical user interface item may be reduced to black; and ¶0049 discloses FIG. 2A illustrates display area 23 before alteration of video information in display area 23, while FIG. 2B shows display area 23 after alteration of video information. As shown in FIG. 2B, video information in background 28 has been turned to black).

**Regarding claim 14,** Plut discloses a multifunction device (¶0106 discloses The present invention finds use with computer systems such as desktop and laptop computers, personal digital assistants (PDAs), cellular telephones, digital cameras, portable computer systems, and the like) comprising:

a display screen (23) (Figs. 2A-2B and ¶0047 disclose Pixel dimensions and resolution may characterize display area 23);

one or more processors (302) (Fig. 5 and ¶0107 discloses Computer system 300 comprises a processor, or CPU, 302); and

a memory (314) comprising program instructions, wherein the program instructions are executable by the one or more processors (302) to implement (Fig. 5 and ¶0118 discloses System bus 312 permits digital communication between system processor 302 and ROM 314, as well as permits communication between other components within system 300 and processor 302 and/or ROM 314):

a power management module configured to manage a display screen (23) of the multifunction device (Fig. 5 and ¶0113 discloses Video adapter 346 is responsible for assisting processor 302 with video graphics processing including power conservation alterations described herein), wherein to manage the display screen (23) the power management module is further configured to instruct the display screen (23) to function in a proportional configuration mode (¶0005 discloses the power conservation systems and methods alter video information outside a graphical user interface item and preserve video information for the graphical user interface item; and ¶0006 discloses the graphical user interface item may include a toggle, toolbar, icon, clock, and/or other small graphics component relevant to usage of the electronics device), wherein the proportional configuration mode configures a portion of the display screen (23) in a powered-on state and another portion of the display screen (23) in a powered-off state (¶0049 discloses FIG. 2A illustrates display area 23 before alteration of video information in display area 23, while FIG. 2B shows display area 23 after alteration of video information. As shown in FIG. 2B, video information in background 28 has been turned to black);

wherein the portion of the display screen (23) that is configured in the powered-on state comprises two or more isolated portions in the powered-on state, the two or more isolated portions in the powered-on state being non-contiguous with respect to one another and separated by at least some of the portion of the display screen (23) that is in the powered-off state (¶0024 discloses For example, luminance for the video information outside the graphical user interface item may be reduced to black; and ¶0049 discloses FIG. 2A illustrates display area 23 before alteration of video information in display area 23, while FIG. 2B shows display area 23 after alteration of video information. As shown in FIG. 2B, video information in background 28 has been turned to black).

**Regarding claim 15,** Plut discloses the multifunction device of claim 14, wherein the powered-on state of the proportional configuration mode configures the portion of the display to perform display functions and receive user input (¶0114 discloses a stylus working in cooperation with a position-sensing display on a PDA; Figs. 2A-2B and ¶0050 disclose Notably, the present invention conserves power without substantially compromising usability of electronics device 20. More specifically, the video information is altered such that the person may still see icons 26 and toolbars 30 in display area 23. Thus, a user may still perceive visual information relevant for interaction after returning to the display after a period of non-usage).

**Regarding claim 16,** Plut discloses the multifunction device of claim 15, wherein the powered-on state of the proportional configuration mode configures the portion of the display to function in a grayscale color mode (¶0073 discloses Video information

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alterations may be applied in a number of color schemes, as one of skill in the art will appreciate. An HSL color scheme characterizes video output according to... degree of brightness for the color ranging from black to white (luminance)).

**Regarding claim 18,** Plut discloses the multifunction device of claim 14, wherein the power management module is further configured to instruct the display screen (23) to function in a full display mode (Fig. 5 and ¶0113 discloses Display device 308 may also digitally communicate with system bus 306 via a separate video interface, such as a video adapter 346), wherein the full display mode configures the display in a powered-on state when the display screen (23) of the device is in the display mode (¶0049 discloses FIG. 2A illustrates display area 23 before alteration of video information in display area 23).

**Regarding claim 19,** Plut discloses the multifunction device of claim 14, wherein the power management module is further configured to manage the display screen (23) of the multifunction device when the display screen (23) is in a sleep mode (¶0058 discloses the power conservation methods use a threshold inactivity time to determine when alterations to video information begin), the power management module configured to direct the display screen (23) to display at least one of a time (Fig. 2A-2B 3B), date and an indication of one or more messages while the display screen (23) controller (346) is in the sleep mode (¶0048 discloses bottom toolbar 30b that includes a clock; and ¶0050 discloses the video information is altered such that the person may still see icons 26 and toolbars 30 in display area 23).

***Claim Rejections - 35 USC § 103***

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7. The following is a quotation of 35 U.S.C. 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent for a claimed invention may not be obtained, notwithstanding that the claimed invention is not identically disclosed as set forth in section 102 of this title, if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claims 4, 11-13 and 17 are rejected under 35 U.S.C. 103** as being unpatentable over Plut in view of Katsu et al. (US 2010/0315371 A, hereinafter referred as Katsu).

**Regarding claim 4**, Plut discloses the multifunction device of claim 3, wherein the powered-off state configures the other portion of the of the display screen (23) to not perform display functions (¶0049 discloses FIG. 2A illustrates display area 23 before alteration of video information in display area 23, while FIG. 2B shows display area 23 after alteration of video information. As shown in FIG. 2B, video information in background 28 has been turned to black).

Plut doesn't explicitly disclose the other portion of the of the display screen to not receive user input.

However, in a similar field of endeavor, Katsu discloses an object of the invention is to provide a terminal device with a display function that enables to make only an operation of a desired operation key invalid, and easily perform the invalidation operation. Specifically, Katsu discloses other portion of the of the display screen to not receive user input (Fig. 5a and ¶0009 discloses a function control section which makes an operation of the operation key displayed between the moving element and the first display area invalid, in response to stopping of the moving element after the moving

element is moved by the first operating section. Also, ¶0052 discloses Then, the CPU 100 detects a new position of the bar 6, and performs a setting of making an operation with respect to an operation key within an area (a key invalidation area) between the bar 6 and the borderline BL invalid).

Therefore, it would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to further modify Plut by specifically providing the other portion of the of the display screen to not receive user input, as taught by Katsu, for the purpose of a terminal device with a display function that enables to make only an operation of a desired operation key invalid, and easily perform the invalidation operation (¶0006).

**Regarding claim 11**, Plut discloses the method of claim 10, wherein instructing the device to function in a proportional configuration mode causes the other portion of the display to not perform display functions (¶0049 discloses FIG. 2A illustrates display area 23 before alteration of video information in display area 23, while FIG. 2B shows display area 23 after alteration of video information. As shown in FIG. 2B, video information in background 28 has been turned to black).

Plut doesn't explicitly disclose the other portion of the display to not receive user input.

However, in a similar field of endeavor, Katsu discloses an object of the invention is to provide a terminal device with a display function that enables to make only an operation of a desired operation key invalid, and easily perform the invalidation operation. Specifically, Katsu discloses other portion of the of the display screen to not



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receive user input (Fig. 5a and ¶0009 discloses a function control section which makes an operation of the operation key displayed between the moving element and the first display area invalid, in response to stopping of the moving element after the moving element is moved by the first operating section. Also, ¶0052 discloses Then, the CPU 100 detects a new position of the bar 6, and performs a setting of making an operation with respect to an operation key within an area (a key invalidation area) between the bar 6 and the borderline BL invalid).

Therefore, it would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to further modify Plut by specifically providing the other portion of the of the display screen to not receive user input, as taught by Katsu, for the purpose of a terminal device with a display function that enables to make only an operation of a desired operation key invalid, and easily perform the invalidation operation (¶0006).

**Regarding claim 12,** Plut discloses the method of claim 11, wherein instructing the display to function in a proportional configuration mode causes the portion of the display to perform display functions and receive user input (¶0114 discloses a stylus working in cooperation with a position-sensing display on a PDA; Figs. 2A-2B and ¶0050 disclose Notably, the present invention conserves power without substantially compromising usability of electronics device 20. More specifically, the video information is altered such that the person may still see icons 26 and toolbars 30 in display area 23. Thus, a user may still perceive visual information relevant for interaction after returning to the display after a period of non-usage).

**Regarding claim 13,** Plut discloses the method of claim 12, further comprising instructing the display screen (23) to function in a full configuration mode (Fig. 5 and ¶0113 discloses Display device 308 may also digitally communicate with system bus 306 via a separate video interface, such as a video adapter 346), wherein the full configuration mode configures each portion of the display screen (23) in a powered-on state (¶0049 discloses FIG. 2A illustrates display area 23 before alteration of video information in display area 23).

**Regarding claim 17,** Plut discloses the multifunction device of claim 16, wherein the powered-off state of the proportional configuration mode configures the other portion of the of the display screen (23) to not perform display functions (¶0049 discloses FIG. 2A illustrates display area 23 before alteration of video information in display area 23, while FIG. 2B shows display area 23 after alteration of video information. As shown in FIG. 2B, video information in background 28 has been turned to black).

Plut doesn't explicitly disclose the other portion of the of the display screen to not receive user input.

However, in a similar field of endeavor, Katsu discloses an object of the invention is to provide a terminal device with a display function that enables to make only an operation of a desired operation key invalid, and easily perform the invalidation operation. Specifically, Katsu discloses other portion of the of the display screen to not receive user input (Fig. 5a and ¶0009 discloses a function control section which makes an operation of the operation key displayed between the moving element and the first display area invalid, in response to stopping of the moving element after the moving

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element is moved by the first operating section. Also, ¶0052 discloses Then, the CPU 100 detects a new position of the bar 6, and performs a setting of making an operation with respect to an operation key within an area (a key invalidation area) between the bar 6 and the borderline BL invalid).

Therefore, it would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to further modify Plut by specifically providing the other portion of the of the display screen to not receive user input, as taught by Katsu, for the purpose of a terminal device with a display function that enables to make only an operation of a desired operation key invalid, and easily perform the invalidation operation (¶0006).

9. **Claims 7 and 20 are rejected under 35 U.S.C. 103** as being unpatentable over Plut in view of Proctor (US 2006/0227122 A1, hereinafter referred as Proctor).

**Regarding claim 7**, Plut doesn't explicitly disclose the multifunction device of claim 1, wherein the power management module is further configured to direct the display controller to transition between modes based on a configurable battery power threshold, wherein the power management module is further configured to: determine that a battery power of the multifunction device reaches the configurable battery power threshold; and subsequent to said determine, instruct the display controller to change from a full configuration mode to the proportional configuration mode.

However, in a similar field of endeavor, Proctor discloses an electronic device has a single display panel that operates in multiple modes to support different display capabilities. Specifically, Proctor discloses the multifunction device of claim 1, wherein

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the power management module is further configured to direct the display controller (406) to transition between modes based on a configurable battery power threshold (¶0030 discloses Current battery level may also be used to decide when to switch modes. For example, when the battery level depletes to a specified threshold level, the device may switch from full display mode to partial display mode), wherein the power management module is further configured to: determine that a battery power of the multifunction device reaches the configurable battery power threshold (¶0030 discloses when the battery level depletes to a specified threshold level, the device may switch from full display mode to partial display mode); and subsequent to said determine, instruct the display controller to change from a full configuration mode to the proportional configuration mode (¶0056 and ¶0060 discloses driver 420 toggles between the two modes in response to any number of events, including an activity timeout, a software-generated event, battery level, or a user command).

Therefore, it would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to further modify Plut by specifically providing battery power threshold is a configurable setting, as taught by Weast, for the purpose of having user level interaction with the electronic device for displaying partial display mode.

**Regarding claim 20,** Plut doesn't explicitly disclose the multifunction device of claim 14, wherein the power management module is further configured to direct the display screen to change between modes based on a configurable battery power threshold, wherein the power management module is further configured to: determine

that a battery power of the multifunction device has reached the configurable battery power threshold; and subsequent to said determine, instruct the display screen to shift from full configuration mode to the proportional configuration mode.

However, in a similar field of endeavor, Proctor discloses an electronic device has a single display panel that operates in multiple modes to support different display capabilities. Specifically, Proctor discloses the multifunction device of claim 14, wherein the power management module is further configured to direct the display screen to change between modes based on a configurable battery power threshold (¶0030 discloses Current battery level may also be used to decide when to switch modes. For example, when the battery level depletes to a specified threshold level, the device may switch from full display mode to partial display mode), wherein the power management module is further configured to: determine that a battery power of the multifunction device reached the configurable battery power threshold (¶0030 discloses when the battery level depletes to a specified threshold level, the device may switch from full display mode to partial display mode); and subsequent to said determine, instruct the display controller to shift from a full configuration mode to the proportional configuration mode (¶0056 and ¶0060 discloses driver 420 toggles between the two modes in response to any number of events, including an activity time-out, a software-generated event, battery level, or a user command).

Therefore, it would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to further modify Plut by specifically providing battery power threshold is a configurable setting, as taught by Weast, for the

purpose of having user level interaction with the electronic device for displaying partial display mode.

10. **Claim 8 is rejected under 35 U.S.C. 103** as being unpatentable over Plut in view of Proctor, and in further view of Weast et al. (US 2013/0106684 A1, hereinafter referred as Weast).

**Regarding claim 8**, Plut as modified doesn't explicitly disclose the multifunction device of claim 7, wherein the configurable battery power threshold is a configurable setting in a user interface of the multifunction device.

However, in a similar field of endeavor, Weast discloses a wearable device assembly has a housing supporting a controller, display and indicator system thereon. In addition, Weast reference is reasonably pertinent to the problem faced by the inventor, in which ¶0225 discloses the device may time-out from the information display loop by deactivating one or more displays (e.g., to conserve power) and/or other device components. Specifically, ¶0247 discloses For example, if a battery level is below a threshold amount (e.g., 30%), the device may automatically remove some of the options and/or displays. Other threshold amounts may be used. The threshold may also be user-configurable. Additionally, the functions that are removed at different threshold battery levels may also be configured/selected by the user (e.g. battery power threshold is a configurable setting).

Therefore, it would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to further modify Plut by specifically providing battery power threshold is a configurable setting, as taught by Weast, for the

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purpose of having user level interaction with the electronic device for displaying partial display mode.

11. **Claim 9 is rejected under 35 U.S.C. 103** as being unpatentable over Plut in view of McRae et al. (US 2013/0080960 A1, hereinafter referred as McRae), and in further view of Katsu.

**Regarding claim 9**, Plut doesn't explicitly disclose the multifunction device of claim 1, wherein the device is set to a lock state, wherein the display is a touch-sensitive display and wherein the program instructions are further executable by the one or more processors (302) to implement a user interface module configured to: detect a contact with the touch-sensitive display at a first predefined location corresponding to an unlock image; continuously move the unlock image on the touch-sensitive display in accordance with movement of the contact while continuous contact with the display screen (23) is maintained, wherein the unlock image is a graphical, interactive user-interface object with which a user interacts in order to unlock the device; unlock the multifunction device into the proportional configuration mode when the move of the unlock image on the touch-sensitive display results in movement of the unlock image from the first predefined location to a predefined unlock region on the touch-sensitive display; and unlock the multifunction device into the full configuration mode when the move of the unlock image on the touch-sensitive display results in movement of the unlock image from the first predefined location to another predefined unlock region on the touch-sensitive display.

However, in a similar field of endeavor, McRae discloses an unlock system for a computer such as a tablet... Areas on the locking screen are defined, within which the user can touch the locking screen and drag it to the opposite side. During the time of dragging, the items underneath, showing the actual content of the screen, are revealed. Fig. 4 and ¶0015 disclose As the unlock bar 400 is moved, it progressively changes from the locked part of the screen for 22 the unlocked part of the screen for 25. Fig. 5 and ¶0017 discloses the user can remove their finger or pointing device after reaching the line 505, and the unlock bar 500 will thereafter continue as an animation (shown as 510) to the opposite edge of the display screen from Where the user touched to invoke the unlock bar. At this time, the unlocking is complete and the screen unlocks.

Further, in a similar field of endeavor, Katsu discloses an object of the invention is to provide a terminal device with a display function that enables to make only an operation of a desired operation key invalid, and easily perform the invalidation operation. Specifically, Fig. 5a and ¶0009 discloses a function control section which makes an operation of the operation key displayed between the moving element and the first display area invalid, in response to stopping of the moving element after the moving element is moved by the first operating section. Also, ¶0052 discloses Then, the CPU 100 detects a new position of the bar 6, and performs a setting of making an operation with respect to an operation key within an area (a key invalidation area) between the bar 6 and the borderline BL invalid.

Thus, prior art of Plut can be modified to teach configuring the display into a proportional configuration mode (see Abstract) by moving an unlock bar 400 from an



unlocked portion of the screen (see ¶0015), as taught by McRae, to a fixed location on the screen such as the center (see Fig. 5a, ¶0052 of Katsu).

Therefore, it would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to modify Plut by specifically providing detecting a contact at first predefined location, continuously move the unlock image, wherein the unlock image is a graphical, interactive user-interface object and unlock the multifunction device into the full configuration mode, as taught by McRae, for the purpose of during the time of dragging, the items underneath, showing the actual content of the screen, are revealed (Abstract), and to further modify Proctor by specifically providing unlock the multifunction device into the proportional configuration mode as display results in movement of the unlock image from the first predefined location to a predefined unlock region, as taught by Katsu, for the purpose of a terminal device with a display function that enables to make only an operation of a desired operation key invalid, and easily perform the invalidation operation (¶0006).

### ***Response to Arguments***

12. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PRIYANK SHAH whose telephone number is (571)270-3732. The examiner can normally be reached on Monday-Thursday 10:30am to 7:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lun Yi Lao can be reached on (571)272-7671. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/PRIYANK SHAH/  
Examiner, Art Unit 2692

<b>Notice of References Cited</b>	Application/Control No. 14/257,888		Applicant(s)/Patent Under Reexamination YANG ET AL.	
	Examiner PRIYANK SHAH		Art Unit 2692	Page 1 of 1

#### U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-2006/0020906 A1	01-2006	Plut, William J.	715/867
	B	US-			
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			


#### FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

#### NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)  
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

<b>Search Notes</b>  	<b>Application/Control No.</b>  14257888	<b>Applicant(s)/Patent Under Reexamination</b>  YANG ET AL.
	<b>Examiner</b>  PRIYANK SHAH	<b>Art Unit</b>  2692

CPC- SEARCHED		
Symbol	Date	Examiner
G09G2340/145	6/14/2014	PS
G09G2330/021	6/14/2014	PS
G09G2310/04	6/14/2014	PS
G06F1/3265	6/14/2014	PS

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
345	173,168,169,184	6/14/2014	PS
178	18.01,18.06	6/14/2014	PS
715	764,780,800	6/14/2014	PS

SEARCH NOTES		
Search Notes	Date	Examiner
Class 345 and text modified	6/14/2014	PS
Search history of 13905064	6/14/2014	PS
Forward and backwards citations search	6/14/2014	PS
Inventor name and claim search	6/14/2014	PS
Updated Inventor name and claim search	9/3/2014	PS
Updated search history and notice of references cited	9/3/2014	PS

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner

/PRIYANK SHAH/ Examiner.Art Unit 2692	
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EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	3	(YANG-JINRONG or MAALOUF-RAMZI).in.	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2014/09/02 23:29
S85	22	("20040233146"   "20040257316"   "20050052446"   "20050068311"   "20060061563"   "5321425"   "5598565"   "5880728"   "6900798"   "7017053").PN. OR ("7389432").URPN.	US-PGPUB; USPAT; USOCR	ADJ	ON	2014/09/02 14:30
S86	129	("20010032321"   "20020063671"   "20030071805"   "20060020906"   "20060071899"   "20060125745"   "3795765"   "4817179"   "4952917"   "5029004"   "5166671"   "5270818"   "5359345"   "5488434"   "5524249"   "5572655"   "5592194"   "5598565"   "5615376"   "5619707"   "5625826"   "5642125"   "5675364"   "5719958"   "5745375"   "5781768"   "5796382"   "5796391"   "5808693"   "5822599"   "5880728"   "5881299"   "5914751"   "5943032"   "5956014"   "5961617"   "5991883"   "6026179"   "6029249"   "6031914"   "6043853"   "6069440"   "6076169"   "6100859"   "6104362"   "6111559"   "6144440"   "6177933"   "6177946"   "6232937"   "6278887"   "6297601"   "6323880"   "6345364"   "6356284"   "6362835"   "6366291"   "6396508"   "6396520"   "6408293"   "6411306"   "6411953"   "6414675"   "6452610"   "6453076"   "6473078"   "6473532"   "6496165"   "6529212"   "6552736"   "6587087"   "6606103"   "6611608"   "6621489"   "6628067"   "6657634"   "6661029"   "6661428"   "6667727"   "6677924"   "6677936"   "6683605"   "6691236"   "6693385"   "6701263"   "6711212"   "6724149"   "6724151"   "6731815"   "6744818"   "6762741"   "6768520"   "6774878"   "6788003"   "6788822"   "6791566"   "6801811"   "6809706"   "6812650"   "6816135"   "6819036"   "6822631"   "6829005"   "6839048"   "6850214"   "6900798"   "6912664"   "6938176"   "7012588"   "7114086"   "7301522"   "7312771"   "7389432"   "7400314"   "7432897"   "7437438"   "7460103"   "7463235"   "7505034"   "7580031"   "7580033"   "7583260"   "7602388").PN.	US-PGPUB; USPAT; USOCR	ADJ	ON	2014/09/02 14:40

		OR ("7602408"   "7629971"   "7663597"   "7714831"   "7760210"   "7786988").PN. OR ("8207934").URPN.				
S87	2	("20130106684").PN.	US- PGPUB; USPAT; USOCR; DERWENT	OR	OFF	2014/09/02 18:18
S88	2	("20060227122").PN.	US- PGPUB; USPAT; USOCR; DERWENT	OR	OFF	2014/09/02 18:23

EAST Search History (Interference)

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9/ 2/ 2014 11:30:11 PM  
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Receipt date: 08/29/2014

Doc code: IDS

Doc description: Information Disclosure Statement (IDS) Filed

14257888 - GAI: 2692

P.O. 05/05a (01-16)

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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> ( Not for submission under 37 CFR 1.99)	Application Number		14257888
	Filing Date		2014-04-21
	First Named Inventor	Jinrong Yang	
	Art Unit	2692	
	Examiner Name	SHAH, PRIYANK J	
	Attorney Docket Number	6755-00105	

U.S.PATENTS						Remove
Examiner Initial*	Cite No	Patent Number	Kind Code <sup>1</sup>	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	8217904		2012-07-10	Kim, Jin Woong	
	2	8281252		2012-10-02	Kapanen et al.	
	3	8432369		2013-04-30	Katsu et al.	
	4	7952932		2011-05-31	Van Duuren, et al.	
	5	4952932		1990-08-28	Sugino et al.	
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Examiner Initial*	Cite No	Publication Number	Kind Code <sup>1</sup>	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20020198906		2002-12-26	Press, Robert	



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	Attorney Docket Number	6755-00105		

	2	20080158189		2008-07-03	Kim, Sang-Hoon	
	3	20080189645		2008-08-07	Kapanen et al.	
	4	20090119589		2009-05-07	Rowell et al.	
	5	20100138767		2010-06-03	Wang et al.	
	6	20050005249		2005-01-06	Hill et al.	
	7	20050195217		2005-09-08	Robertson et al.	
	8	20070252822		2007-11-01	Kim et al.	
	9	20090256814		2009-10-15	Chung et al.	
	10	20100088634		2010-04-08	Tsuruta et al.	
	11	20100315371		2010-12-16	Katsu et al.	
	12	20120054674		2012-03-01	Beykpour et al.	

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	13	20120117507		2012-05-10	Tseng et al.	
	14	20130080960		2013-03-28	McRae et al.	
	15	20120131497		2012-05-24	Jitkoff, John Nicholas	

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	1							<input type="checkbox"/>

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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.						T <sup>5</sup>
	1	U.S. Application Serial No. 13/905,064, filed May 29, 2014, Jinrong Yang						<input type="checkbox"/>
	2	U.S. Application Serial No. 14/058,731, filed October 21, 2013, Jinrong Yang						<input type="checkbox"/>
	3	Focus: A Usable & Effective Approach to OLEO Display Power Management, Tan Klat Wee, et al., September 8-12, 2013, pages 573-582.						<input type="checkbox"/>

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	Examiner Name	SHAH, PRIYANK J		
	Attorney Docket Number	6755-00105		

	4	U.S. Application Serial No. 14/219,817, filed March 19, 2014, Jinrong Yang	<input type="checkbox"/>
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Examiner Signature	/Priyank Shah/	Date Considered	09/08/2014
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<sup>1</sup> See Kind Codes of USPTO Patent Documents at [www.USPTO.GOV](http://www.USPTO.GOV) or MPEP 901.04. <sup>2</sup> Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>3</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>4</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>5</sup> Applicant is to place a check mark here if English language translation is attached.

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	Examiner Name	SHAH, PRIYANK J		
	Attorney Docket Number	6755-00105		

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☐ See attached certification statement.

☒ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☐ A certification statement is not submitted herewith.

### SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Stephen A. Mason/	Date (YYYY-MM-DD)	2014-08-29
Name/Print	Stephen A. Mason	Registration Number	64303

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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	Art Unit	2692	
	Examiner Name	SHAH, PRIYANK J	
	Attorney Docket Number	6755-00105	

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	1	8217904		2012-07-10	Kim, Jin Woong	
	2	8281252		2012-10-02	Kapanen et al.	
	3	8432369		2013-04-30	Katsu et al.	
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Examiner Initial*	Cite No	Publication Number	Kind Code <sup>1</sup>	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20020198906		2002-12-26	Press, Robert	

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8	20070252822		2007-11-01	Kim et al.	
9	20090256814		2009-10-15	Chung et al.	
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11	20100315371		2010-12-16	Katsu et al.	
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	1	U.S. Application Serial No. 13/905,064, filed May 29, 2014, Jinrong Yang	<input type="checkbox"/>
	2	U.S. Application Serial No. 14/058,731, filed October 21, 2013, Jinrong Yang	<input type="checkbox"/>
	3	Focus: A Usable & Effective Approach to OLEO Display Power Management, Tan Klat Wee, et al., September 8-12, 2013, pages 573-582.	<input type="checkbox"/>



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	4	U.S. Application Serial No. 14/219,817, filed March 19, 2014, Jinrong Yang	<input type="checkbox"/>
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☐ See attached certification statement.

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Name/Print	Stephen A. Mason	Registration Number	64303

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3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
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5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Patent Application Fee Transmittal				
Application Number:		14257888		
Filing Date:		21-Apr-2014		
Title of Invention:		SYSTEM AND METHOD FOR MANAGING DISPLAY POWER CONSUMPTION		
First Named Inventor/Applicant Name:		Jinrong Yang		
Filer:		Stephen Anthony Mason/Jane Maher		
Attorney Docket Number:		6755-00105		
Filed as Large Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
<b>Miscellaneous:</b>				
Submission- Information Disclosure Stmt	1806	1	180	180
<b>Total in USD (\$)</b>				<b>180</b>

## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	20001917
<b>Application Number:</b>	14257888
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	6790
<b>Title of Invention:</b>	SYSTEM AND METHOD FOR MANAGING DISPLAY POWER CONSUMPTION
<b>First Named Inventor/Applicant Name:</b>	Jinrong Yang
<b>Customer Number:</b>	35690
<b>Filer:</b>	Stephen Anthony Mason/Jane Maher
<b>Filer Authorized By:</b>	Stephen Anthony Mason
<b>Attorney Docket Number:</b>	6755-00105
<b>Receipt Date:</b>	29-AUG-2014
<b>Filing Date:</b>	21-APR-2014
<b>Time Stamp:</b>	10:27:22
<b>Application Type:</b>	Utility under 35 USC 111(a)

### Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$ 180
RAM confirmation Number	8141
Deposit Account	501505
Authorized User	

### File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part (if appl.)	Pages (if appl.)
				186 of 280	

1	Information Disclosure Statement (IDS) Form (SB08)	IDS_6755-00105.pdf	528556 97b7bd821074d75be115e34757a668b71f45bc57	no	6
<b>Warnings:</b>					
<b>Information:</b>					
2	Non Patent Literature	focus-ubicom13-.pdf	7211117 5e7e6556c3c936e0fdd5c9b56f2761402934c816	no	10
<b>Warnings:</b>					
<b>Information:</b>					
3	Fee Worksheet (SB06)	fee-info.pdf	30343 c113ed5f77c2e8062345792b125fb7f4e0c67a7d	no	2
<b>Warnings:</b>					
<b>Information:</b>					
<b>Total Files Size (in bytes):</b>			7770016		
<p><b>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</b></p> <p><b><u>New Applications Under 35 U.S.C. 111</u></b>  <b>If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</b></p> <p><b><u>National Stage of an International Application under 35 U.S.C. 371</u></b>  <b>If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</b></p> <p><b><u>New International Application Filed with the USPTO as a Receiving Office</u></b>  <b>If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</b></p>					





**In the Claims:**

1. (Currently amended) A multifunction device comprising:  
a display comprising a display screen;  
one or more processors; and  
a memory comprising program instructions, wherein the program instructions are ~~executable~~ executed by the one or more processors to implement:  
a power management module configured to manage a display controller of the multifunction device, wherein to manage the display the power management module is further configured to instruct the display controller to function in a proportional configuration mode, wherein the proportional configuration mode configures a portion of the display screen in a powered-on state and another portion of the display screen in a powered-off state;  
wherein the portion of the display screen that is configured in the powered-on state comprises two or more isolated portions in the powered-on state, the two or more isolated portions in the powered-on state being non-contiguous with respect to one another and separated by at least some of the portion of the display screen that is in the powered-off state.
2. (Original) The multifunction device of claim 1, wherein when the portion of the display screen is in the powered-on state, the portion of the display screen is configured to perform display functions and receive user input.
3. (Original) The multifunction device of claim 2, wherein the powered-on state configures the portion of the display screen to function in a grayscale color mode.
4. (Original) The multifunction device of claim 3, wherein the powered-off state configures the other portion of the of the display screen to not perform display functions and to not receive user input.

5. (Original) The multifunction device of claim 1, wherein the power management module is further configured to instruct the display controller to function in a full display mode, wherein the full display mode configures all of an available area of the display screen in a powered-on state when the display controller of the device is in the full display mode.

6. (Original) The multifunction device of claim 1, wherein the power management module is further configured to manage the display of the multifunction device when the display is in a powered-off mode, the power management module configured to direct the display controller to display at least one of a time, date and an indication of one or more messages while the display controller is in the powered-off mode.

7. (Original) The multifunction device of claim 1, wherein the power management module is further configured to direct the display controller to transition between modes based on a configurable battery power threshold, wherein the power management module is further configured to:

determine that a battery power of the multifunction device reaches the configurable battery power threshold; and  
subsequent to said determine, instruct the display controller to change from a full configuration mode to the proportional configuration mode.

8. (Original) The multifunction device of claim 7, wherein the configurable battery power threshold is a configurable setting in a user interface of the multifunction device.

9. (Currently amended) The multifunction device of claim 1, wherein the device is set to a lock state, wherein the display is a touch-sensitive display and wherein the program instructions are further executable by the one or more processors to implement a user interface module configured to:

detect a contact with the touch-sensitive display at a first predefined location corresponding to an unlock image;

continuously move the unlock image on the touch-sensitive display in accordance with movement of the contact while continuous contact with the display screen is maintained, wherein the unlock image is a graphical, interactive user-interface object with which a user interacts in order to unlock the device;

unlock the multifunction device into the proportional configuration mode when the move of the unlock image on the touch-sensitive display results in movement of the unlock image from the first predefined location to a predefined unlock region on the touch-sensitive display; and

unlock the multifunction device into the full configuration mode when the move of the unlock image on the touch-sensitive display results in movement of the unlock image from the first predefined location to another predefined unlock region on the touch-sensitive display.

10. (Currently amended) A method comprising:

managing a display of a multifunction device, wherein managing the display comprises:

instructing the device to transition from functioning in a full configuration mode to functioning in a proportional configuration mode, wherein the proportional configuration mode configures a portion of a display screen of the device in a powered-on state and another portion of the display screen of the device in a powered-off state;

wherein the portion of the display screen that is configured in the powered-on state comprises two or more isolated portions in the powered-on state, the two or more isolated portions in the powered-on state being non-contiguous with respect to one another and separated by at least some of the portion of the display screen that is in the powered-off state.

11. (Currently amended) The method of claim 10, wherein instructing the device to function in a proportional configuration mode causes the other portion of the display to not perform display functions and not receive user input.

12. (Currently amended) The method of claim 11, wherein instructing the display to function in a proportional configuration mode causes the portion of the display to perform display functions and receive user input.

13. (Original) The method of claim 12, further comprising instructing the display screen to function in a full configuration mode, wherein the full configuration mode configures each portion of the display screen in a powered-on state.

14. (Currently amended) A multifunction device comprising:

a display screen;

one or more processors; and

a memory comprising program instructions, wherein the program instructions are executable by the one or more processors to implement:

a power management module configured to manage a display screen of the multifunction device, wherein to manage the display screen the power management module is further configured to instruct the display screen to function in a proportional configuration mode, wherein the proportional configuration mode configures a portion of the display screen in a powered-on state and another portion of the display screen in a powered-off state;

wherein the portion of the display screen that is configured in the powered-on state comprises two or more isolated portions in the powered-on state, the two or more isolated portions in the powered-on state being non-contiguous with respect to one another and separated by at least some of the portion of the display screen that is in the powered-off state.

15. (Original) The multifunction device of claim 14, wherein the powered-on state of the proportional configuration mode configures the portion of the display to perform display functions and receive user input.

16. (Original) The multifunction device of claim 15, wherein the powered-on state of the proportional configuration mode configures the portion of the display to function in a grayscale color mode.

17. (Original) The multifunction device of claim 16, wherein the powered-off state of the proportional configuration mode configures the other portion of the of the display screen to not perform display functions and to not receive user input.

18. (Original) The multifunction device of claim 14, wherein the power management module is further configured to instruct the display screen to function in a full display mode, wherein the full display mode configures the display in a powered-on state when the display screen of the device is in the display mode.

19. (Original) The multifunction device of claim 14, wherein the power management module is further configured to manage the display screen of the multifunction device when the display screen is in a sleep mode, the power management module configured to direct the display screen to display at least one of a time, date and an indication of one or more messages while the display screen controller is in the sleep mode.

20. (Original) The multifunction device of claim 14, wherein the power management module is further configured to direct the display screen to change between modes based on a configurable battery power threshold, wherein the power management module is further configured to:

determine that a battery power of the multifunction device has reached the configurable battery power threshold; and

subsequent to said determine, instruct the display screen to shift from full configuration mode to the proportional configuration mode.

## **REMARKS**

Claims 1-20 remain pending in the application. Reconsideration is respectfully requested in light of the amendments and the following remarks.

### **Section 102(a) Rejection:**

The Office Action rejected claims 1, 2, 5-7, 10-15 and 18-20 under 35 U.S.C. § 102(a)(1) or 102(a)(2) as allegedly being anticipated by Proctor (U.S. Publication 2006/0227122). Applicants respectfully traverse the rejection for at least the following reasons.

On August 22, 2014, Mr. Shah indicated that the clarified claims, reproduced herein, distinguish the currently cited reference and suggested that Applicants' file a formal response such that the claims may be considered for allowance.

Withdrawal of the rejection is respectfully requested for at least these reasons.

### **Section 103(a) Rejection:**

The Office Action rejected claims 3 and 16 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Proctor in view of Bull, et al. (U.S. Publication 2009/0058842) (hereinafter "Bull"), claim 8 as allegedly being unpatentable over Proctor in view of Weast, et al. (U.S. Publication 2013/0106684) (hereinafter "Weast"), claims 4 and 17 as allegedly being unpatentable over Proctor and Bull in view of Katsu, et al. (U.S. Publication 2010/0315371) (hereinafter "Katsu"), claim 9 as allegedly being unpatentable over Proctor in view of Katsu and McRae, et al. (U.S. Publication 2013/0080960) (hereinafter "McRae"). Applicants respectfully traverse the rejection for at least the following reasons.

Numerous dependent claims recite further distinctions over the cited references. However, since Applicants have shown that the independent claims are patentable, and because Mr. Shah has indicated that the currently-cited references are distinguished by the claims presented herein, a further discussion of the dependent claims is not necessary at this time. Withdrawal of the rejection of these claims is respectfully requested. Applicants reserve the right to make further arguments.



## CONCLUSION

Applicants submit the application is in condition for allowance, and an early notice to that effect is respectfully requested.

If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C. Deposit Account No. 501505/6755-00105/RCK.

Respectfully submitted,

/Stephen A. Mason/  
Stephen A. Mason, Reg. #64,303  
Attorney for Applicants

Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C.  
P.O. Box 398  
Austin, TX 78767-0398  
Phone: (512) 853-8850

Date: August 25, 2014

## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	19951969
<b>Application Number:</b>	14257888
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	6790
<b>Title of Invention:</b>	SYSTEM AND METHOD FOR MANAGING DISPLAY POWER CONSUMPTION
<b>First Named Inventor/Applicant Name:</b>	Jinrong Yang
<b>Customer Number:</b>	35690
<b>Filer:</b>	Stephen Anthony Mason/Dena Poudrier
<b>Filer Authorized By:</b>	Stephen Anthony Mason
<b>Attorney Docket Number:</b>	6755-00105
<b>Receipt Date:</b>	25-AUG-2014
<b>Filing Date:</b>	21-APR-2014
<b>Time Stamp:</b>	13:06:34
<b>Application Type:</b>	Utility under 35 USC 111(a)

### Payment information:

Submitted with Payment	no
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### File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		RespOA-00105.pdf	101143 c3669ca34bed4954600ffa411b13cadf25a60d6f	yes	10

	Multipart Description/PDF files in .zip description		
	Document Description	Start	End
	Amendment/Req. Reconsideration-After Non-Final Reject	1	1
	Claims	2	7
	Applicant Arguments/Remarks Made in an Amendment	8	10
Warnings:			
Information:			
Total Files Size (in bytes):		101143	
<p>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</p> <p><b><u>New Applications Under 35 U.S.C. 111</u></b> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><b><u>National Stage of an International Application under 35 U.S.C. 371</u></b> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><b><u>New International Application Filed with the USPTO as a Receiving Office</u></b> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>			



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/257,888	04/21/2014	Jinrong Yang	6755-00105	6790
35690	7590	06/19/2014		
MEYERTONS, HOOD, KIVLIN, KOWERT & GOETZEL, P.C. P.O. BOX 398 AUSTIN, TX 78767-0398			EXAMINER SHAH, PRIYANK J	
			ART UNIT 2692	PAPER NUMBER
			NOTIFICATION DATE 06/19/2014	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patent\_docketing@intprop.com  
ptomhkg@gmail.com

<b>Office Action Summary</b>	<b>Application No.</b> 14/257,888	<b>Applicant(s)</b> YANG ET AL.	
	<b>Examiner</b> PRIYANK SHAH	<b>Art Unit</b> 2692	<b>AIA (First Inventor to File) Status</b> Yes

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04/21/2014.  
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on \_\_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on \_\_\_\_\_; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims\*

- 5) ☒ Claim(s) 1-20 is/are pending in the application.  
5a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 7) ☒ Claim(s) 1-20 is/are rejected.
- 8) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 9) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

\* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see [http://www.uspto.gov/patents/init\\_events/pph/index.jsp](http://www.uspto.gov/patents/init_events/pph/index.jsp) or send an inquiry to [PPHfeedback@uspto.gov](mailto:PPHfeedback@uspto.gov).

### Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☒ The drawing(s) filed on 04/21/2014 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

#### Certified copies:

- a) ☐ All    b) ☐ Some\*\*    c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\*\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 3) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b)<br>Paper No(s)/Mail Date <u>05/15/2014</u> . | 4) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.
2. In the event the determination of the status of the application as subject to AIA 35 U.S.C. 102 and 103 (or as subject to pre-AIA 35 U.S.C. 102 and 103) is incorrect, any correction of the statutory basis for the rejection will not be considered a new ground of rejection if the prior art relied upon, and the rationale supporting the rejection, would be the same under either status.

### ***Claim Objections***

3. Claim 12 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a)(1) the claimed invention was patented, described in a printed publication, or in public use, on sale or otherwise available to the public before the effective filing date of the claimed invention.

(a)(2) the claimed invention was described in a patent issued under section 151, or in an application for patent published or deemed published under section 122(b), in which the patent or application, as the case may be, names another inventor and was effectively filed before the effective filing date of the claimed invention.

5. **Claims 1, 2, 5-7, 10-15 and 18-20 rejected under 35 U.S.C. 102(a)(1) or 102(a)(2)** as being anticipated by Proctor (US 2006/0227122 A1).

**Regarding claim 1**, Proctor discloses a multifunction device (abstract discloses electronic device) comprising:

a display comprising a display screen (abstract discloses electronic device has a single display panel that operates in multiple modes to support different display capabilities);

one or more processors (402) (Fig. 4 and ¶0032 discloses a central processing unit (CPU) 402); and

a memory comprising program instructions, wherein the program instructions are executable by the one or more processors (402) (Fig. 4 and ¶0033 disclose graphics driver 408 is illustrated as being implemented in software that executes on the CPU 402) to implement:

a power management module (402) configured to manage a display controller (406) of the multifunction device (Fig. 4 and ¶0038 discloses The panel mode control driver 402 implements mode switching functionality to choose among the various display modes, including the full display mode and the partial display mode), wherein to manage the display the power management module (402) is further configured to instruct the display controller (406) to function in a proportional configuration mode (112) (Fig. 1 and ¶0027 discloses The display panel 104 may alternatively be operated in a second mode in which part of the display is operational while the rest of the display is powered off. In the second mode, the display panel provides a smaller area for

depicting a reduced amount of image data (e.g., alphanumeric characters, small graphics, etc.), as represented by the partial display mode area 112), wherein the proportional configuration mode (112) configures a portion of the display screen in a powered-on state and another portion of the display screen in a powered-off state (Fig. 1 and ¶0027 discloses This partial display mode may be implemented by activating a subset of the pixels, while powering off or inactivating the remaining pixels).

**Regarding claim 2,** Proctor discloses the multifunction device of claim 1, wherein when the portion of the display screen is in the powered-on state (Fig. 1 and ¶0027 discloses This partial display mode may be implemented by activating a subset of the pixels, while powering off or inactivating the remaining pixels), the portion of the display screen is configured to perform display functions and receive user input (¶0020 discloses The smaller portion of the display is defined by activating a subset of the pixels, certain backlights (if any), and/or a part of the circuitry for the display (e.g., frame buffer, display controller)) and receive user input (¶0024 discloses The display panel may optionally be implemented with a touch screen overlaying the display to facilitate user input).

**Regarding claim 5,** Proctor discloses the multifunction device of claim 1, wherein the power management module (402) is further configured to instruct the display controller (406) to function in a full display mode (Fig. 2 illustrates an exemplary full display mode where all pixels are active), wherein the full display mode configures all of an available area of the display screen in a powered-on state when the display controller (406) of the device is in the full display mode (¶0020 discloses In a first or full



Art Unit: 2692

display mode, the entire display, including all pixels and any backlighting, is on and available for depicting image data. The display panel thus functions as a full-feature "first display" that can be used to show videos, play games, render graphics, read and write email, browse the Internet, and so forth).

**Regarding claim 6,** Proctor discloses the multifunction device of claim 1, wherein the power management module (402) is further configured to manage the display of the multifunction device when the display is in a powered-off mode (¶0020 discloses The smaller portion of the display is defined by activating a subset of the pixels, certain backlights (if any), and/or a part of the circuitry for the display (e.g., frame buffer, display controller)), the power management module configured to direct the display controller (406) to display at least one of a time, date and an indication of one or more messages while the display controller (406) is in the powered-off mode (Fig. 11 and ¶0020 discloses The smaller display portion thus functions as a "second display" that offers limited functionality to depict information (e.g., time-of-day, power levels, cell signal strength, control settings, song title, and so forth) while conserving power).

**Regarding claim 7,** Proctor discloses the multifunction device of claim 1, wherein the power management module is further configured to direct the display controller (406) to transition between modes based on a configurable battery power threshold (¶0030 discloses Current battery level may also be used to decide when to switch modes. For example, when the battery level depletes to a specified threshold level, the device may switch from full display mode to partial display mode), wherein the power management module is further configured to:

determine that a battery power of the multifunction device reaches the configurable battery power threshold (§0030 discloses when the battery level depletes to a specified threshold level, the device may switch from full display mode to partial display mode); and

subsequent to said determine, instruct the display controller to change from a full configuration mode to the proportional configuration mode (§0056 and §0060 discloses driver 420 toggles between the two modes in response to any number of events, including an activity time-out, a software-generated event, battery level, or a user command).

**Regarding claim 10**, Proctor discloses a method comprising:

managing a display of a multifunction device (Title discloses Implementing multiple display modes on one display panel), wherein managing the display comprises:

instructing the device to transition from functioning in a full configuration mode to functioning in a proportional configuration mode (Fig. 1 and §0030 discloses Switching between full and partial display modes can be achieved in a number of ways. One approach is use of a mechanical switch that allows a user to physically choose a desired mode of operation), wherein the proportional configuration mode configures a portion of a display screen of the device in a powered-on state and another portion of the display screen of the device in a powered-off state (Fig. 1, Abstract and §0027 disclose In the second mode, the display panel provides a smaller area for depicting a reduced amount of image data (e.g., alphanumeric characters, small graphics, etc.), as represented by the partial display mode area 112... the partial display mode might

involve turning on or off portions of backlighting (if any) or circuitry that supports the display panel (e.g., frame buffer, display controller)).

**Regarding claim 11**, Proctor discloses the method of claim 10, wherein instructing the device to function in a proportional configuration mode causes the portion of the display to perform display functions and receive user input (§0020 discloses The smaller portion of the display is defined by activating a subset of the pixels, certain backlights (if any), and/or a part of the circuitry for the display (e.g., frame buffer, display controller)) and receive user input (§0024 discloses The display panel may optionally be implemented with a touch screen overlaying the display to facilitate user input).

**Regarding claim 12**, Proctor discloses the method of claim 11, wherein instructing the display to function in a configuration mode causes the portion of the display to perform display functions and receive user input (§0020 discloses The smaller portion of the display is defined by activating a subset of the pixels, certain backlights (if any), and/or a part of the circuitry for the display (e.g., frame buffer, display controller)) and receive user input (§0024 discloses The display panel may optionally be implemented with a touch screen overlaying the display to facilitate user input).

**Regarding claim 13**, Proctor discloses the method of claim 12, further comprising instructing the display screen to function in a full configuration mode (Fig. 2 illustrates an exemplary full display mode where all pixels are active), wherein the full configuration mode configures each portion of the display screen in a powered-on state (§0020 discloses In a first or full display mode, the entire display, including all pixels and any backlighting, is on and available for depicting image data. The display panel thus

functions as a full-feature "first display" that can be used to show videos, play games, render graphics, read and write email, browse the Internet, and so forth).

**Regarding claim 14**, Proctor discloses a multifunction device (abstract discloses electronic device) comprising:

a display screen (abstract discloses electronic device has a single display panel that operates in multiple modes to support different display capabilities);

one or more processors (402) (Fig. 4 and ¶0032 discloses a central processing unit (CPU) 402); and

a memory comprising program instructions, wherein the program instructions are executable by the one or more processors (402) (Fig. 4 and ¶0033 disclose graphics driver 408 is illustrated as being implemented in software that executes on the CPU 402) to implement:

a power management module (402) configured to manage a display screen of the multifunction device (Fig. 4 and ¶0038 discloses The panel mode control driver 402 implements mode switching functionality to choose among the various display modes, including the full display mode and the partial display mode), wherein to manage the display screen the power management module (402) is further configured to instruct the display screen to function in a proportional configuration mode (112) (Fig. 1 and ¶0027 discloses The display panel 104 may alternatively be operated in a second mode in which part of the display is operational while the rest of the display is powered off. In the second mode, the display panel provides a smaller area for depicting a reduced amount of image data (e.g., alphanumeric characters, small graphics, etc.), as represented by

the partial display mode area 112), wherein the proportional configuration mode (112) configures a portion of the display screen in a powered-on state and another portion of the display screen in a powered-off state (Fig. 1 and ¶0027 discloses This partial display mode may be implemented by activating a subset of the pixels, while powering off or inactivating the remaining pixels).

**Regarding claim 15**, Proctor discloses the multifunction device of claim 14, wherein the powered-on state of the proportional configuration mode configures the portion of the display to perform display functions (¶0020 discloses The smaller portion of the display is defined by activating a subset of the pixels, certain backlights (if any), and/or a part of the circuitry for the display (e.g., frame buffer, display controller)) and receive user input (¶0024 discloses The display panel may optionally be implemented with a touch screen overlaying the display to facilitate user input).

**Regarding claim 18**, Proctor discloses the multifunction device of claim 14, wherein the power management module (402) is further configured to instruct the display screen to function in a full display mode (Fig. 2 illustrates an exemplary full display mode where all pixels are active), wherein the full display mode configures all of an available area of the display screen in a powered-on state when the display screen of the device is in the display mode (¶0020 discloses In a first or full display mode, the entire display, including all pixels and any backlighting, is on and available for depicting image data. The display panel thus functions as a full-feature "first display" that can be used to show videos, play games, render graphics, read and write email, browse the Internet, and so forth).

**Regarding claim 19,** Proctor discloses the multifunction device of claim 14, wherein the power management module (402) is further configured to manage the display screen of the multifunction device when the display screen is in a sleep mode (¶0030 discloses Activity time-out may be another approach to switch modes, where a period of inactivity triggers a transition from full display mode to partial display mode), the power management module (402) configured to direct the display screen to display at least one of a time, date and an indication of one or more messages while the display screen controller is in the sleep mode (Fig. 11 and ¶0020 discloses The smaller display portion thus functions as a "second display" that offers limited functionality to depict information (e.g., time-of-day, power levels, cell signal strength, control settings, song title, and so forth) while conserving power).

**Regarding claim 20,** Proctor discloses the multifunction device of claim 14, wherein the power management module is further configured to direct the display screen to change between modes based on a configurable battery power threshold (¶0030 discloses Current battery level may also be used to decide when to switch modes. For example, when the battery level depletes to a specified threshold level, the device may switch from full display mode to partial display mode), wherein the power management module is further configured to:

determine that a battery power of the multifunction device reaches the configurable battery power threshold (¶0030 discloses when the battery level depletes to a specified threshold level, the device may switch from full display mode to partial display mode); and

subsequent to said determine, instruct the display screen to change from a full configuration mode to the proportional configuration mode (¶0056 and ¶0060 discloses driver 420 toggles between the two modes in response to any number of events, including an activity time-out, a software-generated event, battery level, or a user command).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent for a claimed invention may not be obtained, notwithstanding that the claimed invention is not identically disclosed as set forth in section 102 of this title, if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claims 3 and 16 are rejected under 35 U.S.C. 103** as being unpatentable over Proctor (US 2006/0227122 A1) in view of Bull et al. (US 2009/0058842 A1).

**Regarding claim 3,** Proctor doesn't explicitly disclose the multifunction device of claim 2, wherein the powered-on state configures the portion of the display screen to function in a grayscale color mode.

However, in a similar field of endeavor, Bull discloses in the title: Devices and methods for controlling a display to conserve power. Specifically, Fig. 3 and ¶0056-¶0057 discloses "Embodiments using black and white or grayscale mode can have an additional advantage in that the images provided generally can be more easily viewed on a display lacking a backlight, or on a display wherein backlighting has been dimmed or turned off. At step 320, a screen providing device information using a reduced-color

mode can be displayed. The screen provided at step 320 can display the same information presented on the full-graphics, full-color screen, or can display a partial display, wherein only a reduced number of status indicators can be provided.”

Therefore, it would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to modify Proctor by specifically providing portion of the display screen to function in a grayscale color mode, as taught by Bull, for the purpose of being advantageous at least because they reduce power consumption, and improve the user experience (§0006).

**Regarding claim 16,** Proctor doesn't explicitly disclose the multifunction device of claim 15, wherein the powered-on state of the proportional configuration mode configures the portion of the display to function in a grayscale color mode.

However, in a similar field of endeavor, Bull discloses in the title: Devices and methods for controlling a display to conserve power. Specifically, Fig. 3 and §0056-§0057 discloses “Embodiments using black and white or grayscale mode can have an additional advantage in that the images provided generally can be more easily viewed on a display lacking a backlight, or on a display wherein backlighting has been dimmed or turned off. At step 320, a screen providing device information using a reduced-color mode can be displayed. The screen provided at step 320 can display the same information presented on the full-graphics, full-color screen, or can display a partial display, wherein only a reduced number of status indicators can be provided.”

Therefore, it would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to modify Proctor by specifically providing



portion of the display screen to function in a grayscale color mode, as taught by Bull, for the purpose of being advantageous at least because they reduce power consumption, and improve the user experience (§0006).

8. **Claim 8 is rejected under 35 U.S.C. 103** as being unpatentable over Proctor (US 2006/0227122 A1) in view of Weast et al. (US 2013/0106684 A1).

**Regarding claim 8**, Proctor doesn't explicitly disclose the multifunction device of claim 7, wherein the configurable battery power threshold is a configurable setting in a user interface of the multifunction device.

However, in a similar field of endeavor, Weast discloses a wearable device assembly has a housing supporting a controller, display and indicator system thereon. In addition, Weast reference is reasonably pertinent to the problem faced by the inventor, in which §0225 discloses the device may time-out from the information display loop by deactivating one or more displays (e.g., to conserve power) and/or other device components. Specifically, §0247 discloses For example, if a battery level is below a threshold amount (e.g., 30%), the device may automatically remove some of the options and/or displays. Other threshold amounts may be used. The threshold may also be user-configurable. Additionally, the functions that are removed at different threshold battery levels may also be configured/selected by the user (e.g. battery power threshold is a configurable setting).

Therefore, it would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to modify Proctor by specifically providing battery power threshold is a configurable setting, as taught by Weast, for the purpose of

having user level interaction with the electronic device for displaying partial display mode.

9. **Claims 4 and 17 are rejected under 35 U.S.C. 103** as being unpatentable over Proctor (US 2006/0227122 A1) and Bull et al. (US 2009/0058842 A1) in view of Katsu et al. (US 2010/0315371 A).

**Regarding claim 4,** Proctor discloses the multifunction device of claim 3, wherein the powered-off state configures the other portion of the of the display screen to not perform display functions (Figs. 1, 11 and Abstract discloses In the second mode, a portion of the display panel is operational while the rest of the display panel is powered off. This partial display mode may be implemented by activating a subset of the pixels, certain backlights, and/or a part of the circuitry that supports the display (e.g., frame buffer, display controller)).

Proctor doesn't explicitly disclose the other portion of the of the display screen to not receive user input.

However, in a similar field of endeavor, Katsu discloses an object of the invention is to provide a terminal device with a display function that enables to make only an operation of a desired operation key invalid, and easily perform the invalidation operation. Specifically, Fig. 5a and ¶0009 discloses a function control section which makes an operation of the operation key displayed between the moving element and the first display area invalid, in response to stopping of the moving element after the moving element is moved by the first operating section. Also, ¶0052 discloses Then, the CPU 100 detects a new position of the bar 6, and performs a setting of making an

operation with respect to an operation key within an area (a key invalidation area) between the bar 6 and the borderline BL invalid.

Therefore, it would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to further modify Proctor by specifically providing the other portion of the of the display screen to not receive user input, as taught by Katsu, for the purpose of a terminal device with a display function that enables to make only an operation of a desired operation key invalid, and easily perform the invalidation operation (§0006).

**Regarding claim 17**, Proctor discloses the multifunction device of claim 16, wherein the powered-off state of the proportional configuration mode configures the other portion of the of the display screen to not perform display functions (Figs. 1, 11 and Abstract discloses In the second mode, a portion of the display panel is operational while the rest of the display panel is powered off. This partial display mode may be implemented by activating a subset of the pixels, certain backlights, and/or a part of the circuitry that supports the display (e.g., frame buffer, display controller)).

Proctor doesn't explicitly disclose the other portion of the of the display screen to not receive user input.

However, in a similar field of endeavor, Katsu discloses an object of the invention is to provide a terminal device with a display function that enables to make only an operation of a desired operation key invalid, and easily perform the invalidation operation. Specifically, Fig. 5a and §0009 discloses a function control section which makes an operation of the operation key displayed between the moving element and

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the first display area invalid, in response to stopping of the moving element after the moving element is moved by the first operating section. Also, ¶0052 discloses Then, the CPU 100 detects a new position of the bar 6, and performs a setting of making an operation with respect to an operation key within an area (a key invalidation area) between the bar 6 and the borderline BL invalid.

Therefore, it would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to further modify Proctor by specifically providing the other portion of the of the display screen to not receive user input, as taught by Katsu, for the purpose of a terminal device with a display function that enables to make only an operation of a desired operation key invalid, and easily perform the invalidation operation (¶0006).

10. **Claim 9 is rejected under 35 U.S.C. 103** as being unpatentable over Proctor (US 2006/0227122 A1) in view of Katsu et al. (US 2010/0315371 A) and McRae et al. (US 2013/0080960 A1).

**Regarding claim 9,** Proctor doesn't explicitly disclose the multifunction device of claim 1, wherein the display is a touch- sensitive display and wherein the program instructions are further executable by the one or more processors to implement a user interface module configured to:

detect a contact with the touch-sensitive display at a first predefined location corresponding to an unlock image; continuously move the unlock image on the touch-sensitive display in accordance with movement of the contact while continuous contact with the display screen is maintained, wherein the unlock image is a graphical,

interactive user-interface object with which a user interacts in order to unlock the device; unlock the multifunction device into the proportional configuration mode when the move of the unlock image on the touch-sensitive display results in movement of the unlock image from the first predefined location to a predefined unlock region on the touch-sensitive display; and unlock the multifunction device into the full configuration mode when the move of the unlock image on the touch-sensitive display results in movement of the unlock image from the first predefined location to another predefined unlock region on the touch-sensitive display.

However, in a similar field of endeavor, McRae discloses an unlock system for a computer such as a tablet... Areas on the locking screen are defined, within which the user can touch the locking screen and drag it to the opposite side. During the time of dragging, the items underneath, showing the actual content of the screen, are revealed. Fig. 4 and ¶0015 disclose As the unlock bar 400 is moved, it progressively changes from the locked part of the screen for 22 the unlocked part of the screen for 25. Fig. 5 and ¶0017 discloses the user can remove their finger or pointing device after reaching the line 505, and the unlock bar 500 will thereafter continue as an animation (shown as 510) to the opposite edge of the display screen from Where the user touched to invoke the unlock bar. At this time, the unlocking is complete and the screen unlocks.

Further, in a similar field of endeavor, Katsu discloses an object of the invention is to provide a terminal device with a display function that enables to make only an operation of a desired operation key invalid, and easily perform the invalidation operation. Specifically, Fig. 5a and ¶0009 discloses a function control section which

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makes an operation of the operation key displayed between the moving element and the first display area invalid, in response to stopping of the moving element after the moving element is moved by the first operating section. Also, ¶0052 discloses Then, the CPU 100 detects a new position of the bar 6, and performs a setting of making an operation with respect to an operation key within an area (a key invalidation area) between the bar 6 and the borderline BL invalid.

Therefore, it would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to modify Proctor by specifically providing detecting a contact at first predefined location, continuously move the unlock image, wherein the unlock image is a graphical, interactive user-interface object and unlock the multifunction device into the full configuration mode, as taught by McRae, for the purpose of during the time of dragging, the items underneath, showing the actual content of the screen, are revealed (Abstract), and to further modify Proctor by specifically providing unlock the multifunction device into the proportional configuration mode as display results in movement of the unlock image from the first predefined location to a predefined unlock region, as taught by Katsu, for the purpose of a terminal device with a display function that enables to make only an operation of a desired operation key invalid, and easily perform the invalidation operation (¶0006).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PRIYANK SHAH whose telephone number is (571)270-

Art Unit: 2692

3732. The examiner can normally be reached on Monday-Thursday 10:30am to 7:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lun Yi Lao can be reached on (571)272-7671. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/PRIYANK SHAH/  
Examiner, Art Unit 2692

<b>Notice of References Cited</b>	Application/Control No. 14/257,888		Applicant(s)/Patent Under Reexamination YANG ET AL.	
	Examiner PRIYANK SHAH		Art Unit 2692	Page 1 of 1

#### U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-2006/0227122 A1	10-2006	Proctor, David W.	345/204
*	B	US-2009/0058842 A1	03-2009	Bull et al.	345/212
*	C	US-2013/0106684 A1	05-2013	Weast et al.	345/156
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
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#### FOREIGN PATENT DOCUMENTS

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Receipt date: 05/15/2014

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Doc description: Information Disclosure Statement (IDS) Filed

14257888 - GAI: 2692

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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> ( Not for submission under 37 CFR 1.99)	Application Number		14257888
	Filing Date		2014-04-21
	First Named Inventor	Jinrong Yang	
	Art Unit	2143	
	Examiner Name		
	Attorney Docket Number	6755-00105	

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	1	8046721		2011-10-25	Chaudhri et al.	
	2	8359410		2013-01-22	Conroy et al.	
	3	6944017		2005-09-13	Dai	
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	Filing Date		2014-04-21	
	First Named Inventor	Jinrong Yang		
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	1	"Settings/System From XBMC", accessed April 3, 2014, pages 1-8.	<input type="checkbox"/>
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	Filing Date		2014-04-21	
	First Named Inventor	Jinrong Yang		
	Art Unit	2143		
	Examiner Name			
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Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

☐ That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

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☐ See attached certification statement.

☐ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

### SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Stephen A. Mason/	Date (YYYY-MM-DD)	2014-05-15
Name/Print	Stephen A. Mason	Registration Number	64303

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6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S84	2	("20120276977").PN.	US-PGPUB; USPAT; USOCR; DERWENT	OR	OFF	2014/06/12 15:33
S85	10	((("20060227122") or ("7760210") or ("20060132474") or ("20020175887") or ("20070024552")).PN.	US-PGPUB; USPAT; USOCR; DERWENT	OR	OFF	2014/06/14 13:24
S86	0	(14/257888).APP.	US-PGPUB; USPAT; USOCR; DERWENT	OR	OFF	2014/06/14 13:45
S87	9	("715".clas. or ("345"/\$ or 178/18.01,18.06).ccls.) and @ad<"20130510" and power (saving or conserv\$3) and (greyscale or grayscale) mode	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2014/06/14 13:50
S88	39	("715".clas. or ("345"/\$ or 178/18.01,18.06).ccls.) and @ad<"20130510" and power (saving or conserv\$3 or consumption) and battery same user specif\$3	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2014/06/14 14:09
S89	0	("715".clas. or ("345"/\$ or 178/18.01,18.06).ccls.) and @ad<"20130510" and battery (amount or level or percent\$3) with user (specif\$3 or modifi\$4)	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2014/06/14 14:29
S90	0	("715".clas. or ("345"/\$ or 178/18.01,18.06).ccls.) and @ad<"20130510" and battery (amount or level or percent\$3) with user (specif\$3 or modifi\$4) and (partial or non-display or division)	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2014/06/14 14:29
S91	8	@ad<"20130510" and battery (amount or level or percent\$3) with user (specif\$3 or modifi\$4) and (partial\$3 or non-display or division or partition\$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2014/06/14 14:30
S92	3	@ad<"20130510" and battery near2 threshold with user (specif\$3 or modifi\$4) and (partial\$3 or non-display or division or partition\$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2014/06/14 14:33
S93	8	@ad<"20130510" and battery near2 threshold with user near2 (specif\$3 or modifi\$4) and (partial\$3 or non-display or division or partition\$3)	US-PGPUB; USPAT; EPO; JPO;	ADJ	ON	2014/06/14 14:33


			DERWENT			
S94	208	@ad<"20130510" and battery near2 threshold with user and (partial\$3 or non-display or division or partition\$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2014/06/14 14:34
S95	7	("715".clas. or ("345"/\$ or 178/18.01,18.06).ccls.) and @ad<"20130510" and battery near2 threshold with user and (partial\$3 or non-display or division or partition\$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2014/06/14 14:35
S96	2	("715".clas. or ("345"/\$ or 178/18.01,18.06).ccls.) and @ad<"20130510" and battery near2 threshold with (specific or modif\$4) and (partial\$3 or non-display or division or partition\$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2014/06/14 14:46
S97	4	("715".clas. or ("345"/\$ or 178/18.01,18.06).ccls.) and @ad<"20130510" and battery near2 threshold with (specific or modif\$4)	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2014/06/14 14:46
S98	3	("715".clas. or ("345"/\$ or 178/18.01,18.06).ccls.) and @ad<"20130510" and battery near2 threshold with (specific or modifi\$4)	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2014/06/14 14:47
S99	4	("715".clas. or ("345"/\$ or 178/18.01,18.06).ccls.) and @ad<"20130510" and battery near2 threshold with (specific or modif\$5)	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2014/06/14 14:47
S100	175	@ad<"20130510" and battery near2 threshold with configur\$4 and (partial\$3 or non-display or division or partition\$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2014/06/14 16:37
S101	5	("715".clas. or ("345"/\$ or 178/18.01,18.06).ccls.) and @ad<"20130510" and battery near2 threshold with configur\$4 and (partial\$3 or non-display or division or partition\$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2014/06/14 16:38
S102	1	(G09G2340/145 or G09G2330/021 or G09G2310/04 or G06F1/3265).cpc. and @ad<"20130510" and battery near2 threshold with (specific or modif\$5)	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2014/06/14 19:12
S103	2	(G09G2340/145 or G09G2330/021 or G09G2310/04 or G06F1/3265).cpc. and @ad<"20130510" and (maximiz\$3 or extend\$3 or dragg\$3 or slid\$3) with bar with (screen or display or active or inactive or dead) (divi\$2 or division or partition\$3 or portion\$3 or area or section or region)	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2014/06/14 19:13
S104	2	(G09G2340/145 or G09G2330/021 or G09G2310/04 or G06F1/3265).cpc. and @ad<"20130510" and (maximiz\$3 or extend\$3 or dragg\$3 or slid\$3 or mov\$3 or contract\$3 or minimiz\$3) with bar with	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2014/06/14 19:13

		(power or cut or remov\$3) and (screen or display or active or inactive or dead) (divi\$2 or division or partition\$3 or portion\$3 or area or section or region)				
S105	8	((("8359410") or ("6944017") or ("8046617") or ("8046721")).PN.	US-PGPUB; USPAT; USOCR; DERWENT	OR	OFF	2014/06/14 19:16
S106	3	(YANG-JINRONG or MAALOUF-RAMZI).in.	US-PGPUB; USPAT; EPO; JPO; DERWENT	ADJ	ON	2014/06/14 19:21

EAST Search History (Interference)

<This search history is empty>

6/ 14/ 2014 9:36:48 PM  
C:\ Users\ pshah1\ Desktop\ Documents\ EAST\ Workspaces\ 13905064.wsp

<b>Search Notes</b>  	<b>Application/Control No.</b>  14257888	<b>Applicant(s)/Patent Under Reexamination</b>  YANG ET AL.
	<b>Examiner</b>  PRIYANK SHAH	<b>Art Unit</b>  2692

CPC- SEARCHED		
Symbol	Date	Examiner
G09G2340/145	6/14/2014	PS
G09G2330/021	6/14/2014	PS
G09G2310/04	6/14/2014	PS
G06F1/3265	6/14/2014	PS

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
345	173,168,169,184	6/14/2014	PS
178	18.01,18.06	6/14/2014	PS
715	764,780,800	6/14/2014	PS

SEARCH NOTES		
Search Notes	Date	Examiner
Class 345 and text modified	6/14/2014	PS
Search history of 13905064	6/14/2014	PS
Forward and backwards citations search	6/14/2014	PS
Inventor name and claim search	6/14/2014	PS

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner

/PRIYANK SHAH/ Examiner.Art Unit 2692	
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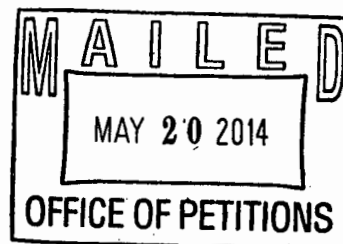




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P.O. BOX 398  
AUSTIN TX 78767-0398



Doc Code: TRACK1.GRANT

<b>Decision Granting Request for Prioritized Examination (Track I or After RCE)</b>	Application No.: 14/257,888
<p>1. THE REQUEST FILED <u>4/21/14</u> IS <b>GRANTED</b>.</p> <p>The above-identified application has met the requirements for prioritized examination</p> <p>A. <input checked="" type="checkbox"/> for an original nonprovisional application (Track I). B. <input type="checkbox"/> for an application undergoing continued examination (RCE).</p> <p>2. <b>The above-identified application will undergo prioritized examination.</b> The application will be accorded special status throughout its entire course of prosecution until one of the following occurs:</p> <p>A. filing a <b><u>petition for extension of time</u></b> to extend the time period for filing a reply; B. filing an <b><u>amendment to amend the application to contain more than four independent claims, more than thirty total claims</u></b>, or a multiple dependent claim; C. filing a <b><u>request for continued examination</u></b>; D. filing a notice of appeal; E. filing a request for suspension of action; F. mailing of a notice of allowance; G. mailing of a final Office action; H. completion of examination as defined in 37 CFR 41.102; or I. abandonment of the application.</p> <p>Telephone inquiries with regard to this decision should be directed to Terri Johnson at 571-272-2991</p> <p>/Terri Johnson/ Paralegal Specialist</p> <p>_____ [Signature] (Title)</p>	

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> ( Not for submission under 37 CFR 1.99)	Application Number		14257888
	Filing Date		2014-04-21
	First Named Inventor	Jinrong Yang	
	Art Unit	2143	
	Examiner Name		
	Attorney Docket Number	6755-00105	

U.S.PATENTS						Remove
Examiner Initial*	Cite No	Patent Number	Kind Code <sup>1</sup>	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	8046721		2011-10-25	Chaudhri et al.	
	2	8359410		2013-01-22	Conroy et al.	
	3	6944017		2005-09-13	Dai	
	4	8046617		2011-10-25	Fleck et al.	

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Examiner Initial*	Cite No	Foreign Document Number <sup>3</sup>	Country Code <sup>2</sup>	Kind Code <sup>4</sup>	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T <sup>5</sup>

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> ( Not for submission under 37 CFR 1.99)	Application Number		14257888
	Filing Date		2014-04-21
	First Named Inventor	Jinrong Yang	
	Art Unit	2143	
	Examiner Name		
	Attorney Docket Number	6755-00105	

	1							<input type="checkbox"/>
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<b>NON-PATENT LITERATURE DOCUMENTS</b>								<b>Remove</b>
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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>5</sup>
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	1	"Settings/System From XBMC", accessed April 3, 2014, pages 1-8.	<input type="checkbox"/>
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	2	"The Microsoft Surface Touchscreen", Accessed April 3, 2014, pages 1-8.	<input type="checkbox"/>
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If you wish to add additional non-patent literature document citation information please click the Add button **Add**

<b>EXAMINER SIGNATURE</b>			
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Examiner Signature		Date Considered	
--------------------	--	-----------------	--

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> See Kind Codes of USPTO Patent Documents at [www.USPTO.GOV](http://www.USPTO.GOV) or MPEP 901.04. <sup>2</sup> Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>3</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>4</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>5</sup> Applicant is to place a check mark here if English language translation is attached.

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**  
( Not for submission under 37 CFR 1.99)

Application Number	14257888
Filing Date	2014-04-21
First Named Inventor	Jinrong Yang
Art Unit	2143
Examiner Name	
Attorney Docket Number	6755-00105

**CERTIFICATION STATEMENT**

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

☐ That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

**OR**

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

☐ See attached certification statement.

☐ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

**SIGNATURE**

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Stephen A. Mason/	Date (YYYY-MM-DD)	2014-05-15
Name/Print	Stephen A. Mason	Registration Number	64303

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

## Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	19038324
<b>Application Number:</b>	14257888
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	6790
<b>Title of Invention:</b>	SYSTEM AND METHOD FOR MANAGING DISPLAY POWER CONSUMPTION
<b>First Named Inventor/Applicant Name:</b>	Jinrong Yang
<b>Customer Number:</b>	35690
<b>Filer:</b>	Stephen Anthony Mason/Jane Maher
<b>Filer Authorized By:</b>	Stephen Anthony Mason
<b>Attorney Docket Number:</b>	6755-00105
<b>Receipt Date:</b>	15-MAY-2014
<b>Filing Date:</b>	21-APR-2014
<b>Time Stamp:</b>	13:30:01
<b>Application Type:</b>	Utility under 35 USC 111(a)

### Payment information:

Submitted with Payment	no
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### File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Form (SB08)	IDS_6755-00105.pdf	527837 63706d05c4a37021dbc20f8da7fa3c09288e58a9	no	4

### Warnings:

### Information:

2	Non Patent Literature	System_XBMC.pdf	1708744 a08073fb4898376715a289d8b55f4bdd3af74fe	no	8
<b>Warnings:</b>					
<b>Information:</b>					
3	Non Patent Literature	The_Microsoft.pdf	1385267 37766d8398b51e267234c98d1783ee27ded17b7c	no	8
<b>Warnings:</b>					
<b>Information:</b>					
<b>Total Files Size (in bytes):</b>			3621848		
<p><b>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</b></p> <p><b><u>New Applications Under 35 U.S.C. 111</u></b>  <b>If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</b></p> <p><b><u>National Stage of an International Application under 35 U.S.C. 371</u></b>  <b>If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</b></p> <p><b><u>New International Application Filed with the USPTO as a Receiving Office</u></b>  <b>If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</b></p>					



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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
14/257,888	04/21/2014	2143	730	6755-00105	20	3

CONFIRMATION NO. 6790

35690  
MEYERTONS, HOOD, KIVLIN, KOWERT & GOETZEL, P.C.  
P.O. BOX 398  
AUSTIN, TX 78767-0398

## FILING RECEIPT



\*OC000000068287490\*

Date Mailed: 05/08/2014

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

### Inventor(s)

Jinrong Yang, Shanghai, CHINA;  
Ramzi Khalil Maalouf, Chevy Chase, MD;

### Applicant(s)

Jinrong Yang, Shanghai, CHINA;  
Ramzi Khalil Maalouf, Chevy Chase, MD;

**Power of Attorney:** The patent practitioners associated with Customer Number 35690

### Domestic Priority data as claimed by applicant

This application is a CIP of 14/058,731 10/21/2013 PAT 8717328  
which is a CON of 13/905,064 05/29/2013 PAT 8593427  
which claims benefit of 61/822,267 05/10/2013  
and claims benefit of 61/826,673 05/23/2013

**Foreign Applications** for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see <http://www.uspto.gov> for more information.) - None.

*Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.*

Permission to Access - A proper **Authorization to Permit Access to Application by Participating Offices** (PTO/SB/39 or its equivalent) has been received by the USPTO.

**If Required, Foreign Filing License Granted:** 05/07/2014

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 14/257,888**



**Projected Publication Date:** 11/13/2014

**Non-Publication Request:** No

**Early Publication Request:** No

**\*\* SMALL ENTITY \*\***

**Title**

SYSTEM AND METHOD FOR MANAGING DISPLAY POWER CONSUMPTION

**Preliminary Class**

715

**Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications:** No

## **PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES**

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**Title 37, Code of Federal Regulations, 5.11 & 5.15**

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<b>PATENT APPLICATION FEE DETERMINATION RECORD</b> Substitute for Form PTO-875						Application or Docket Number 14/257,888			
<b>APPLICATION AS FILED - PART I</b>									
(Column 1)		(Column 2)		SMALL ENTITY		OR OTHER THAN SMALL ENTITY			
FOR	NUMBER FILED	NUMBER EXTRA		RATE(\$)	FEE(\$)		RATE(\$)		
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A		N/A	70		N/A		
SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A		N/A	300		N/A		
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A		N/A	360		N/A		
TOTAL CLAIMS (37 CFR 1.16(j))	20	minus 20 =	*	x 40 =	0.00	OR			
INDEPENDENT CLAIMS (37 CFR 1.16(h))	3	minus 3 =	*	x 210 =	0.00				
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).				0.00				
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))					0.00				
* If the difference in column 1 is less than zero, enter "0" in column 2.				TOTAL	730		TOTAL		
<b>APPLICATION AS AMENDED - PART II</b>									
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY		OR OTHER THAN SMALL ENTITY	
AMENDMENT A		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)
	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =
	Application Size Fee (37 CFR 1.16(s))							OR	
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR	
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE
AMENDMENT B		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)
	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =
	Application Size Fee (37 CFR 1.16(s))							OR	
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR	
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3. ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20". *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3". The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.									

**CERTIFICATION AND REQUEST FOR PRIORITIZED EXAMINATION  
UNDER 37 CFR 1.102(e) (Page 1 of 1)**

First Named Inventor:	Jinrong Yang	Nonprovisional Application Number (if known):	
Title of Invention:	SYSTEM AND METHOD FOR MANAGING DISPLAY POWER CONSUMPTION		

**APPLICANT HEREBY CERTIFIES THE FOLLOWING AND REQUESTS PRIORITIZED EXAMINATION FOR THE ABOVE-IDENTIFIED APPLICATION.**

1. The processing fee set forth in 37 CFR 1.17(i)(1), the prioritized examination fee set forth in 37 CFR 1.17(c), and if not already paid, the publication fee set forth in 37 CFR 1.18(d) have been filed with the request. The basic filing fee, search fee, examination fee, and any required excess claims and application size fees are filed with the request or have been already been paid.
2. The application contains or is amended to contain no more than four independent claims and no more than thirty total claims, and no multiple dependent claims.
3. The applicable box is checked below:

**I. ☒ Original Application (Track One) - Prioritized Examination under § 1.102(e)(1)**

- i. (a) The application is an original nonprovisional utility application filed under 35 U.S.C. 111(a). This certification and request is being filed with the utility application via EFS-Web.  
---OR---  
(b) The application is an original nonprovisional plant application filed under 35 U.S.C. 111(a). This certification and request is being filed with the plant application in paper.
- ii. The executed inventor's oath or declaration is filed with the application. (37 CFR 1.63 and 1.64)

**II. ☐ Request for Continued Examination - Prioritized Examination under § 1.102(e)(2)**

- i. A request for continued examination has been filed with, or prior to, this form.
- ii. If the application is a utility application, this certification and request is being filed via EFS-Web.
- iii. The application is an original nonprovisional utility application filed under 35 U.S.C. 111(a), or is a national stage entry under 35 U.S.C. 371.
- iv. This certification and request is being filed prior to the mailing of a first Office action responsive to the request for continued examination.
- v. No prior request for continued examination has been granted prioritized examination status under 37 CFR 1.102(e)(2).

Signature <u>/Stephen A. Mason/</u>	Date <u>April 21, 2014</u>
Name (Print/Typed) <u>Stephen A. Mason</u>	Practitioner Registration Number <u>64,303</u>
<b>Note:</b> This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. Submit multiple forms if more than one signature is required.*	
<input type="checkbox"/> *Total of _____ forms are submitted.	

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3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
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6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

**SYSTEM AND METHOD FOR MANAGING DISPLAY POWER  
CONSUMPTION**

By:

Jinrong Yang  
Ramzi Khalil Maalouf

## **BACKGROUND**

### **Priority**

**[0001]** This application is a continuation-in-part of U.S. Application Serial No. 14/058,731, filed October 21, 2013, which is continuation of U.S. Application Serial No. 13/905,064, filed May 29, 2013, which claims benefit of priority of U.S. Provisional Application Serial No. 61/822,267, filed 10 May 2013, the contents of which are incorporated by reference herein in their entirety.

**[0002]** This application further claims benefit of priority of U.S. Provisional Application Serial No. 61/826,673, entitled “System and Method for Managing Display Power Consumption,” filed May 23, 2013, the content of which is incorporated by reference herein in its entirety.

### **Technical Field**

**[0003]** This disclosure relates generally to power management, and, more specifically, to managing power consumption in display systems.

### **Description of the Related Art**

**[0004]** The revolution in mobile computing devices, also described herein as multifunction devices, has progressed at a far greater pace than the progress of the batteries that power mobile devices. From smart phones to tablets to laptops, users face increasing frustration as batteries drain under the ceaseless consumption produced by modern display devices.

**[0005]** As the multifunction devices improve and provide an increasingly sophisticated array of functions to the user, demand for power increases on two fronts. First, the amount of time that devices are in use increases. Second, improved hardware such as

brighter display screens and faster processors drains more battery power for each minute that the multifunction device remains in use.

**[0006]** Most, if not all multifunction devices (e.g., smart phones) have a constant screen size and a display area with two options only; this is, the devices are either in a full display state (e.g., the entire display screen is powered on) or in a no display state where the entire display screen is powered-off.



## **SUMMARY OF EMBODIMENTS**

[0007] Systems and methods for managing display power consumption are disclosed. In some embodiments, screen space configuration and user or automated management of the display may cause portions of the display as well as elements displayed by the display to be configured to any user-selected size or position. The battery-saving benefit resulting from this new empowerment may be an extremely valuable function, in some embodiments.

[0008] In some embodiments first information is displayed in an available display area including a first portion of a display screen in a configuration having a set of portions. The set of portions includes the first portion of the display screen, which is configured in a powered-on state to perform display functions and receive user input, and a second portion of the display screen, which is configured in a powered-off state. Responsive to a user indication in the first portion, the second portion is added to the available display area by transitioning the second portion to the powered-on state to perform display functions and receive user input. Second information is displayed in the second portion.

[0009] According to some embodiments, an entire device display screen may function in a full configuration mode where the entire available display screen is in a power-on state. For example, a powered-on state may cause the affected part of the display to perform display functions and receive user input, although less, other or different functionality may be associated with the powered-on state. Instructions may be received directing the display to transition from the full configuration mode to a proportional configuration mode. The proportional configuration mode may configure a portion of the display screen in the powered-on state and another portion of the display in a powered-off state (in an example powered-off state, the affected part of the display may be configured to not perform display functions and to not receive user input). Responsive to receiving the instructions, the underlying display technology (e.g., OLED/AMOLED or LCD, etc.) may be directed to continue to power the portion of the display and power-off the other portion of the display.

**[0010]** In another embodiment, a device may be set to a user interface lock state by any predefined manner where the state prevents the device from performing a predefined set of actions. The device may be configured to display an unlock image while in the lock state and detect contact with a touch sensitive display. The device may be configured to determine whether the contact corresponds to an unlock gesture using the unlock image and further configured to determine whether the gesture indicates a proportional configuration mode or a full configuration mode. Responsive to the determination(s) the display may transition to the determined configuration mode.

## **BRIEF DESCRIPTION OF THE DRAWINGS**

[0011] FIG. 1 illustrates a block diagram of a portable multifunction device in accordance with some embodiments.

[0012] FIG. 2 illustrates a portable multifunction device in accordance with some embodiments.

[0013] FIG. 3 illustrates a portable multifunction displaying first information in an available display area comprising a first portion of a display screen device in accordance with some embodiments.

[0014] FIG. 4 depicts a portable multifunction responsive to a user indication in the in the first portion, adding the second portion to the available display area by transitioning the second portion to the powered-on state to perform display functions and receive user input, and displaying second information in the second portion in accordance with some embodiments.

[0015] FIG. 5 illustrates a portable multifunction displaying first information in an available display area comprising a first portion of a display screen device in accordance with some embodiments.

[0016] FIG. 6 depicts a portable multifunction responsive to a user indication in the in the first portion, adding the second portion to the available display area by transitioning the second portion to the powered-on state to perform display functions and receive user input, and displaying second information in the second portion in accordance with some embodiments.

[0017] FIG. 7 illustrates a portable multifunction displaying first information in an available display area comprising a first portion of a display screen device in accordance with some embodiments.

**[0018]** FIG. 8 depicts a portable multifunction responsive to a user indication in the in the first portion, adding the second portion to the available display area by transitioning the second portion to the powered-on state to perform display functions and receive user input, and displaying second information in the second portion in accordance with some embodiments.

**[0019]** FIG. 9 illustrates a portable multifunction displaying first information in an available display area comprising a first portion of a display screen device in accordance with some embodiments.

**[0020]** FIG. 10 depicts a portable multifunction responsive to a user indication in the in the first portion, adding the second portion to the available display area by transitioning the second portion to the powered-on state to perform display functions and receive user input, and displaying second information in the second portion in accordance with some embodiments.

**[0021]** FIG. 11 illustrates a portable multifunction displaying first information in an available display area comprising a first portion of a display screen device in accordance with some embodiments.

**[0022]** FIG. 12 depicts a portable multifunction displaying first information in an available display area comprising a first portion of a display screen device in accordance with some embodiments.

**[0023]** FIG. 13 illustrates a portable multifunction responsive to a user indication in the in the first portion, adding the second portion to the available display area by transitioning the second portion to the powered-on state to perform display functions and receive user input, and displaying second information in the second portion in accordance with some embodiments.

**[0024]** FIG. 14 depicts a portable multifunction displaying with a display screen device in accordance with some embodiments.

**[0025]** FIG. 15 illustrates a portable multifunction displaying with a display screen device in accordance with some embodiments.

**[0026]** FIG. 16 depicts a portable multifunction displaying first information in an available display area comprising a first portion of a display screen device in accordance with some embodiments.

**[0027]** FIG. 17 illustrates a portable multifunction responsive to a user indication in the in the first portion, adding the second portion to the available display area by transitioning the second portion to the powered-on state to perform display functions and receive user input, and displaying second information in the second portion in accordance with some embodiments.

**[0028]** FIG. 18 depicts a portable multifunction responsive to a user indication in the in the first portion, adding the second portion to the available display area by transitioning the second portion to the powered-on state to perform display functions and receive user input, and displaying second information in the second portion in accordance with some embodiments.

**[0029]** FIG. 19 illustrates a portable multifunction displaying with a display screen device in accordance with some embodiments.

**[0030]** FIG. 19A illustrates a portable multifunction displaying with a display screen device in accordance with some embodiments.

**[0031]** FIG. 20 depicts a portable multifunction displaying with a display screen device in accordance with some embodiments.

**[0032]** FIG. 21 illustrates a portable multifunction displaying with a display screen device in accordance with some embodiments.

**[0033]** FIG. 22 depicts a portable multifunction displaying with a display screen device in accordance with some embodiments.

**[0034]** FIG. 23 illustrates a portable multifunction displaying with a display screen device in accordance with some embodiments.

**[0035]** FIG. 24 depicts a portable multifunction displaying with a display screen device in accordance with some embodiments.

**[0036]** FIG. 25 illustrates a display power management module for managing display power consumption, according to some embodiments.

**[0037]** FIG. 26 is a flow diagram illustrating one embodiment of a method for managing display power consumption, according to some embodiments.

**[0038]** FIG. 27 is a flow diagram illustrating one embodiment of a method for managing display power consumption, according to some embodiments.

**[0039]** FIG. 28 is a flow diagram illustrating one embodiment of a method for managing display power consumption, according to some embodiments.

**[0040]** FIG. 29 is a flow diagram illustrating one embodiment of a method for managing display power consumption, according to some embodiments.

**[0041]** FIG. 30 is a flow diagram illustrating one embodiment of a method for managing display power consumption, according to some embodiments.

**[0042]** FIG. 31 is a flow diagram illustrating one embodiment of a method for managing display power consumption, according to some embodiments.

**[0043]** FIG. 32 is a flow diagram illustrating one embodiment of a method for managing display power consumption, according to some embodiments.

**[0044]** FIG. 33 is a flow diagram illustrating an embodiment of a method for unlocking a display and transitioning the display into either a full configuration mode or a proportional configuration mode.

**[0045]** FIG. 34 illustrates a portable multifunction with a display screen in accordance with some embodiments.

**[0046]** FIG. 35 illustrates a portion of a portable multifunction with a display screen in accordance with some embodiments.

**[0047]** FIG. 36 illustrates a portable multifunction with a display screen in accordance with some embodiments.

**[0048]** FIG. 37 illustrates a portable multifunction with a display screen in accordance with some embodiments.

**[0049]** FIG. 38 illustrates a portable multifunction with a display screen in accordance with some embodiments.

**[0050]** FIG. 39 is a flow diagram illustrating an embodiment of a method for transitioning a display from a full configuration mode to a proportional configuration mode.

**[0051]** FIG. 40 illustrates a portable multifunction with a display screen in accordance with some embodiments.

**[0052]** FIG. 41 illustrates a portable multifunction with a display screen in accordance with some embodiments.

**[0053]** FIG. 42 illustrates a portable multifunction with a display screen in accordance with some embodiments.

**[0054]** FIG. 43 illustrates a portable multifunction with a display screen in accordance with some embodiments.

**[0055]** FIG. 44 illustrates a portable multifunction with a display screen in accordance with some embodiments.

**[0056]** FIG. 45 illustrates a portable multifunction with a display screen in accordance with some embodiments.

**[0057]** FIG. 46 illustrates a portable multifunction with a display screen in accordance with some embodiments.

**[0058]** FIG. 47 illustrates an example computer system configured to implement aspects of the system and method for managing display power consumption.

**[0059]** This specification includes references to “one embodiment” or “an embodiment.” The appearances of the phrases “in one embodiment” or “in an embodiment” do not necessarily refer to the same embodiment. Particular features, structures, or characteristics may be combined in any suitable manner consistent with this disclosure.

**[0060]** “Comprising.” This term is open-ended. As used in the appended claims, this term does not foreclose additional structure or steps. Consider a claim that recites: “An apparatus comprising one or more processor units ....” Such a claim does not foreclose



the apparatus from including additional components (e.g., a network interface unit, graphics circuitry, etc.).

**[0061]** “Configured To.” Various units, circuits, or other components may be described or claimed as “configured to” perform a task or tasks. In such contexts, “configured to” is used to connote structure by indicating that the units/circuits/components include structure (e.g., circuitry) that performs those task or tasks during operation. As such, the unit/circuit/component can be said to be configured to perform the task even when the specified unit/circuit/component is not currently operational (e.g., is not on). The units/circuits/components used with the “configured to” language include hardware—for example, circuits, memory storing program instructions executable to implement the operation, etc. Reciting that a unit/circuit/component is “configured to” perform one or more tasks is expressly intended not to invoke 35 U.S.C. § 112, sixth paragraph, for that unit/circuit/component. Additionally, “configured to” can include generic structure (e.g., generic circuitry) that is manipulated by software and/or firmware (e.g., an FPGA or a general-purpose processor executing software) to operate in manner that is capable of performing the task(s) at issue. “Configure to” may also include adapting a manufacturing process (e.g., a semiconductor fabrication facility) to fabricate devices (e.g., integrated circuits) that are adapted to implement or perform one or more tasks.

**[0062]** “First,” “Second,” etc. As used herein, these terms are used as labels for nouns that they precede, and do not imply any type of ordering (e.g., spatial, temporal, logical, etc.). For example, a buffer circuit may be described herein as performing write operations for “first” and “second” values. The terms “first” and “second” do not necessarily imply that the first value must be written before the second value.

**[0063]** “Based On.” As used herein, this term is used to describe one or more factors that affect a determination. This term does not foreclose additional factors that may affect a determination. That is, a determination may be solely based on those factors or based, at least in part, on those factors. Consider the phrase “determine A based on B.” While in this case, B is a factor that affects the determination of A, such a phrase does not

foreclose the determination of A from also being based on C. In other instances, A may be determined based solely on B.

## **DETAILED DESCRIPTION**

### **Introduction**

[0064] Various embodiments of a system and method for managing display power consumption are disclosed. According to some embodiments, an entire device display screen may function in a full configuration mode where the entire available display screen is in a power-on state. For example, a powered-on state may cause the affected part of the display to perform display functions and receive user input, although less, other or different functionality may be associated with the powered-on state. Instructions may be received directing the display to transition from the full configuration mode to a proportional configuration mode. The proportional configuration mode may configure a portion of the display screen in the powered-on state and another portion of the display in a powered-off state (in an example powered-off state, the affected part of the display may be configured to not perform display functions and to not receive user input). Responsive to receiving the instructions, the underlying display technology (e.g., pixels for OLED/AMOLED technologies) may be directed to continue to power the portion of the display and power-off the other portion of the display.

[0065] In some embodiments, the portion of the screen (e.g., some or all of the display) that is powered-off may be black or near-black, unresponsive to the touch, or display other characteristics of a display that is not powered. For example, the portion of the display that is powered-off cannot be activated by an errant finger and may be used as a handle for gripping the device. Such configuration may be useful for tasks such as taking pictures with the device comprising the display. The portion of the display that is powered-off may be configurable by or for the user and the rest of the display may continue to provide all or almost all of the full functionality, as described herein.

[0066] The screen may be the constant total surface area of the multifunction device on which graphics or text may be electronically provided (or “displayed”), in some embodiments. A display may be configured to display (e.g., illuminate one or more

pixels) one or more colors (e.g., other than a black, or other color screen that is the color of the display when powered off) when powered-on, for example. The area of the display that is powered-on may range from 0% (e.g., all black/off) to 100% (e.g., a full display) and anywhere in-between. In some embodiments, the display may be configured to display in grayscale.

**[0067]** 0% to 100% of the display or screen may be configured as powered-on, in embodiments. Whatever portion is not configured as powered-on may be configured as powered-off. In embodiments, the portion that is configured as powered-off may be using little to no power from the battery. In embodiments, multiple different portions of the screen may be configured as powered-on while the rest of the screen remains powered-off. For example, the icons representing applications on a smart phone user interface may be powered-on while the space in-between the icons may be powered-off, like islands of powered-on color in a sea of powered-off display area. The display portion may be equal to the total surface area of the sum of the individual powered-on display areas divided by the total screen size.

**[0068]** The portion of powered-on display may be user-configurable, via settings or manipulation of the user-interface, such as described herein, for example. In another example, the portion of powered-on display may be otherwise controlled, by the device operating system or by an application. Embodiments, as described herein, may reduce the amount of screen that is powered-on (e.g., from 20-plus applications to half that or less). In some embodiment, such a configuration may reduce the use of battery power.

**[0069]** In some embodiments, power efficiency may be improved by practicing the methods and configurations described herein, providing for extended battery life for example. A device comprising a display as described herein may provide a user with the ability to control the size of the display such that individual pixels below the powered-off or inactive (e.g., black/dead/unpowered) portion of the display screen are all turned off (e.g., in smart phones using OLED/AMOLED technologies) in embodiments. Some tests have shown that for some devices, something like 67% of the total power drain of a

battery may be attributable to the display. In embodiments, the power drain reduction may be proportional to the size of the powered-off portion

**[0070]** In another embodiment, a device may be set to a user interface lock state by any predefined manner where the state prevents the device from performing a predefined set of actions. The device may be configured to display an unlock image while in the lock state and detect contact with a touch sensitive display. The device may be configured to determine whether the contact corresponds to an unlock gesture using the unlock image and further configured to determine whether the gesture indicates a proportional configuration mode or a full configuration mode. Responsive to the determination(s) the display may transition to the determined configuration mode.

**[0071]** In some embodiments first information is displayed in an available display area including a first portion of a display screen in a configuration having a plurality of portions. In some embodiments, the display screen includes the first portion of the display screen, which is configured in a powered-on state to perform display functions and receive user input, and a second portion of the display screen, which is configured in a powered-off state. Responsive to a user indication in the in the first portion, the second portion is added to the available display area by transitioning the second portion to the powered-on state to perform display functions and receive user input. Second information is displayed in the second portion.

**[0072]** The process may be reversible in some embodiments, and a portion of the display screen may be removed from the powered-on state to the powered off state in response to user input. Likewise, the actions described herein as being performed in response to user input may, in some embodiments, be performed in response to system events such as the passage of an amount of time or a signal from an application or system module, or other system events, such as a power-down or sleep signal.

**[0073]** Some embodiments include a redesign of the current user interface of smart phones and hand-held terminals, variously referred to herein as multifunction devices,

giving the user the full freedom to touch change their screen and divide it into an active (working) portion and a non-active (non-working, dead) portion depending on their needs and application. Some embodiments achieve numerous valuable benefits such as extending existing battery usage time as a result of the unused electricity saved by the dead portion of the screen, and at the same time using the dead portion of the screen as a grip surface to securely and conveniently use applications such as the camera (similar to the HandlePa™), etc.

**[0074]** Some embodiments present a new simple yet revolutionary user interface (UI) based on a concept and method which will elevate the user's freedom and flexibility and thus change the way smart phone and hand-held terminal users interact with their screen.

**[0075]** In some embodiments, the second information is generated by mathematically upscaling the first information. The second information includes a portion of the first information upscaled for display in both the second portion and the first portion. In some embodiments, third information in the first portion. The third information comprises a portion of the first information upscaled for display in both the second portion and the first portion. In some embodiments, a graphical content data structure including content for display in the available display area is received, and elements of the graphical content data structure are selected for display in the available display area based at least in part on whether the second portion is in a powered-on state.

**[0076]** In some embodiments, a graphical content data structure including content for display in the available display area is received, and elements of the graphical content data structure are scaled for display in the available display area based at least in part on a dimension of the available display area. In some embodiments, a graphical content data structure including content for display in the available display area is received, and elements of the graphical content data structure are scaled for display in the available display area based at least in part on whether the second portion is in a powered-on state.

[0077] In some embodiments, a graphical content data structure including content for display in the available display area is received, and a position relative to a background element of a foreground content element of the graphical content data structure is adjusted for display in the available display area based at least in part on whether the second portion is in a powered-on state. In some embodiments, a graphical content data structure including content for display in the available display area is received, and elements of the graphical content data structure are selected for display in the available display area based at least in part on a dimension of the available display area.

[0078] Some embodiments may include a means for managing display power consumption. For example, a screen power management module may display first information in an available display area comprising a first portion of a display screen in a configuration having a plurality of portions, responsive to a user indication in the in the first portion, add the second portion to the available display area by transitioning the second portion to the powered-on state to perform display functions and receive user input, and display second information in the second portion, as described herein. The screen power management module may in some embodiments be implemented by a non-transitory, computer-readable storage medium and one or more processors (e.g., CPUs and/or GPUs) of a computing apparatus. The computer-readable storage medium may store program instructions executable by the one or more processors to cause the computing apparatus to display first information in an available display area comprising a first portion of a display screen in a configuration having a plurality of portions, responsive to a user indication in the in the first portion, add the second portion to the available display area by transitioning the second portion to the powered-on state to perform display functions and receive user input, and display second information in the second portion, as described herein. Other embodiments of a screen power management module may be at least partially implemented by hardware circuitry and/or firmware stored, for example, in a non-volatile memory.

### **Multifunction Device**

[0079] Reference will now be made in detail to embodiments, examples of which are illustrated in the accompanying drawings. In the following detailed description, numerous specific details are set forth in order to provide a thorough understanding of the present disclosure. However, it will be apparent to one of ordinary skill in the art that some embodiments may be practiced without these specific details. In other instances, well-known methods, procedures, components, circuits, and networks have not been described in detail so as not to unnecessarily obscure aspects of the embodiments.

[0080] It will also be understood that, although the terms first, second, etc. may be used herein to describe various elements, these elements should not be limited by these terms. These terms are only used to distinguish one element from another. For example, a first contact could be termed a second contact, and, similarly, a second contact could be termed a first contact, without departing from the intended scope. The first contact and the second contact are both contacts, but they are not the same contact.

[0081] The terminology used in the description herein is for the purpose of describing particular embodiments only and is not intended to be limiting. As used in the description and the appended claims, the singular forms “a”, “an” and “the” are intended to include the plural forms as well, unless the context clearly indicates otherwise. It will also be understood that the term “and/or” as used herein refers to and encompasses any and all possible combinations of one or more of the associated listed items. It will be further understood that the terms “includes,” “including,” “comprises,” and/or “comprising,” when used in this specification, specify the presence of stated features, integers, steps, operations, elements, and/or components, but do not preclude the presence or addition of one or more other features, integers, steps, operations, elements, components, and/or groups thereof.

[0082] As used herein, the term “if” may be construed to mean “when” or “upon” or “in response to determining” or “in response to detecting,” depending on the context. Similarly, the phrase “if it is determined” or “if [a stated condition or event] is detected” may be construed to mean “upon determining” or “in response to determining” or “upon



detecting [the stated condition or event]" or "in response to detecting [the stated condition or event]," depending on the context.

**[0083]** Embodiments of electronic devices, user interfaces for such devices, and associated processes for using such devices are described. In some embodiments, the device is a portable communications device, such as a mobile telephone, that also contains other functions, such as PDA and/or music player functions. Other portable electronic devices, such as laptops or tablet computers with touch-sensitive surfaces (e.g., touch screen displays and/or touch pads), may also be used. It should also be understood that, in some embodiments, the device is not a portable communications device, but is a desktop computer with a touch-sensitive surface (e.g., a touch screen display and/or a touch pad). In some embodiments, the device is a gaming computer with orientation sensors (e.g., orientation sensors in a gaming controller).

**[0084]** In the discussion that follows, an electronic device that includes a display and a touch-sensitive surface is described. It should be understood, however, that the electronic device may include one or more other physical user-interface devices, such as a physical keyboard, a mouse and/or a joystick.

**[0085]** The device typically supports a variety of applications, such as one or more of the following: a drawing application, a presentation application, a word processing application, a website creation application, a disk authoring application, a spreadsheet application, a gaming application, a telephone application, a video conferencing application, an e-mail application, an instant messaging application, a workout support application, a photo management application, a digital camera application, a digital video camera application, a web browsing application, a digital music player application, and/or a digital video player application.

**[0086]** The various applications that may be executed on the device may use at least one common physical user-interface device, such as the touch-sensitive surface. One or more functions of the touch-sensitive surface as well as corresponding information displayed

on the device may be adjusted and/or varied from one application to the next and/or within a respective application. In this way, a common physical architecture (such as the touch-sensitive surface) of the device may support the variety of applications with user interfaces that are intuitive and transparent to the user.

[0087] Attention is now directed toward embodiments of portable devices. FIG. 1 is a block diagram illustrating portable multifunction device 100 with touch-sensitive displays 112 in accordance with some embodiments. Touch-sensitive display 112 is sometimes called a "touch screen" for convenience, and may also be known as or called a touch-sensitive display system. Device 100 may include memory 102 (which may include one or more computer readable storage mediums), memory controller 122, one or more processing units (CPU's) 120, peripherals interface 118, RF circuitry 108, audio circuitry 110, speaker 111, microphone 113, input/output (I/O) subsystem 106, other input or control devices 116, and external port 124. Device 100 may include one or more optical sensors 164. These components may communicate over one or more communication buses or signal lines 103.

[0088] It should be appreciated that device 100 is only one example of a portable multifunction device, and that device 100 may have more or fewer components than shown, may combine two or more components, or may have a different configuration or arrangement of the components. The various components shown in FIG. 1 may be implemented in hardware, software, or a combination of hardware and software, including one or more signal processing and/or application specific integrated circuits.

[0089] Memory 102 may include high-speed random access memory and may also include non-volatile memory, such as one or more magnetic disk storage devices, flash memory devices, or other non-volatile solid-state memory devices. Access to memory 102 by other components of device 100, such as CPU 120 and the peripherals interface 118, may be controlled by memory controller 122.

**[0090]** Peripherals interface 118 can be used to couple input and output peripherals of the device to CPU 120 and memory 102. The one or more processors 120 run or execute various software programs and/or sets of instructions stored in memory 102 to perform various functions for device 100 and to process data.

**[0091]** In some embodiments, peripherals interface 118, CPU 120, and memory controller 122 may be implemented on a single chip, such as chip 104. In some other embodiments, they may be implemented on separate chips.

**[0092]** RF (radio frequency) circuitry 108 receives and sends RF signals, also called electromagnetic signals. RF circuitry 108 converts electrical signals to/from electromagnetic signals and communicates with communications networks and other communications devices via the electromagnetic signals. RF circuitry 108 may include well-known circuitry for performing these functions, including but not limited to an antenna system, an RF transceiver, one or more amplifiers, a tuner, one or more oscillators, a digital signal processor, a CODEC chipset, a subscriber identity module (SIM) card, memory, and so forth. RF circuitry 108 may communicate with networks, such as the Internet, also referred to as the World Wide Web (WWW), an intranet and/or a wireless network, such as a cellular telephone network, a wireless local area network (LAN) and/or a metropolitan area network (MAN), and other devices by wireless communication.

**[0093]** The wireless communication may use any of a variety of communications standards, protocols and technologies, including but not limited to Global System for Mobile Communications (GSM), Enhanced Data GSM Environment (EDGE), high-speed downlink packet access (HSDPA), high-speed uplink packet access (HSUPA), wideband code division multiple access (W-CDMA), code division multiple access (CDMA), time division multiple access (TDMA), Bluetooth, Wireless Fidelity (Wi-Fi) (e.g., IEEE 802.11a, IEEE 802.11b, IEEE 802.11g and/or IEEE 802.11n), voice over Internet Protocol (VoIP), Wi-MAX, a protocol for e-mail (e.g., Internet message access protocol (IMAP) and/or post office protocol (POP)), instant messaging (e.g., extensible messaging

and presence protocol (XMPP), Session Initiation Protocol for Instant Messaging and Presence Leveraging Extensions (SIMPLE), Instant Messaging and Presence Service (IMPS)), and/or Short Message Service (SMS), or any other suitable communication protocol, including communication protocols not yet developed as of the filing date of this document.

**[0094]** Audio circuitry 110, speaker 111, and microphone 113 provide an audio interface between a user and device 100. Audio circuitry 110 receives audio data from peripherals interface 118, converts the audio data to an electrical signal, and transmits the electrical signal to speaker 111. Speaker 111 converts the electrical signal to human-audible sound waves. Audio circuitry 110 also receives electrical signals converted by microphone 113 from sound waves. Audio circuitry 110 converts the electrical signal to audio data and transmits the audio data to peripherals interface 118 for processing. Audio data may be retrieved from and/or transmitted to memory 102 and/or RF circuitry 108 by peripherals interface 118. In some embodiments, audio circuitry 110 also includes a headset jack (e.g., 212, FIG. 2). The headset jack provides an interface between audio circuitry 110 and removable audio input/output peripherals, such as output-only headphones or a headset with both output (e.g., a headphone for one or both ears) and input (e.g., a microphone).

**[0095]** I/O subsystem 106 couples input/output peripherals on device 100, such as touch screen 112 and other input control devices 116, to peripherals interface 118. I/O subsystem 106 may include display controller 156 and one or more input controllers 160 for other input or control devices. The one or more input controllers 160 receive/send electrical signals from/to other input or control devices 116. The other input control devices 116 may include physical buttons (e.g., push buttons, rocker buttons, etc.), dials, slider switches, joysticks, click wheels, and so forth. In some alternate embodiments, input controller(s) 160 may be coupled to any (or none) of the following: a keyboard, infrared port, USB port, and a pointer device such as a mouse. The one or more buttons (e.g., 208, FIG. 2) may include an up/down button for volume control of speaker 111

and/or microphone 113. The one or more buttons may include a push button (e.g., 206, FIG. 2).

[0096] Touch-sensitive display 112 provides an input interface and an output interface between the device and a user. Display controller 156 receives and/or sends electrical signals from/to touch screen 112. Touch screen 112 displays visual output to the user. The visual output may include graphics, text, icons, video, and any combination thereof (collectively termed "graphics"). In some embodiments, some or all of the visual output may correspond to user-interface objects.

[0097] Touch screen 112 has a touch-sensitive surface, sensor or set of sensors that accepts input from the user based on haptic and/or tactile contact. Touch screen 112 and display controller 156 (along with any associated modules and/or sets of instructions in memory 102) detect contact (and any movement or breaking of the contact) on touch screen 112 and converts the detected contact into interaction with user-interface objects (e.g., one or more soft keys, icons, web pages or images) that are displayed on touch screen 112. In an exemplary embodiment, a point of contact between touch screen 112 and the user corresponds to a finger of the user.

[0098] Touch screen 112 may use LCD (liquid crystal display) technology, LPD (light emitting polymer display) technology, or LED (light emitting diode) technology, although other display technologies may be used in other embodiments. Touch screen 112 and display controller 156 may detect contact and any movement or breaking thereof using any of a variety of touch sensing technologies now known or later developed, including but not limited to capacitive, resistive, infrared, and surface acoustic wave technologies, as well as other proximity sensor arrays or other elements for determining one or more points of contact with touch screen 112. In an exemplary embodiment, projected mutual capacitance sensing technology is used, such as that found in the iPhone®, iPod Touch®, and iPad® from Apple Inc. of Cupertino, California.

[0099] The user may make contact with touch screen 112 using any suitable object or appendage, such as a stylus, a finger, and so forth. In some embodiments, the user interface is designed to work primarily with finger-based contacts and gestures, which can be less precise than stylus-based input due to the larger area of contact of a finger on the touch screen. In some embodiments, the device translates the rough finger-based input into a precise pointer/cursor position or command for performing the actions desired by the user.

[0100] In some embodiments, in addition to the touch screen, device 100 may include a touchpad (not shown) for activating or deactivating particular functions. In some embodiments, the touchpad is a touch-sensitive area of the device that, unlike the touch screen, does not display visual output. The touchpad may be a touch-sensitive surface that is separate from touch screen 112 or an extension of the touch-sensitive surface formed by the touch screen.

[0101] Device 100 also includes power system 162 for powering the various components. Power system 162 may include a power management system, one or more power sources (e.g., battery, alternating current (AC)), a recharging system, a power failure detection circuit, a power converter or inverter, a power status indicator (e.g., a light-emitting diode (LED)) and any other components associated with the generation, management and distribution of power in portable devices.

[0102] Device 100 may also include one or more optical sensors 164. FIG. 1 shows an optical sensor coupled to optical sensor controller 159 in I/O subsystem 106. Optical sensor 164 may include charge-coupled device (CCD) or complementary metal-oxide semiconductor (CMOS) phototransistors. Optical sensor 164 receives light from the environment, projected through one or more lens, and converts the light to data representing an image. In conjunction with imaging module 143 (also called a camera module) optical sensor 164 may capture still images or video. In some embodiments, an optical sensor is located on the back of device 100, opposite touch screen display 112 on the front of the device, so that the touch screen display may be used as a viewfinder for

still and/or video image acquisition. In some embodiments, another optical sensor is located on the front of the device so that the user's image may be obtained for videoconferencing while the user views the other video conference participants on the touch screen display.

**[0103]** Device 100 may also include one or more proximity sensors 166. FIG. 1 shows proximity sensor 166 coupled to peripherals interface 118. Alternately, proximity sensor 166 may be coupled to input controller 160 in I/O subsystem 106. In some embodiments, the proximity sensor turns off and disables touch screen 112 when the multifunction device is placed near the user's ear (e.g., when the user is making a phone call).

**[0104]** Device 100 includes one or more orientation sensors 168. In some embodiments, the one or more orientation sensors include one or more accelerometers (e.g., one or more linear accelerometers and/or one or more rotational accelerometers). In some embodiments, the one or more orientation sensors include one or more gyroscopes. In some embodiments, the one or more orientation sensors include one or more magnetometers. In some embodiments, the one or more orientation sensors include one or more of global positioning system (GPS), Global Navigation Satellite System (GLONASS), and/or other global navigation system receivers. The GPS, GLONASS, and/or other global navigation system receivers may be used for obtaining information concerning the location and orientation (e.g., portrait or landscape) of device 100. In some embodiments, the one or more orientation sensors include any combination of orientation/rotation sensors. FIG. 1 shows the one or more orientation sensors 168 coupled to peripherals interface 118. Alternately, the one or more orientation sensors 168 may be coupled to an input controller 160 in I/O subsystem 106. In some embodiments, information is displayed on the touch screen display in a portrait view or a landscape view based on an analysis of data received from the one or more orientation sensors.

**[0105]** In some embodiments, the software components stored in memory 102 include operating system 126, communication module (or set of instructions) 128, contact/motion module (or set of instructions) 130, graphics module (or set of instructions) 132, text

input module (or set of instructions) 134, Global Positioning System (GPS) module (or set of instructions) 135, screen power management module 158 and applications (or sets of instructions) 136. Device/global internal state 157 includes one or more of: active application state, indicating which applications, if any, are currently active; display state, indicating what applications, views or other information occupy various regions of touch screen display 112; sensor state, including information obtained from the device's various sensors and input control devices 116; state information that indicates which processes control output of shared audio or visual resource of a vehicle; ownership transition conditions of the shared audio or visual resource; and location information concerning the device's location and/or attitude.

**[0106]** Operating system 126 (e.g., Darwin, LINUX, UNIX, OS X, WINDOWS, or an embedded operating system such as VxWorks or RTX) includes various software components and/or drivers for controlling and managing general system tasks (e.g., memory management, storage device control, power management, etc.) and facilitates communication between various hardware and software components.

**[0107]** Communication module 128 facilitates communication with other devices over one or more external ports 124 and also includes various software components for handling data received by RF circuitry 108 and/or external port 124. External port 124 (e.g., Universal Serial Bus (USB), FIREWIRE, etc.) is adapted for coupling directly to other devices or indirectly over a network (e.g., the Internet, wireless LAN, etc.).

**[0108]** Contact/motion module 130 may detect contact with touch screen 112 (in conjunction with display controller 156) and other touch sensitive devices (e.g., a touchpad or physical click wheel). Contact/motion module 130 includes various software components for performing various operations related to detection of contact, such as determining if contact has occurred (e.g., detecting a finger-down event), determining if there is movement of the contact and tracking the movement across the touch-sensitive surface (e.g., detecting one or more finger-dragging events), and determining if the contact has ceased (e.g., detecting a finger-up event or a break in contact).



Contact/motion module 130 receives contact data from the touch-sensitive surface. Determining movement of the point of contact, which is represented by a series of contact data, may include determining speed (magnitude), velocity (magnitude and direction), and/or an acceleration (a change in magnitude and/or direction) of the point of contact. These operations may be applied to single contacts (e.g., one finger contacts) or to multiple simultaneous contacts (e.g., "multitouch"/multiple finger contacts). In some embodiments, contact/motion module 130 and display controller 156 detect contact on a touchpad.

[0109] Contact/motion module 130 may detect a gesture input by a user. Different gestures on the touch-sensitive surface have different contact patterns. Thus, a gesture may be detected by detecting a particular contact pattern. For example, detecting a finger tap gesture includes detecting a finger-down event followed by detecting a finger-up (lift off) event at the same position (or substantially the same position) as the finger-down event (e.g., at the position of an icon). As another example, detecting a finger swipe gesture on the touch-sensitive surface includes detecting a finger-down event followed by detecting one or more finger-dragging events, and subsequently followed by detecting a finger-up (lift off) event.

[0110] Graphics module 132 includes various known software components for rendering and displaying graphics on touch screen 112 or other display, including components for changing the intensity of graphics that are displayed. As used herein, the term "graphics" includes any object that can be displayed to a user, including without limitation text, web pages, icons (such as user-interface objects including soft keys), digital images, videos, animations and the like.

[0111] In some embodiments, graphics module 132 stores data representing graphics to be used. Each graphic may be assigned a corresponding code. Graphics module 132 receives, from applications etc., one or more codes specifying graphics to be displayed along with, if necessary, coordinate data and other graphic property data, and then generates screen image data to output to display controller 156.

[0112] Text input module 134, which may be a component of graphics module 132, provides soft keyboards for entering text in various applications (e.g., contacts 137, e-mail 140, IM 141, browser 147, and any other application that needs text input).

[0113] GPS module 135 determines the location of the device and provides this information for use in various applications (e.g., to telephone 138 for use in location-based dialing, to camera 143 as picture/video metadata, and to applications that provide location-based services such as weather widgets, local yellow page widgets, and map/navigation widgets).

[0114] Applications 136 may include the following modules (or sets of instructions), or a subset or superset thereof:

- contacts module 137 (sometimes called an address book or contact list);
- telephone module 138;
- video conferencing module 139;
- e-mail client module 140;
- instant messaging (IM) module 141;
- workout support module 142;
- camera module 143 for still and/or video images;
- image management module 144;
- browser module 147;
- calendar module 148;
- widget modules 149, which may include one or more of: weather widget 149-1, stocks widget 149-2, calculator widget 149-3, alarm clock widget 149-4, dictionary widget 149-5, and other widgets obtained by the user, as well as user-created widgets 149-6;
- widget creator module 150 for making user-created widgets 149-6;
- search module 151;
- video and music player module 152, which may be made up of a video module and a music module;

- notes module 153;
- map module 154; and/or
- online video module 155.

[0115] Examples of other applications 136 that may be stored in memory 102 include other word processing applications, other image editing applications, drawing applications, presentation applications, JAVA-enabled applications, encryption, digital rights management, voice recognition, and voice replication.

[0116] In conjunction with touch screen 112, display controller 156, contact module 130, graphics module 132, and text input module 134, contacts module 137 may be used to manage an address book or contact list (e.g., stored in application internal state 192 of contacts module 137 in memory 102), including: adding name(s) to the address book; deleting name(s) from the address book; associating telephone number(s), e-mail address(es), physical address(es) or other information with a name; associating an image with a name; categorizing and sorting names; providing telephone numbers or e-mail addresses to initiate and/or facilitate communications by telephone 138, video conference 139, e-mail 140, or IM 141; and so forth.

[0117] In conjunction with RF circuitry 108, audio circuitry 110, speaker 111, microphone 113, touch screen 112, display controller 156, contact module 130, graphics module 132, and text input module 134, telephone module 138 may be used to enter a sequence of characters corresponding to a telephone number, access one or more telephone numbers in address book 137, modify a telephone number that has been entered, dial a respective telephone number, conduct a conversation and disconnect or hang up when the conversation is completed. As noted above, the wireless communication may use any of a variety of communications standards, protocols and technologies.

[0118] In conjunction with RF circuitry 108, audio circuitry 110, speaker 111, microphone 113, touch screen 112, display controller 156, and communication module

128, screen power management module 158 controls portions of a screen active for display use as described herein, by controlling or causing the graphics module 132 to display first information in an available display area comprising a first portion of a display screen in a configuration having a plurality of portions, responsive to a user indication in the in the first portion, add the second portion to the available display area by transitioning the second portion to the powered-on state to perform display functions and receive user input, and display second information in the second portion, as described herein

**[0119]** In conjunction with RF circuitry 108, audio circuitry 110, speaker 111, microphone 113, touch screen 112, display controller 156, optical sensor 164, screen power management module 158, contact module 130, graphics module 132, text input module 134, contact list 137, and telephone module 138, videoconferencing module 139 includes executable instructions to initiate, conduct, and terminate a video conference between a user and one or more other participants in accordance with user instructions.

**[0120]** In conjunction with RF circuitry 108, touch screen 112, display controller 156, contact module 130, graphics module 132, and text input module 134, e-mail client module 140 includes executable instructions to create, send, receive, and manage e-mail in response to user instructions. In conjunction with image management module 144, e-mail client module 140 makes it very easy to create and send e-mails with still or video images taken with camera module 143.

**[0121]** In conjunction with RF circuitry 108, touch screen 112, display controller 156, contact module 130, graphics module 132, and text input module 134, the instant messaging module 141 includes executable instructions to enter a sequence of characters corresponding to an instant message, to modify previously entered characters, to transmit a respective instant message (for example, using a Short Message Service (SMS) or Multimedia Message Service (MMS) protocol for telephony-based instant messages or using XMPP, SIMPLE, or IMPS for Internet-based instant messages), to receive instant messages and to view received instant messages. In some embodiments, transmitted

and/or received instant messages may include graphics, photos, audio files, video files and/or other attachments as are supported in a MMS and/or an Enhanced Messaging Service (EMS). As used herein, “instant messaging” refers to both telephony-based messages (e.g., messages sent using SMS or MMS) and Internet-based messages (e.g., messages sent using XMPP, SIMPLE, or IMPS).

**[0122]** In conjunction with RF circuitry 108, touch screen 112, display controller 156, contact module 130, graphics module 132, text input module 134, GPS module 135, map module 154, and music player module 146, workout support module 142 includes executable instructions to create workouts (e.g., with time, distance, and/or calorie burning goals); communicate with workout sensors (sports devices); receive workout sensor data; calibrate sensors used to monitor a workout; select and play music for a workout; and display, store and transmit workout data.

**[0123]** In conjunction with touch screen 112, display controller 156, optical sensor(s) 164, optical sensor controller 159, contact module 130, graphics module 132, and image management module 144, camera module 143 includes executable instructions to capture still images or video (including a video stream) and store them into memory 102, modify characteristics of a still image or video, or delete a still image or video from memory 102.

**[0124]** In conjunction with touch screen 112, display controller 156, contact module 130, graphics module 132, text input module 134, and camera module 143, image management module 144 includes executable instructions to arrange, modify (e.g., edit), or otherwise manipulate, label, delete, present (e.g., in a digital slide show or album), and store still and/or video images.

**[0125]** In conjunction with RF circuitry 108, touch screen 112, display system controller 156, contact module 130, graphics module 132, and text input module 134, browser module 147 includes executable instructions to browse the Internet in accordance with user instructions, including searching, linking to, receiving, and displaying web pages or portions thereof, as well as attachments and other files linked to web pages.

**[0126]** In conjunction with RF circuitry 108, touch screen 112, display system controller 156, contact module 130, graphics module 132, text input module 134, e-mail client module 140, and browser module 147, calendar module 148 includes executable instructions to create, display, modify, and store calendars and data associated with calendars (e.g., calendar entries, to do lists, etc.) in accordance with user instructions.

**[0127]** In conjunction with RF circuitry 108, touch screen 112, display system controller 156, contact module 130, graphics module 132, text input module 134, and browser module 147, widget modules 149 are mini-applications that may be downloaded and used by a user (e.g., weather widget 149-1, stocks widget 149-2, calculator widget 149-3, alarm clock widget 149-4, and dictionary widget 149-5) or created by the user (e.g., user-created widget 149-6). In some embodiments, a widget includes an HTML (Hypertext Markup Language) file, a CSS (Cascading Style Sheets) file, and a JavaScript file. In some embodiments, a widget includes an XML (Extensible Markup Language) file and a JavaScript file (e.g., Yahoo! Widgets).

**[0128]** In conjunction with RF circuitry 108, touch screen 112, display system controller 156, contact module 130, graphics module 132, text input module 134, and browser module 147, the widget creator module 150 may be used by a user to create widgets (e.g., turning a user-specified portion of a web page into a widget).

**[0129]** In conjunction with touch screen 112, display system controller 156, contact module 130, graphics module 132, and text input module 134, search module 151 includes executable instructions to search for text, music, sound, image, video, and/or other files in memory 102 that match one or more search criteria (e.g., one or more user-specified search terms) in accordance with user instructions.

**[0130]** In conjunction with touch screen 112, display system controller 156, contact module 130, graphics module 132, audio circuitry 110, speaker 111, RF circuitry 108, and browser module 147, video and music player module 152 includes executable

instructions that allow the user to download and play back recorded music and other sound files stored in one or more file formats, such as MP3 or AAC files, and executable instructions to display, present or otherwise play back videos (e.g., on touch screen 112 or on an external, connected display via external port 124). In some embodiments, device 100 may include the functionality of an MP3 player, such as an iPod (trademark of Apple Inc.).

**[0131]** In conjunction with touch screen 112, display controller 156, contact module 130, graphics module 132, and text input module 134, notes module 153 includes executable instructions to create and manage notes, to do lists, and the like in accordance with user instructions.

**[0132]** In conjunction with RF circuitry 108, touch screen 112, display system controller 156, contact module 130, graphics module 132, text input module 134, GPS module 135, and browser module 147, map module 154 may be used to receive, display, modify, and store maps and data associated with maps (e.g., driving directions; data on stores and other points of interest at or near a particular location; and other location-based data) in accordance with user instructions.

**[0133]** In conjunction with touch screen 112, display system controller 156, contact module 130, graphics module 132, audio circuitry 110, speaker 111, RF circuitry 108, text input module 134, e-mail client module 140, and browser module 147, online video module 155 includes instructions that allow the user to access, browse, receive (e.g., by streaming and/or download), play back (e.g., on the touch screen or on an external, connected display via external port 124), send an e-mail with a link to a particular online video, and otherwise manage online videos in one or more file formats, such as H.264. In some embodiments, instant messaging module 141, rather than e-mail client module 140, is used to send a link to a particular online video.

**[0134]** Each of the above identified modules and applications correspond to a set of executable instructions for performing one or more functions described above and the

methods described in this application (e.g., the computer-implemented methods and other information processing methods described herein). These modules (i.e., sets of instructions) need not be implemented as separate software programs, procedures or modules, and thus various subsets of these modules may be combined or otherwise re-arranged in various embodiments. In some embodiments, memory 102 may store a subset of the modules and data structures identified above. Furthermore, memory 102 may store additional modules and data structures not described above.

**[0135]** In some embodiments, device 100 is a device where operation of a predefined set of functions on the device is performed exclusively through a touch screen and/or a touchpad. By using a touch screen and/or a touchpad as the primary input control device for operation of device 100, the number of physical input control devices (such as push buttons, dials, and the like) on device 100 may be reduced.

**[0136]** The predefined set of functions that may be performed exclusively through a touch screen and/or a touchpad include navigation between user interfaces. In some embodiments, the touchpad, when touched by the user, navigates device 100 to a main, home, or root menu from any user interface that may be displayed on device 100. In such embodiments, the touchpad may be referred to as a “menu button.” In some other embodiments, the menu button may be a physical push button or other physical input control device instead of a touchpad.

**[0137]** While a portable or mobile computing device is shown as one embodiment of a multifunction device, one of skill in the art will readily realize in light of having read the current disclosure that a desktop computer or other computing device may also perform many of the functions described herein without departing from the scope and intent of the present disclosure. Likewise, while touch screen devices are shown as one embodiment of a multifunction device, one of skill in the art will readily realize in light of having read the current disclosure that a desktop computer or other computing device without a touch screen may also perform many of the functions described herein without departing from the scope and intent of the present disclosure.



[0138] FIG. 2 illustrates a portable multifunction device 100 in accordance with some embodiments. The touch screen may display one or more graphics within user interface (UI) 200. In this embodiment, as well as others described below, a user may select one or more of the graphics by making a gesture on the graphics, for example, with one or more fingers 202 (not drawn to scale in the figure) or one or more styluses 203 (not drawn to scale in the figure).

[0139] Device 100 may also include one or more physical buttons, such as "home" or menu button 204. As described previously, menu button 204 may be used to navigate to any application 136 in a set of applications that may be executed on device 100. Alternatively, in some embodiments, the menu button is implemented as a soft key in a GUI displayed on touch screen 112.

[0140] In one embodiment, device 100 includes touch screen 112, menu button 204, push button 206 for powering the device on/off and locking the device, volume adjustment button(s) 208, Subscriber Identity Module (SIM) card slot 210, head set jack 212, and docking/charging external port 124. Push button 206 may be used to turn the power on/off on the device by depressing the button and holding the button in the depressed state for a predefined time interval; to lock the device by depressing the button and releasing the button before the predefined time interval has elapsed; and/or to unlock the device or initiate an unlock process.

[0141] In an alternative embodiment, device 100 also may accept verbal input for activation or deactivation of some functions through microphone 113.

### **User interface examples**

[0142] FIG. 3 illustrates a portable multifunction displaying first information of the active display within the available display area comprising a first portion of a display screen device in accordance with some embodiments. Multifunction device 300 includes

an active display 305. A first portion 315 is an available display area 310 and a second portion 320 is in a powered-off condition. As shown in FIG. 3, multifunction device 300 is displaying first information in the available display area 310 comprising the first portion 315 and a second portion 320 of the display screen in a configuration having a plurality of portions, e.g., first portion 315 and second portion 320. The first portion 315 of the display screen 305 is configured in a powered-on state to perform display functions and receive user input. The second portion 320 is configured in a powered-off state. A display main control bar 350 for providing user input is shown.

[0143] FIG. 4 depicts a portable multifunction responsive to a user indication in the in the first portion, adding the second portion to the available display area by transitioning the second portion to the powered-on state to perform display functions and receive user input, and displaying second information in the second portion in accordance with some embodiments. Multifunction device 400 includes a display 405. An available display area 410 includes a first portion 415 and a second portion 420. Note that a third portion 425 remains in a powered-off condition.

[0144] To achieve a transition from the state represented in FIG. 3 to the state represented in FIG. 4, multifunction device 400, responsive to a user indication, for instance movement of control bar 350, in the first portion 315, adds the second portion 320 to the available display area 310 by transitioning the second portion 320 to the powered-on state to perform display functions and receive user input, and displays second information in the second portion 320 as illustrated in FIG. 4. User input can be provided by various types of user input (e.g., input suitable for touch-sensitive displays, such as tapping below the display control bar or by a dragging gesture while touching the location of display screen control bar 450), either to provide user input to expand the available display area 410 by transitioning the third portion 425 to the powered-on state to perform display functions and receive user input or to provide user input to contract the available display area 410 by transitioning the second portion 420 to the powered-off state.

[0145] FIG. 5 illustrates a portable multifunction displaying first information in an available display area comprising a first portion of a display screen device in accordance with some embodiments. Multifunction device 500 includes a display 505. A first portion 515 is an available display area 510 and a second portion 520 is in a powered-off condition. As shown in FIG. 5, multifunction device 500 is displaying first information in the available display area 510 comprising the first portion 515 of the display screen in a configuration having a plurality of portions, e.g., first portion 515 and second portion 520. The first portion 515 of the display screen 505 is configured in a powered-on state to perform display functions and receive user input. The second portion 520 is configured in a powered-off state. A display control bar 550 for providing user input is shown.

[0146] To achieve a transition from the state represented in FIG. 4 to the state represented in FIG. 5, multifunction device 500, responsive to a user indication, for instance movement of control bar 550, in the second portion 520, transitions the second portion 520 to the powered-off state to perform display functions. User input can be provided (e.g., input suitable for touch-sensitive displays, such as by tapping below the display control bar or by a dragging gesture while touching the location of display control bar 550) to provide user input to expand the available display area 510 by transitioning the second portion 520 to the powered-on state to perform display functions and receive user input.

[0147] FIG. 6 depicts a portable multifunction responsive to a user indication in the in the first portion, adding the second portion to the available display area by transitioning the second portion to the powered-on state to perform display functions and receive user input, and displaying second information in the second portion in accordance with some embodiments. Multifunction device 600 includes a display 605. An available display area 610 includes a first portion 615 and a second portion 620.

[0148] To achieve a transition from the state represented in FIG. 5 to the state represented in FIG. 6, multifunction device 600, responsive to a user indication, for instance movement of control bar 650, in the in the first portion 615, adds the second

portion 620 to the available display area 610 by transitioning the second portion 415 to the powered-on state to perform display functions and receive user input, and displays second information in the second portion 620. User input can be provided, e.g., by tapping below the display control bar or by a dragging gesture while touching the location of display control bar 650, to provide user input to contract the available display area 610 by transitioning the second portion 620 to the powered-off state.

**[0149]** FIG. 7 illustrates a portable multifunction displaying first information in an available display area comprising a first portion of a display screen device in accordance with some embodiments. Multifunction device 700 includes a display 705. A first portion 715 is an available display area 710 and a second portion 720 is in a powered-off condition. As shown in FIG. 7, multifunction device 700 is displaying first information in the available display area 710 comprising the first portion 715 of the display screen in a configuration having a plurality of portions, e.g., first portion 715 and second portion 720.

**[0150]** The first portion 715 of the display screen 705 is configured in a powered-on state to perform display functions and receive user input. The second portion 720 is configured in a powered-off state. A display control bar 750 for providing user input is shown. Selected interface elements 725 are shown, as well as a scaled element 730. Selected interface elements 725 are, in some embodiments, a subset of elements of included in a graphical content data structure comprising content for display in the available display area 710, and embodiments select the selected interface elements 725 of the graphical content data structure for display in the available display area 710 based at least in part on whether the second portion 720 is in a powered-on state.

**[0151]** In some embodiments, a size of scaled element 730 is determined by scaling elements of the graphical content data structure for display in the available display area based at least in part on a dimension of the available display area. In some embodiments, a size of scaled element 730 is determined by scaling elements of the graphical content

data structure for display in the available display area based at least in part on whether the second portion is in a powered-on state.

**[0152]** In some embodiments, positions of selected elements 825 are determined by adjusting a position relative to a background element of a foreground content element of the graphical content data structure for display in the available display area based at least in part on whether the second portion is in a powered-on state. In some embodiments, selected interface elements 725 of the graphical content data structure may be selected for display in the available display area 710 based at least in part on a dimension of the available display area.

**[0153]** FIG. 8 depicts a portable multifunction responsive to a user indication in the in the first portion, adding the second portion to the available display area by transitioning the second portion to the powered-on state to perform display functions and receive user input, and displaying second information in the second portion in accordance with some embodiments. Multifunction device 800 includes a display 805. A first portion 815 and a second portion 820 are an available display area 810, and a third portion 830 is in a powered-off condition. As shown in FIG. 8, multifunction device 800 is displaying first information in the available display area 810 comprising the first portion 815 of the display screen in a configuration having a plurality of portions, e.g., first portion 815 and second portion 820.

**[0154]** The first portion 815 and the second portion 820 of the display screen 805 are configured in a powered-on state to perform display functions and receive user input. The third portion 830 is configured in a powered-off state. A display control bar 850 for providing user input is shown. Selected interface elements 825 are shown, as well as a scaled element 830. Selected interface elements 825 are, in some embodiments, a subset of elements of included in a graphical content data structure comprising content for display in the available display area 810, and embodiments select the selected interface elements 825 of the graphical content data structure for display in the available display area 810 based at least in part on whether the second portion 820 is in a powered-on state.

**[0155]** In some embodiments, a size of scaled element 830 is determined by scaling elements of the graphical content data structure for display in the available display area based at least in part on a dimension of the available display area. In some embodiments, a size of scaled element 830 is determined by scaling elements of the graphical content data structure for display in the available display area based at least in part on whether the second portion is in a powered-on state.

**[0156]** In some embodiments, positions of selected elements 825 are determined by adjusting a position relative to a background element of a foreground content element of the graphical content data structure for display in the available display area based at least in part on whether the second portion is in a powered-on state. In some embodiments, selected interface elements 825 of the graphical content data structure may be selected for display in the available display area 810 based at least in part on a dimension of the available display area.

**[0157]** FIG. 9 illustrates a portable multifunction displaying first information in an available display area comprising a first portion of a display screen device in accordance with some embodiments. Multifunction device 900 includes a display 905. A first portion 915 is an available display area 910 and a second portion 920 is in a powered-off condition. As shown in FIG. 9, multifunction device 900 is displaying first information in the available display area 910 comprising the first portion 915 of the display screen in a configuration having a plurality of portions, e.g., first portion 915 and second portion 920. The first portion 915 of the display screen 905 is configured in a powered-on state to perform display functions and receive user input. The second portion 920 is configured in a powered-off state. A display control bar 950 for providing user input is shown.

**[0158]** FIG. 10 depicts a portable multifunction responsive to a user indication in the in the first portion, adding the second portion to the available display area by transitioning the second portion to the powered-on state to perform display functions and receive user input, and displaying second information in the second portion in accordance with some

embodiments. Multifunction device 1000 includes a display 1005. A first portion 1015 is an available display area 1010 and a second portion 1020 is in a powered-off condition. As shown in FIG. 10, multifunction device 1000 is displaying first information in the available display area 1010 comprising the first portion 1015 of the display screen in a configuration having a plurality of portions, e.g., first portion 1015 and second portion 1020. The first portion 1015 of the display screen 1005 is configured in a powered-on state to perform display functions and receive user input. The second portion 1020 is configured in a powered-off state. A display control bar 1050 for providing user input is shown.

**[0159]** FIG. 11 illustrates a portable multifunction displaying first information in an available display area comprising a first portion of a display screen device in accordance with some embodiments. FIG. 11 depicts a portable multifunction responsive to a user indication in the in the first portion, adding the second portion to the available display area by transitioning the second portion to the powered-on state to perform display functions and receive user input, and displaying second information in the second portion in accordance with some embodiments. Multifunction device 1100 includes a display 1105. An available display area 1110 includes a first portion 1115 and a second portion 1120.

**[0160]** FIG. 12 depicts a portable multifunction displaying first information in an available display area comprising a first portion of a display screen device in accordance with some embodiments. Multifunction device 1200 includes a display 1205. A first portion 1215 is an available display area 1210 and a second portion 1220 is in a powered-off condition. As shown in FIG. 12, multifunction device 1200 is displaying first information in the available display area 1210 comprising the first portion 1215 of the display screen in a configuration having a plurality of portions, e.g., first portion 1215 and second portion 1220. The first portion 1215 of the display screen 1205 is configured in a powered-on state to perform display functions and receive user input. The second portion 1220 is configured in a powered-off state and may be used as a grip.

**[0161]** FIG. 13 illustrates a portable multifunction responsive to a user indication in the in the first portion, adding the second portion to the available display area by transitioning the second portion to the powered-on state to perform display functions and receive user input, and displaying second information in the second portion in accordance with some embodiments. FIG. 13 depicts a portable multifunction responsive to a user indication in the in the first portion, adding the second portion to the available display area by transitioning the second portion to the powered-on state to perform display functions and receive user input, and displaying second information in the second portion in accordance with some embodiments. Multifunction device 1300 includes a display 1305. An available display area 1310 includes a first portion 1315 and a second portion 1320.

**[0162]** FIG. 14 depicts a portable multifunction displaying a display screen device in accordance with some embodiments. FIG. 14 depicts a portable multifunction responsive to a user indication in the in the first portion, adding the second portion to the available display area by transitioning the second portion to the powered-on state to perform display functions and receive user input, and displaying second information in the second portion in accordance with some embodiments. Multifunction device 1400 includes a display 1405. An available display area 1410 includes a first portion 1415 and a second portion 1420.

**[0163]** FIG. 15 illustrates a portable multifunction displaying a display screen device in accordance with some embodiments. Multifunction device 1500 includes a display 1505. A first portion 1515 is an available display area 1510 and a second portion 1520 is in a powered-off condition. As shown in FIG. 15, multifunction device 1500 is displaying first information in the available display area 1510 comprising the first portion 1515 of the display screen in a configuration having a plurality of portions, e.g., first portion 1515 and second portion 1520. The first portion 1515 of the display screen 1505 is configured in a powered-on state to perform display functions and receive user input. The second portion 1520 is configured in a powered-off state and may be used as a grip.



**[0164]** FIG. 16 depicts a portable multifunction displaying first information in an available display area comprising a first portion of a display screen device in accordance with some embodiments. FIG. 16 depicts a portable multifunction responsive to a user indication in the in the first portion, adding the second portion to the available display area by transitioning the second portion to the powered-on state to perform display functions and receive user input, and displaying second information in the second portion in accordance with some embodiments. Multifunction device 1600 includes a display 1605. An available display area 1610 includes a first portion 1615 and a second portion 1620.

**[0165]** FIG. 17 illustrates a portable multifunction responsive to a user indication in the in the first portion, adding the second portion to the available display area by transitioning the second portion to the powered-on state to perform display functions and receive user input, and displaying second information in the second portion in accordance with some embodiments. Multifunction device 1700 includes a display 1705. A first portion 1715 is an available display area 1710 and a second portion 1720 is in a powered-off condition. As shown in FIG. 17, multifunction device 1700 is displaying first information in the available display area 1710 comprising the first portion 1715 of the display screen in a configuration having a plurality of portions, e.g., first portion 1715 and second portion 1720. The first portion 1715 of the display screen 1705 is configured in a powered-on state to perform display functions and receive user input. The second portion 1720 is configured in a powered-off state and may be used as a grip.

**[0166]** FIG. 18 depicts a portable multifunction responsive to a user indication in the first portion, adding the second portion to the available display area by transitioning the second portion to the powered-on state to perform display functions and receive user input, and displaying second information in the second portion in accordance with some embodiments. Multifunction device 1800 includes a display 1805. A first portion 1815 is an available display area 1810 and a second portion 1820 is in a powered-off condition. As shown in FIG. 18, multifunction device 1800 is displaying first information in the available display area 1810 comprising the first portion 1815 of the display screen in a

configuration having a plurality of portions, e.g., first portion 1815 and second portion 1820. The first portion 1815 of the display screen 1805 is configured in a powered-on state to perform display functions and receive user input. The second portion 1820 is configured in a powered-off state and may be used as a grip.

[0167] FIG. 19 illustrates a portable multifunction with a display screen device in accordance with some embodiments. FIG. 19 depicts a portable multifunction responsive to a user indication in the in the first portion, adding the second portion to the available display area by transitioning the second portion to the powered-on state to perform display functions and receive user input, and displaying second information in the second portion in accordance with some embodiments. Multifunction device 1900 includes a display 1905. An available display area 1910 includes a first portion 1915 and a second portion 1920.

[0168] In FIG. 19, multifunction device 1900 has been rotated 90 degrees and the displayed features of the application being displayed, along with the time and signal strength icon have rotated 90 degree in the other direction so as to appear upright. In some of the previous illustrations, the icons associated with applications are illustrated as retaining their orientation with the device as the device is rotated. In some embodiments, the icons may re-orient so as to appear upright when the device has been tilted or turned. In some embodiments, the application being displayed may or may not reorient so as to appear upright. In embodiments, such functionality may be configurable, for example via program instructions 4722, state information 2570, 2590 or via image management module 144, graphics module 132 or the like. In embodiments, the time and signal strength tool bar may be configured to be oriented with the device or with the icons or with the application, based on how such elements of the display orient themselves in response to orientation of the device.

[0169] In FIG. 19A, multifunction device 1900 has been rotated 90 degrees and the displayed features of the application being displayed have rotated 90 degree in the other direction so as to appear upright. In FIG. 19A, the indicator display 1935 (e.g.,

illustrating time and signal strength indicators) has not rotated 90 degree in the other direction so as to appear upright. In embodiments, the indicator display may rotate with the display. In some embodiments, the indicator display may rotate with the displayed features of the application, for example. In embodiments, the indicator display may remain displayed while in a display portion that is otherwise powered-off or may be reconfigured by one or more components of the device to be displayed entirely within the power-on portion, without any reduced functionality, for example. For example, the indicator display crosses from a first portion (e.g., first portion 1915) to a second portion (e.g., second portion 1920) in FIG. 19. If the device 1900 changed mode or state such that the second portion of the display was placed into a powered-off mode, the indicator display may either remain displayed as it is, or may be reconfigured to only appear in the first portion, albeit continuing to display the same or similar indicators such that the portion of the indicator display 1935 illustrated in the second portion 1920 would appear in the first portion 1915.

**[0170]** In some of the illustrations, the icons associated with applications are illustrated as retaining their orientation with the device as the device is rotated. In some embodiments, the icons may re-orient so as to appear upright when the device has been tilted or turned. In some embodiments, the application being displayed may or may not reorient so as to appear upright. In embodiments, such functionality may be configurable, for example via program instructions 4722, state information 2570, 2590 or via image management module 144, graphics module 132 or the like. In embodiments, the time and signal strength tool bar may be configured to be oriented with the device or with the icons or with the application, based on how such elements of the display orient themselves in response to orientation of the device.

**[0171]** FIG. 20 depicts a portable multifunction with a display screen device in accordance with some embodiments. FIG. 20 depicts a portable multifunction responsive to a user indication in the in the first portion, adding the second portion to the available display area by transitioning the second portion to the powered-on state to perform display functions and receive user input, and displaying second information in the second

portion in accordance with some embodiments. Multifunction device 2000 includes a display 2005. An available display area 2010 includes a first portion 2015 and a second portion 2020.

[0172] FIG. 21 illustrates a portable multifunction with a display screen device in accordance with some embodiments. FIG. 21 depicts a portable multifunction responsive to a user indication in the in the first portion, adding the second portion to the available display area by transitioning the second portion to the powered-on state to perform display functions and receive user input, and displaying second information in the second portion in accordance with some embodiments. Multifunction device 2100 includes a display 2105. An available display area 2110 includes a first portion 2115 and a second portion 2120.

[0173] FIG. 22 depicts a portable multifunction with a display screen device in accordance with some embodiments. FIG. 22 depicts a portable multifunction responsive to a user indication in the in the first portion, adding the second portion to the available display area by transitioning the second portion to the powered-on state to perform display functions and receive user input, and displaying second information in the second portion in accordance with some embodiments. Multifunction device 2200 includes a display 2205. An available display area 2210 includes a first portion 2215 and a second portion 2220.

[0174] FIG. 23 illustrates a portable multifunction with a display screen device in accordance with some embodiments. FIG. 23 depicts a portable multifunction responsive to a user indication in the in the first portion, adding the second portion to the available display area by transitioning the second portion to the powered-on state to perform display functions and receive user input, and displaying second information in the second portion in accordance with some embodiments. Multifunction device 2300 includes a display 2305. An available display area 2310 includes a first portion 2315 and a second portion 2320.

[0175] FIG. 24 depicts a portable multifunction with a display screen device in accordance with some embodiments. Multifunction device 2400 includes a display 2405. A first portion 2415 is an available display area 2410 and a second portion 2420 is in a powered-off condition. As shown in FIG. 24, multifunction device 2400 is displaying first information in the available display area 2410 comprising the first portion 2415 of the display screen in a configuration having a plurality of portions, e.g., first portion 2415 and second portion 2420. The first portion 2415 of the display screen 2405 is configured in a powered-on state to perform display functions and receive user input. The second portion 2420 is configured in a powered-off state and may be used as a grip.

### **Screen Power Management Module**

[0176] FIG. 25 illustrates a display power management module for managing display power consumption, according to some embodiments. Screen power management module 2500 includes a configuration module 2510, a utilization determination module 2520, an element management module 2530, and a scale management module 2540. Screen power management module 2500 receives as input system events 2550 and user stimulus 2560, stores existing state information 2570 and screen portion transition conditions 2580, and generates as output new state information 2590.

[0177] In some embodiments, configuration module 2510 allocates display screen space to a first portion of the display screen, which is configured in a powered-on state to perform display functions and receive user input, and a second portion of the display screen, which is configured in a powered-off state. In such a state, a graphics module, such as graphics module 132 of FIG. 1, performs displaying first information in an available display area comprising a first portion of a display screen in a configuration having a plurality of portions, as described above. Responsive to a user indication in the first portion, which is received by screen power management module as a user stimulus 2560, utilization determination module 2520 may perform adding the second portion to the available display area by, in conjunction with configuration module 2510, transitioning the second portion to the powered-on state to perform display functions and

receive user input. Configuration module 2510 may reverse the configuration of the display, and a portion of the display screen may be removed from the powered-on state to the powered off state in response to user input. Likewise, the actions described herein as being performed in response to user input may, in some embodiments, be performed in response to system events 2550 such as the passage of an amount of time or a signal from an application or system module, or other system events 2550, such as a power-down or sleep signal.

**[0178]** In embodiments, one or more of the modules of the screen power management module 2500 may configure (e.g., coordinately configure) the color of the display. For example, user-defined display color settings may be stored as existing state information 2570 and/or element management module 2530 or configuration module 2510 may instruct configuration of the display in particular colors. In some embodiments, the color(s) used for the display may be configured based on a corresponding state or mode. For example, a device or display that is in a power-saving mode or in a proportional configuration mode may be configured to display in grayscale or in black and white. In some embodiments, the graphics module, display controller or the display system 112 may be configured to perform similar functionality.

**[0179]** In some embodiments, utilization determination module 2520 performs adding the second portion to the available display area by, in conjunction with configuration module 2510, transitioning the second portion to the powered-on state to perform display functions and receive user input in response to system events 2560, such as stimulus provided by an application or a module of the multifunction device.

**[0180]** In either case, a graphics module, such as graphics module 132 of FIG. 1, may then perform displaying second information in the second portion. States of the first and second portion are stored in existing state information 2570. New state information 2590 includes instructions to a graphics module, such as graphics module 132 of FIG. 1, for implementing transitioning the second portion to the powered-on state to perform display functions and receive user input.

**[0181]** In some embodiments, scale management module 2540 performs generating the second information by mathematically upscaling the first information. The second information includes a portion of the first information upscaled for display in both the second portion and the first portion. In some such embodiments, a graphics module, such as graphics module 132 of FIG. 1, performs displaying third information in the first portion. The third information comprises a portion of the first information upscaled for display in both the second portion and the first portion.

**[0182]** In some embodiments, system events 2550 include graphical content data structures. Screen power management module 2500 performs receiving a graphical content data structure including content for display in the available display area. Element management module 2530 performs selecting elements of the graphical content data structure for display in the available display area based at least in part on whether the second portion is in a powered-on state.

**[0183]** In some embodiments, system events 2550 include graphical content data structures. Screen power management module 2500 performs receiving a graphical content data structure including content for display in the available display area. Scale management module 2540 performs scaling elements of the graphical content data structure for display in the available display area based at least in part on a dimension of the available display area.

**[0184]** In some embodiments, system events 2550 include graphical content data structures. Screen power management module 2500 performs receiving a graphical content data structure including content for display in the available display area. Scale management module 2540 performs scaling elements of the graphical content data structure for display in the available display area based at least in part on whether the second portion is in a powered-on state.

[0185] In some embodiments, system events 2550 include graphical content data structures. Screen power management module 2500 performs receiving a graphical content data structure including content for display in the available display area. Element management module 2530 performs adjusting a position relative to a background element of a foreground content element of the graphical content data structure for display in the available display area based at least in part on whether the second portion is in a powered-on state.

[0186] In some embodiments, system events 2550 include graphical content data structures. Screen power management module 2500 performs receiving a graphical content data structure including content for display in the available display area. Element management module 2530 performs selecting elements of the graphical content data structure for display in the available display area based at least in part on a dimension of the available display area.

[0187] In embodiments, the functionality associated with the screen power module may be incorporated into the operating system of a device. In other embodiments, the functionality associated with the screen power module may be incorporated into an application that interacts with the operating system. In some embodiments, the described functionality may be divided among an application and the operating system. In some embodiments, the power management module 2500 may send instructions to direct the display controller 156, as described herein.

### **Example Operations**

[0188] FIG. 26 is a flow diagram illustrating one embodiment of a method for managing display power consumption, according to some embodiments. First information is displayed in an available display area comprising a first portion of a display screen in a configuration having a plurality of portions, including the first portion of the display screen, which is configured in a powered-on state to perform display functions and receive user input, and a second portion of the display screen, which is configured in a



powered-off state (block 2600). Responsive to a user indication in the in the first portion, the second portion is added to the available display area by transitioning the second portion to the powered-on state to perform display functions and receive user input (block 2610). Second information is displayed in the second portion (block 2620).

**[0189]** The process is reversible, and a portion of the display screen may be removed from the powered-on state to the powered off state in response to user input. Likewise, the actions described herein as being performed in response to user input may, in some embodiments, be performed in response to system events such as the passage of an amount of time or a signal from an application or system module, or other system events, such as a power-down or sleep signal.

**[0190]** FIG. 27 is a flow diagram illustrating one embodiment of a method for managing display power consumption, according to some embodiments. First information is displayed in an available display area comprising a first portion of a display screen in a configuration having a plurality of portions, including the first portion of the display screen, which is configured in a powered-on state to perform display functions and receive user input, and a second portion of the display screen, which is configured in a powered-off state (block 2700). Responsive to a user indication in the in the first portion, the second portion is added to the available display area by transitioning the second portion to the powered-on state to perform display functions and receive user input (block 2710). Second information is generated by mathematically upscaling the first information. The second information includes a portion of the first information upscaled for display in both the second portion and the first portion (block 2720). The second information is displayed in the second portion (block 2730). Third information is displayed in the first portion. The third information comprises a portion of the first information upscaled for display in both the second portion and the first portion (block 2740).

**[0191]** FIG. 28 is a flow diagram illustrating one embodiment of a method for managing display power consumption, according to some embodiments. A graphical content data

structure including content for display in the available display area is received (block 2800). Elements of the graphical content data structure are selected for display in the available display area based at least in part on whether the second portion is in a powered-on state (block 2810). First information is displayed in an available display area comprising a first portion of a display screen in a configuration having a plurality of portions, including the first portion of the display screen, which is configured in a powered-on state to perform display functions and receive user input, and a second portion of the display screen, which is configured in a powered-off state (block 2820). Responsive to a user indication in the in the first portion, the second portion is added to the available display area by transitioning the second portion to the powered-on state to perform display functions and receive user input (block 2830).

**[0192]** FIG. 29 is a flow diagram illustrating one embodiment of a method for managing display power consumption, according to some embodiments. A graphical content data structure comprising content for display in the available display area is received (block 2900). Elements of the graphical content data structure are scaled for display in the available display area based at least in part on a dimension of the available display area (block 2910). First information is displayed in an available display area comprising a first portion of a display screen in a configuration having a plurality of portions, including the first portion of the display screen, which is configured in a powered-on state to perform display functions and receive user input, and a second portion of the display screen, which is configured in a powered-off state (block 2920). Responsive to a user indication in the in the first portion, the second portion is added to the available display area by transitioning the second portion to the powered-on state to perform display functions and receive user input (block 2930).

**[0193]** FIG. 30 is a flow diagram illustrating one embodiment of a method for managing display power consumption, according to some embodiments. A graphical content data structure comprising content for display in the available display area is received (block 3000). Elements of the graphical content data structure are scaled for display in the available display area based at least in part on whether the second portion is in a

powered-on state (block 3010). First information is displayed in an available display area comprising a first portion of a display screen in a configuration having a plurality of portions, including the first portion of the display screen, which is configured in a powered-on state to perform display functions and receive user input, and a second portion of the display screen, which is configured in a powered-off state (block 3020). Responsive to a user indication in the first portion, the second portion is added to the available display area by transitioning the second portion to the powered-on state to perform display functions and receive user input (block 3030).

[0194] FIG. 31 is a flow diagram illustrating one embodiment of a method for managing display power consumption, according to some embodiments. A graphical content data structure comprising content for display in the available display area is received (block 3100). A position relative to a background element of a foreground content element of the graphical content data structure is adjusted for display in the available display area based at least in part on whether the second portion is in a powered-on state (block 3110). First information is displayed in an available display area comprising a first portion of a display screen in a configuration having a plurality of portions, including the first portion of the display screen, which is configured in a powered-on state to perform display functions and receive user input, and a second portion of the display screen, which is configured in a powered-off state (block 3120). Responsive to a user indication in the in the first portion, the second portion is added to the available display area by transitioning the second portion to the powered-on state to perform display functions and receive user input (block 3130).

[0195] FIG. 32 is a flow diagram illustrating one embodiment of a method for managing display power consumption, according to some embodiments. A graphical content data structure comprising content for display in the available display area is received (block 3200). Elements of the graphical content data structure are selected for display in the available display area based at least in part on a dimension of the available display area (block 3210). First information is displayed in an available display area comprising a first portion of a display screen in a configuration having a plurality of portions,

including the first portion of the display screen, which is configured in a powered-on state to perform display functions and receive user input, and a second portion of the display screen, which is configured in a powered-off state (block 3220). Responsive to a user indication in the in the first portion, the second portion is added to the available display area by transitioning the second portion to the powered-on state to perform display functions and receive user input (block 3230).

[0196] FIG. 33 is a flow diagram illustrating an embodiment of a method for unlocking a display and transitioning the display into either a full configuration mode or a proportional configuration mode. Multifunction devices may set themselves (e.g., based on a timer that detects no use) or may be set via the user interface into an interface lock state, in embodiments. The device interface may provide a reduced set of features and responses to user input while in the interface lock state. For example, a device in the interface lock state may provide a limited number of graphic(s) via the display and respond to a limited number of input commands (e.g., only responding to one or a few types of particular input, such as a particular swipe with respect to a displayed object). In embodiments, the described methods may be performed by various modules, such as the modules of a screen power management module 2500.

[0197] In embodiments, a device may be configured to exhibit multiple display modes. For example, when the device (e.g., the display controller or the screen power management module or the touch-sensitive display system) is in a display mode, at least some portion of the display system may be configured to perform display functionality. In another example, when the display controller of the device is in another mode, such as a sleep mode, at least some portion or all of the display may be configured with limited or no functionality. Other modes, exhibiting other types of limited functionality, alone or in combination are also contemplated.

[0198] At block 3310, a screen or device may be set to a user interface lock state by any predefined manner where the lock state prevents the device from performing a predefined set of actions. For example, either user stimulus 2560 or system events 2550 may cause

the device to be set to a user interface lock state and state information indicating the lock state may be stored as existing state information 2570, in some embodiments. At block 3320, an unlock image may be displayed via the screen while the screen/device is in the lock state. In some embodiments, the element management module may determine from state information 2570 that the device or screen is in the lock state and provide an image of an unlock element or object to be displayed to the screen, by graphics module 132, for example. For example, FIG. 35 illustrates a graphic BAR as an unlock image 3550.

**[0199]** At 3330, contact with the device screen (e.g., a touch sensitive display) may be detected. For example, a touch sensitive display of the device may determine that a user has touched the screen. At 3340, a determination may be made whether the contact corresponds to an unlock gesture using the unlock image. For example, a particular type of contact may be required to unlock the device from the user interface lock state, such that other types of contact do not unlock the lock state. When the contact does not correspond to an unlock gesture using the lock image, the method may continue to block 3350, wherein the device is maintained in the user-interface lock state.

**[0200]** When the contact does correspond to an unlock gesture using the unlock image, the method may continue to block 3360 where a determination is made whether the unlock gesture indicates a proportional configuration mode. For example, in some embodiments, more than one type of contact may be recognized. Different types of contact may be associated with different instructions of how to transition from the user interface lock state. In one embodiment, a certain type of swipe using the unlock image may indicate an instruction to transition to a full configuration mode 3370 and a different type of swipe may indicate an instruction to a proportional configuration mode as indicated at block 3380. FIG. 35, for example, illustrates that when a swipe to the left corresponds with unlock image 3550, a transition to a configuration mode is instructed (3525) and that when a swipe to the right corresponds with unlock image 3550, a transition to another configuration mode is instructed. In some embodiments, the configuration modes to transition to may be full or proportional display configuration modes. The device may transition to the indicated mode (e.g., proportional configuration

mode or full configuration mode) after receiving the instruction to transition, in embodiments.

**[0201]** FIG. 34 illustrates a portable multifunction with a display screen in accordance with some embodiments. The illustrated multifunction device 3400 is illustrated comprising display screen 3405. In the illustrated embodiment, the display 3405 is entirely in a powered-off mode. In this particular embodiment, the display 3405 is illustrated in black to indicate that no power is being used to illuminate any portion of the display 3405. Other displays may be other colors when in a powered-off state.

**[0202]** FIG. 35 illustrates a portion of a portable multifunction with a display screen in accordance with some embodiments. In some embodiments, the illustrated multifunction device 3500 of FIG. 35 may be the same multifunction device as illustrated in FIG. 34, but in a different mode. In other embodiments, the illustrated multifunction device 3500 of FIG. 35 may be a different multifunction device than illustrated in FIG. 34.

**[0203]** In the illustrated embodiment, the multifunction device 3500 of FIG. 35 is in a powered-off state. In embodiments, a multifunction device may continuously (e.g., while in the powered-off state) display any of one or more graphical indications while in a powered-off state. In the illustrated powered-off state, the multifunction device 3500 continuously (e.g., while in the powered-off state) displays the time (e.g., 10:10 A.M.), date (e.g., Thursday, January 16, 2014) and indications of notices of emails (e.g., Email icon 3510), SMS, texts (e.g., text message icon 3520), messages (e.g., voice message icon 3515), and the like. Also illustrated in the continuous display are icons for battery power supply amount, local wireless connectivity, WiFi connectivity and carrier signal strength. Other graphical indications of other features are contemplated as well. For example, the unlock image 3550 of the BAR may be continuously displayed in the powered-off state. In some embodiments, some or all such graphical indications cover a limited surface area of the total screen. In some embodiments, such graphical indications consume a limited amount of battery power. In some embodiments, the limited amount of battery power consumed may be in a ratio with the amount of surface area covered. In some

embodiments, providing some such information via the continuous display may reduce the wear and tear and chance of mechanical breakdown of use of mechanical (e.g., on-off) switches used to access such information. In other embodiments, the continuous display of some such information may reduce the number of times the device is put into a powered-on state that uses more battery power than the continuous display powered-off mode described herein.

**[0204]** FIGs. 36-38 illustrate multifunction devices in various configurations and states. The displays of the devices are illustrated with various arrangements of the icons, but without the control bar 450 illustrated in FIG. 4, for example. In embodiments (not illustrated) the illustrated devices and displays of FIGs. 36-38 may include control bar 450, without departing from the scope of this disclosure.

**[0205]** FIG. 36 illustrates a portable multifunction device 3600 with a display screen 3605 in accordance with some embodiments. The illustrated embodiment includes the entire available display area 3610. In the illustrated embodiment, 100% of the display 3605 is active (e.g., in a powered-on state configured to perform display functions and/or receive user input). In embodiments, active may indicate display functionality or user-input functionality although additional or different functionality may be associated with an active display area as well. In some embodiments, an active display may indicate that the display is limited to a particular functionality such as display functionality only or receive input functionality only.

**[0206]** FIG. 37 illustrates a portable multifunction 3700 with a display screen 3705 in accordance with some embodiments. In some, but not all embodiments, FIG. 37 illustrates the same multifunction device as in FIG. 36, but in a different configuration mode. In at least one embodiment, device 3700 illustrates the same device 3600, but in a proportional configuration mode. As illustrated, a first portion 3720 of display 3705 is all black, indicating that the first portion is in a powered-off state while the second portion(s) 3730 (e.g., the icon graphical elements) are illustrated in a powered-on state. FIG. 37 illustrates that the portions of the display that are in a powered-on state do not need to be

contiguous. In embodiments (not illustrated) the portions of the display that are in a powered-off state need not be contiguous.

[0207] FIG. 38 illustrates a portable multifunction device 3800 with a display screen 3805 in accordance with some embodiments. Multifunction device 3800 is illustrated in a configuration with all of the icons grouped together in a single area (a first portion 3815) of the display 3805. The second portion 3820 is illustrated in black to indicate that portion is in a powered-off state. In embodiments, the icons in the first portion may be downsized (e.g., with respect to the icons illustrated in FIG. 36) to fit in a smaller area. In another embodiment, the space between icons may be removed to fit the icons into a smaller portion of the screen. The unused portion of the screen may be directed, instructed or configured into a powered-off state in some configurations.

[0208] FIG. 39 is a flow diagram illustrating an embodiment of a method for transitioning a display from a full configuration mode to a proportional configuration mode. The methods described in FIG. 39 may be performed by modules of the screen power management module 3500, singly or in combination.

[0209] An entire (e.g., the entire available display screen) display screen may function in a full configuration mode where all of the display screen is in a power-on state, as at block 3900. For example, the screen power management module 2500 may direct the configuration of the screen according to data in existing state information module 2570 that may store the particular configuration mode and the state of the display.

[0210] Instructions may be received to transition from the full configuration mode to a proportional configuration mode that configures a portion of the display screen in a powered-on state and another portion of the display screen in a powered-off state as at block 3910. For example, screen transition portion transition conditions module 2580 may listen for particular system events 2550 or indications of user stimulus 2560 that match the transition conditions for the particular configuration mode. In some embodiments, system events may include the battery power level reaching a



predetermined level or amount (e.g., 35%) or the user interface receiving an indication of user stimulus indicating a particular mode and sending the instructions for the particular mode to the screen power management module 2500.

**[0211]** Responsive to receiving the instruction(s) to transition from the full configuration mode to a proportional configuration mode, a portion of the display or screen remains powered-on while the other portion of the display is directed to power-off. For example, the utilization determination module 2520 may be configured to work in concert with the configuration module 2510 to transition the display from full configuration mode to proportional configuration mode. In some embodiments, the modules of the screen power management module 2500 send instructions to the graphics module 132, instructing the graphics module to power a portion of the display and to not power the other portion of the display. In embodiments, the process is reversible to put the device back into the full configuration mode where the entire screen is in the powered-on state.

**[0212]** FIGs. 40-42 illustrate a battery level feature that may be used to control the transition into and out of the proportional configuration mode, in embodiments. FIG. 40 illustrates a portable multifunction with a display screen in accordance with some embodiments. Although the black and white drawings of this application limit the illustration, it is intended that the icon elements of Fig. 40 are displayed in various colors and that the background behind the icons of the various applications could be of any color as well. This is in contrast to the device illustrated in FIG. 41, where it is intended that the display of the device be configured such that the black portion illustrated is in a powered-off state and the portions of the icons that appear white in the FIG. 41 could be of any color, such as the illustrated white, grayscale or any other color while in the powered-on state as illustrated.

**[0213]** FIG. 40 illustrates a portable multifunction device 4000 with a display 4005 and a control bar 4050, in accordance with some embodiments. In some embodiments, the display 4005 is in color, while in other embodiments, the display may be in grayscale or black and white. In the illustrated embodiment, the available display area 4010 is at

100% of the display 4005, in accordance with the device being configured in the full configuration mode. In the illustrated embodiment, the control bar 4050 is included on the display in the full configuration mode. In some embodiments, the control bar 4050 may not be displayed when the display is in the full configuration mode. In other embodiments, the control bar 4050 may be displayed while the display is in the full configuration mode, as a graphic that may be interacted with via the user interface to instruct the device to transition to the proportional configuration mode, for example.

**[0214]** A battery level auto shift value 4025 is illustrated in FIG. 40. In embodiments, the battery level may be a condition upon which the configuration may be changed from the proportional mode to the full mode or from the full mode to the configuration mode. For example, the device may be configured such that the display transitions from the full configuration mode to the proportional configuration mode when the battery level auto shift value reaches or reaches a point below a certain value (e.g., 35%).

**[0215]** FIG. 41 illustrates a portable multifunction device 4100 with a display screen 4105 and a battery level auto shift value 4125, in accordance with some embodiments. FIG. 41 illustrates that when the battery level auto shift value 4125 achieves a level less than a predefined level (e.g., 35%) the display may be put into a proportional configuration mode, such as those described herein. The proportional configuration mode that is illustrated (34% is less than the example 35% predefined level, so the device has been configured into a proportional configuration mode) configures the display with the black portions of the display in a powered-off state and the white portions of the display in a powered-on state. White is used to illustrate the portions of the screen that are in a powered-on state in the illustrated embodiment due to the nature of black and white drawings. However, the portions illustrated in white as being in a powered-on state may be displayed in any color or grayscale, in embodiments, while the portion illustrated in black remains in a powered-off state. The color of the portion(s) of the display in the powered-off state may be other colors in other embodiments, due to the particular underlying display technology, for example.

[0216] FIG. 42 illustrates a portable multifunction device 4200 with a display screen 4205 and battery level auto shift value, in accordance with some embodiments. FIG. 42 illustrates a device configured in a proportional configuration mode, due to the battery level auto shift value 4225 reaching a threshold (e.g., a threshold of 20%). In this illustrated embodiment, the available display area 4210 includes the first portion 4215 of the display 4205 that remains in a powered-on state while the second portion 4220 of the display 4205 has been directed into a powered-off state.

[0217] FIGs. 43-45 illustrate that a portion of the display that is in a powered-on state may be anywhere in the display. In some embodiments, the placement of or the amount of area allocated to elements of the user interface may be moved without losing any functionality or access to the applications. For example, a portion of the display that is associated with the menu of icons and the control bar 4350 (e.g., the second portion 4320 of Fig. 43) may be moved anywhere on the display.

[0218] FIG. 43 illustrates a portable multifunction device 4300 with a display screen 4305 and an available display area 4310, in accordance with some embodiments. In FIG. 43, three portions of the display are illustrated. The first portion 4315 and the third portion 4335 are illustrated as in a powered-off state and the second portion 4320 is illustrated as being in a powered-on state in accordance with the device being in a proportional configuration mode. The second portion is illustrated as being in the middle of the display 4305, between the first portion 4315 and the third portion 4335.

[0219] FIG. 44 illustrates a portable multifunction device 4400 with a display screen 4405 and available display area 4410, in accordance with some embodiments. FIG. 44 illustrates that the same icon group illustrated in FIG. 43 may be moved to the bottom of the display 4405, such that the first portion 4415 of the display 4405 is in a powered-off state and the second portion of the display 4405 is in a powered-on state.

[0220] FIG. 45 illustrates a portable multifunction device 4505 with a display screen 4505 and available display area 4510, in accordance with some embodiments. FIG. 44

illustrates that the same icon group illustrated in FIG. 43 may be moved to the top of the display 4505, such that the first portion 4415 of the display 4405 within the available display area 4510 is in a powered-on state and the second portion 4502 of the display 4405 is in a powered-off state.

[0221] The portion of the display that is in the powered-on state may be moved within the display via various methods, such as by dragging via interaction with the user interface (e.g., touch-sensitive surface) or by user configurable settings for example.

[0222] FIG. 46 illustrates a portable multifunction device 4600 with a display screen 4605 and an available display area 4610, in accordance with some embodiments. FIG. 46 illustrates that the icon group illustrated in FIG. 45 may include more icons or other graphic elements than those illustrated in FIG. 45. In some embodiments, the graphic object on the display screen may include hidden elements in addition to the elements that are currently visible via the display. For example, the first full icon visible on the left of the first portion 4615 of the display 4605 is an icon for a radio. In the first portion 4515 of FIG. 45, the radio icon was the last icon on the left. In FIG. 46, the user has interacted with the graphical elements of the screen to make the icons scroll such that hidden icons become visible/available and available/visible icons are hidden. This and other types of graphical elements may provide functionality that reduces the amount of area of the display that is powered-on without losing functionality or access to applications.

### **Example Computer System**

[0223] FIG. 47 illustrates computer system 4700 that is configured to execute any or all of the embodiments described above. In different embodiments, computer system 4700 may be any of various types of devices, including, but not limited to, a computer embedded in a vehicle, a computer embedded in an appliance, a personal computer system, desktop computer, laptop, notebook, tablet, slate, or netbook computer, mainframe computer system, handheld computer, workstation, network computer, a camera, a set top box, a mobile device, a consumer device, video game console, handheld

video game device, application server, storage device, a television, a video recording device, a peripheral device such as a switch, modem, router, or in general any type of computing or electronic device.

**[0224]** Various embodiments of a system and method for negotiating control of a shared audio or visual resource, as described herein, may be executed on one or more computer systems 4700, which may interact with various other devices. Note that any component, action, or functionality described above with respect to Figures 1-5 may be implemented on one or more computers configured as computer system 4700 of FIG. 47, according to various embodiments. In the illustrated embodiment, computer system 4700 includes one or more processors 4710 coupled to a system memory 4720 via an input/output (I/O) interface 4730. Computer system 4700 further includes a network interface 4740 coupled to I/O interface 4730, and one or more input/output devices 4750, such as cursor control device 4760, keyboard 4770, and display(s) 4780. In some cases, it is contemplated that embodiments may be implemented using a single instance of computer system 4700, while in other embodiments multiple such systems, or multiple nodes making up computer system 4700, may be configured to host different portions or instances of embodiments. For example, in one embodiment some elements may be implemented via one or more nodes of computer system 4700 that are distinct from those nodes implementing other elements.

**[0225]** In various embodiments, computer system 4700 may be a uniprocessor system including one processor 4710, or a multiprocessor system including several processors 4710 (e.g., two, four, eight, or another suitable number). Processors 4710 may be any suitable processor capable of executing instructions. For example, in various embodiments processors 4710 may be general-purpose or embedded processors implementing any of a variety of instruction set architectures (ISAs), such as the x86, PowerPC, SPARC, or MIPS ISAs, or any other suitable ISA. In multiprocessor systems, each of processors 4710 may commonly, but not necessarily, implement the same ISA.

[0226] System memory 4720 may be configured to store program instructions 4722 and/or existing state information and ownership transition condition data 4732 accessible by processor 4710. In various embodiments, system memory 4720 may be implemented using any suitable memory technology, such as static random access memory (SRAM), synchronous dynamic RAM (SDRAM), nonvolatile/Flash-type memory, or any other type of memory. In the illustrated embodiment, program instructions 4722 may be configured to implement a mapping application 4724 incorporating any of the functionality described above. Additionally, existing state information and ownership transition condition data 4732 of memory 4720 may include any of the information or data structures described above. In some embodiments, program instructions and/or data may be received, sent or stored upon different types of computer-accessible media or on similar media separate from system memory 4720 or computer system 4700. While computer system 4700 is described as implementing the functionality of functional blocks of previous Figures, any of the functionality described herein may be implemented via such a computer system.

[0227] In one embodiment, I/O interface 4730 may be configured to coordinate I/O traffic between processor 4710, system memory 4720, and any peripheral devices in the device, including network interface 4740 or other peripheral interfaces, such as input/output devices 4750. In some embodiments, I/O interface 4730 may perform any necessary protocol, timing or other data transformations to convert data signals from one component (e.g., system memory 4720) into a format suitable for use by another component (e.g., processor 4710). In some embodiments, I/O interface 4730 may include support for devices attached through various types of peripheral buses, such as a variant of the Peripheral Component Interconnect (PCI) bus standard or the Universal Serial Bus (USB) standard, for example. In some embodiments, the function of I/O interface 4730 may be split into two or more separate components, such as a north bridge and a south bridge, for example. Also, in some embodiments some or all of the functionality of I/O interface 4730, such as an interface to system memory 4720, may be incorporated directly into processor 4710.

**[0228]** Network interface 4740 may be configured to allow data to be exchanged between computer system 4700 and other devices attached to a network 4785 (e.g., carrier or agent devices) or between nodes of computer system 4700. Network 4785 may in various embodiments include one or more networks including but not limited to Local Area Networks (LANs) (e.g., an Ethernet or corporate network), Wide Area Networks (WANs) (e.g., the Internet), wireless data networks, some other electronic data network, or some combination thereof. In various embodiments, network interface 4740 may support communication via wired or wireless general data networks, such as any suitable type of Ethernet network, for example; via telecommunications/telephony networks such as analog voice networks or digital fiber communications networks; via storage area networks such as Fibre Channel SANs, or via any other suitable type of network and/or protocol.

**[0229]** Input/output devices 4750 may, in some embodiments, include one or more display terminals, keyboards, keypads, touchpads, scanning devices, voice or optical recognition devices, or any other devices suitable for entering or accessing data by one or more computer systems 4700. Multiple input/output devices 4750 may be present in computer system 4700 or may be distributed on various nodes of computer system 4700. In some embodiments, similar input/output devices may be separate from computer system 4700 and may interact with one or more nodes of computer system 4700 through a wired or wireless connection, such as over network interface 4740.

**[0230]** As shown in FIG. 47, memory 4720 may include program instructions 4722, which may be processor-executable to implement any element or action described above. In one embodiment, the program instructions may implement the methods described above, such as the methods illustrated by FIG. 8. In other embodiments, different elements and data may be included. Note that data 4732 may include any data or information described above.

**[0231]** Those skilled in the art will appreciate that computer system 4700 is merely illustrative and is not intended to limit the scope of embodiments. In particular, the

computer system and devices may include any combination of hardware or software that can perform the indicated functions, including computers, network devices, Internet appliances, PDAs, wireless phones, pagers, etc. Computer system 4700 may also be connected to other devices that are not illustrated, or instead may operate as a stand-alone system. In addition, the functionality provided by the illustrated components may in some embodiments be combined in fewer components or distributed in additional components. Similarly, in some embodiments, the functionality of some of the illustrated components may not be provided and/or other additional functionality may be available.

[0232] Those skilled in the art will also appreciate that, while various items are illustrated as being stored in memory or on storage while being used, these items or portions of them may be transferred between memory and other storage devices for purposes of memory management and data integrity. Alternatively, in other embodiments some or all of the software components may execute in memory on another device and communicate with the illustrated computer system via inter-computer communication. Some or all of the system components or data structures may also be stored (e.g., as instructions or structured data) on a computer-accessible medium or a portable article to be read by an appropriate drive, various examples of which are described above. In some embodiments, instructions stored on a computer-accessible medium separate from computer system 4700 may be transmitted to computer system 4700 via transmission media or signals such as electrical, electromagnetic, or digital signals, conveyed via a communication medium such as a network and/or a wireless link. Various embodiments may further include receiving, sending or storing instructions and/or data implemented in accordance with the foregoing description upon a computer-accessible medium. Generally speaking, a computer-accessible medium may include a non-transitory, computer-readable storage medium or memory medium such as magnetic or optical media, e.g., disk or DVD/CD-ROM, volatile or non-volatile media such as RAM (e.g. SDRAM, DDR, RDRAM, SRAM, etc.), ROM, etc. In some embodiments, a computer-accessible medium may include transmission media or signals such as electrical, electromagnetic, or digital signals, conveyed via a communication medium such as network and/or a wireless link.



[0233] The methods described herein may be implemented in software, hardware, or a combination thereof, in different embodiments. In addition, the order of the blocks of the methods may be changed, and various elements may be added, reordered, combined, omitted, modified, etc. Various modifications and changes may be made as would be obvious to a person skilled in the art having the benefit of this disclosure. The various embodiments described herein are meant to be illustrative and not limiting. Many variations, modifications, additions, and improvements are possible. Accordingly, plural instances may be provided for components described herein as a single instance. Boundaries between various components, operations and data stores are somewhat arbitrary, and particular operations are illustrated in the context of specific illustrative configurations. Other allocations of functionality are envisioned and may fall within the scope of claims that follow. Finally, structures and functionality presented as discrete components in the exemplary configurations may be implemented as a combined structure or component. These and other variations, modifications, additions, and improvements may fall within the scope of embodiments as defined in the claims that follow.

**WHAT IS CLAIMED IS:**

1. A multifunction device comprising:  
a display comprising a display screen;  
one or more processors; and  
a memory comprising program instructions, wherein the program instructions are executable by the one or more processors to implement:  
a power management module configured to manage a display controller of the multifunction device, wherein to manage the display the power management module is further configured to instruct the display controller to function in a proportional configuration mode, wherein the proportional configuration mode configures a portion of the display screen in a powered-on state and another portion of the display screen in a powered-off state.
2. The multifunction device of claim 1, wherein when the portion of the display screen is in the powered-on state, the portion of the display screen is configured to perform display functions and receive user input.
3. The multifunction device of claim 2, wherein the powered-on state configures the portion of the display screen to function in a grayscale color mode.
4. The multifunction device of claim 3, wherein the powered-off state configures the other portion of the of the display screen to not perform display functions and to not receive user input.
5. The multifunction device of claim 1, wherein the power management module is further configured to instruct the display controller to function in a full display mode, wherein the full display mode configures all of an available area of the display screen in a powered-on state when the display controller of the device is in the full display mode.

6. The multifunction device of claim 1, wherein the power management module is further configured to manage the display of the multifunction device when the display is in a powered-off mode, the power management module configured to direct the display controller to display at least one of a time, date and an indication of one or more messages while the display controller is in the powered-off mode.

7. The multifunction device of claim 1, wherein the power management module is further configured to direct the display controller to transition between modes based on a configurable battery power threshold, wherein the power management module is further configured to:

determine that a battery power of the multifunction device reaches the configurable battery power threshold; and  
subsequent to said determine, instruct the display controller to change from a full configuration mode to the proportional configuration mode.

8. The multifunction device of claim 7, wherein the configurable battery power threshold is a configurable setting in a user interface of the multifunction device.

9. The multifunction device of claim 1, wherein the display is a touch-sensitive display and wherein the program instructions are further executable by the one or more processors to implement a user interface module configured to:

detect a contact with the touch-sensitive display at a first predefined location corresponding to an unlock image;  
continuously move the unlock image on the touch-sensitive display in accordance with movement of the contact while continuous contact with the display screen is maintained, wherein the unlock image is a graphical, interactive user-interface object with which a user interacts in order to unlock the device;  
unlock the multifunction device into the proportional configuration mode when the move of the unlock image on the touch-sensitive display results in

movement of the unlock image from the first predefined location to a predefined unlock region on the touch-sensitive display; and  
unlock the multifunction device into the full configuration mode when the move of the unlock image on the touch-sensitive display results in movement of the unlock image from the first predefined location to another predefined unlock region on the touch-sensitive display.

10. A method comprising:

managing a display of a multifunction device, wherein managing the display comprises:

instructing the device to transition from functioning in a full configuration mode to functioning in a proportional configuration mode, wherein the proportional configuration mode configures a portion of a display screen of the device in a powered-on state and another portion of the display screen of the device in a powered-off state.

11. The method of claim 10, wherein instructing the device to function in a proportional configuration mode causes the portion of the display to perform display functions and receive user input.

12. The method of claim 11, wherein instructing the display to function in a configuration mode causes the portion of the display to perform display functions and receive user input.

13. The method of claim 12, further comprising instructing the display screen to function in a full configuration mode, wherein the full configuration mode configures each portion of the display screen in a powered-on state.

14. A multifunction device comprising:

a display screen;

one or more processors; and

a memory comprising program instructions, wherein the program instructions are executable by the one or more processors to implement:

a power management module configured to manage a display screen of the multifunction device, wherein to manage the display screen the power management module is further configured to instruct the display screen to function in a proportional configuration mode, wherein the proportional configuration mode configures a portion of the display screen in a powered-on state and another portion of the display screen in a powered-off state.

15. The multifunction device of claim 14, wherein the powered-on state of the proportional configuration mode configures the portion of the display to perform display functions and receive user input.

16. The multifunction device of claim 15, wherein the powered-on state of the proportional configuration mode configures the portion of the display to function in a grayscale color mode.

17. The multifunction device of claim 16, wherein the powered-off state of the proportional configuration mode configures the other portion of the of the display screen to not perform display functions and to not receive user input.

18. The multifunction device of claim 14, wherein the power management module is further configured to instruct the display screen to function in a full display mode, wherein the full display mode configures the display in a powered-on state when the display screen of the device is in the display mode.

19. The multifunction device of claim 14, wherein the power management module is further configured to manage the display screen of the multifunction device when the display screen is in a sleep mode, the power management module configured to

direct the display screen to display at least one of a time, date and an indication of one or more messages while the display screen controller is in the sleep mode.

20. The multifunction device of claim 14, wherein the power management module is further configured to direct the display screen to change between modes based on a configurable battery power threshold, wherein the power management module is further configured to:

determine that a battery power of the multifunction device has reached the configurable battery power threshold; and  
subsequent to said determine, instruct the display screen to shift from full configuration mode to the proportional configuration mode.

## **ABSTRACT OF THE DISCLOSURE**

A device includes a display screen that may be directed to function in one of multiple modes. The device may be configured to direct the display to shift between modes. In one mode, first information is displayed in an available display area including a first portion of a display screen in a display screen mode having a set of portions of the display screen. The set of portions may include the first portion of the display screen, which is configured in a powered-on state to perform display functions and receive user input, and a second portion of the display screen, which is configured in a powered-off state. In another mode, the entire screen may function in a powered-on state. One of the particular modes may be selected by swiping on object displayed by the screen to select a particular mode while the display is in a sleep mode.

# DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

Title of Invention

SYSTEM AND METHOD FOR MANAGING DISPLAY POWER CONSUMPTION

As the below named inventor, I hereby declare that:

The declaration is directed to:



The attached application, or



United States application or PCT International application number \_\_\_\_\_

Signed on \_\_\_\_\_

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

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## LEGAL NAME OF INVENTOR

Inventor: Kenneth David Marshall

Date (Optional): \_\_\_\_\_

Signature: \_\_\_\_\_

Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire invention with, must accompany this form. Use an additional PTO/AIA/1 form for each additional inventor.

This information is required by 35 U.S.C. 112 and 37 CFR 1.63. The information is required in order to ensure benefit to the public which is to be derived from the USPTO's processing of the application. Confidentiality is governed by 35 U.S.C. 42 and 37 CFR 1.11 and 1.14. The information is not to be made available, including gathering, preparing, and submitting the completed application form to the USPTO. The only exception is for the purpose of the Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1420, Alexandria, VA 22313-1420. DO NOT SEND FILES OR COMPAK/ZIP FORMS TO THE ADDRESS BEHIND TO: Commissioner for Patents, P.O. Box 1420, Alexandria, VA 22313-1420. If you need assistance in completing this form, call 1-800-786-9999 and use option 1.



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**DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN  
APPLICATION DATA SHEET (37 CFR 1.76)**

<b>Title of Invention</b>	<b>SYSTEM AND METHOD FOR MANAGING DISPLAY POWER CONSUMPTION</b>
<p>As the below named inventor, I hereby declare that:</p> <p>This declaration is directed to: <input checked="" type="checkbox"/> The attached application, or</p> <p><input type="checkbox"/> United States application or PCT international application number _____</p> <p>filed on _____</p> <p>The above-identified application was made or authorized to be made by me.</p> <p>I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.</p> <p>I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.</p> <p style="text-align: center;"><b>WARNING:</b></p> <p>Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.</p>	
<b>LEGAL NAME OF INVENTOR</b>	
Inventor: <u>Jinrong Yang</u> Date (Optional): _____	
Signature: <u>Jinrong Yang</u>	
<p>Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form. Use an additional PTO/AIA/01 form for each additional inventor.</p>	

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 1 minute to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing this form, call 1-800-PTO-9199 and select option 2.

Portable  
Multifunction Device  
100

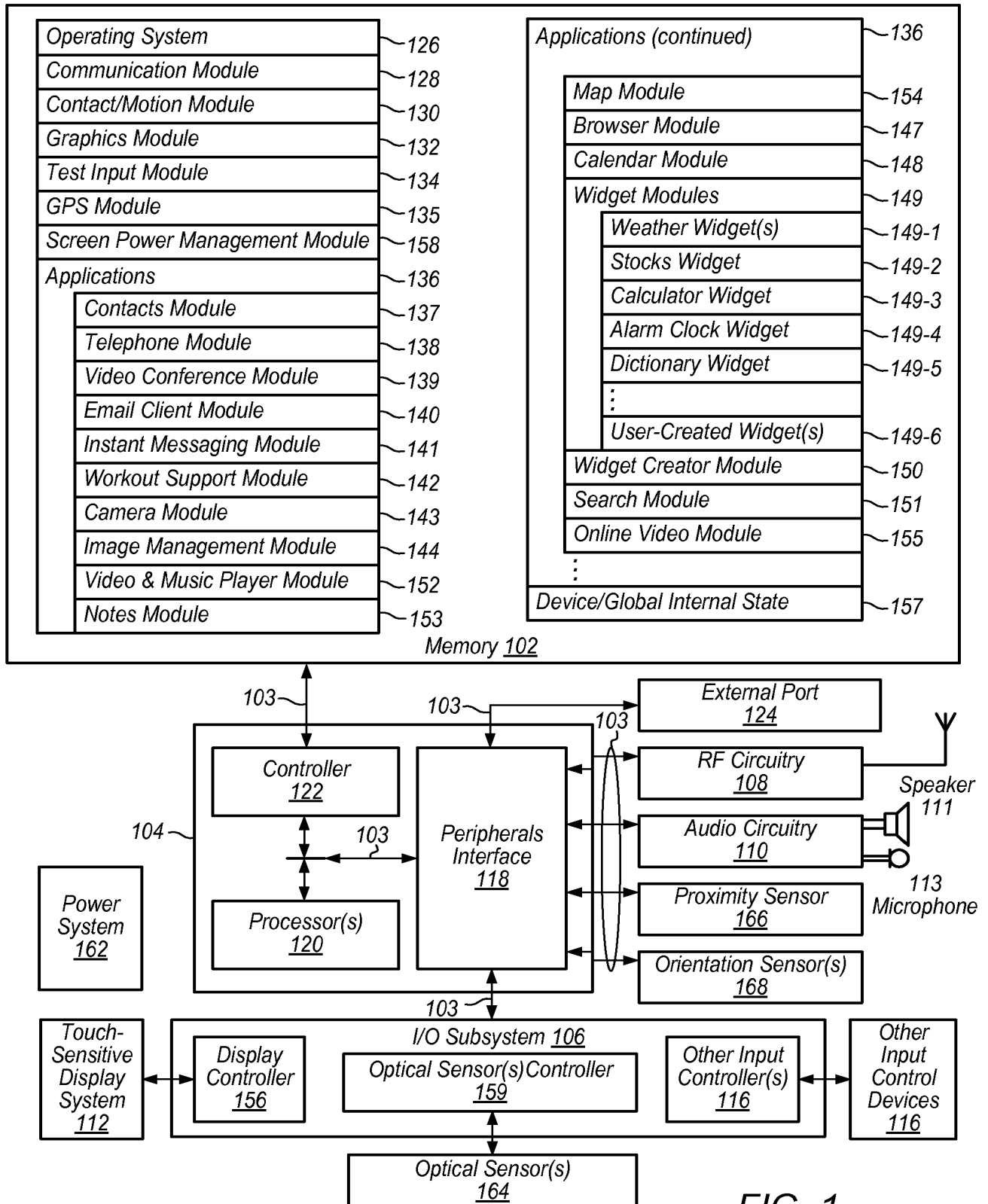


FIG. 1

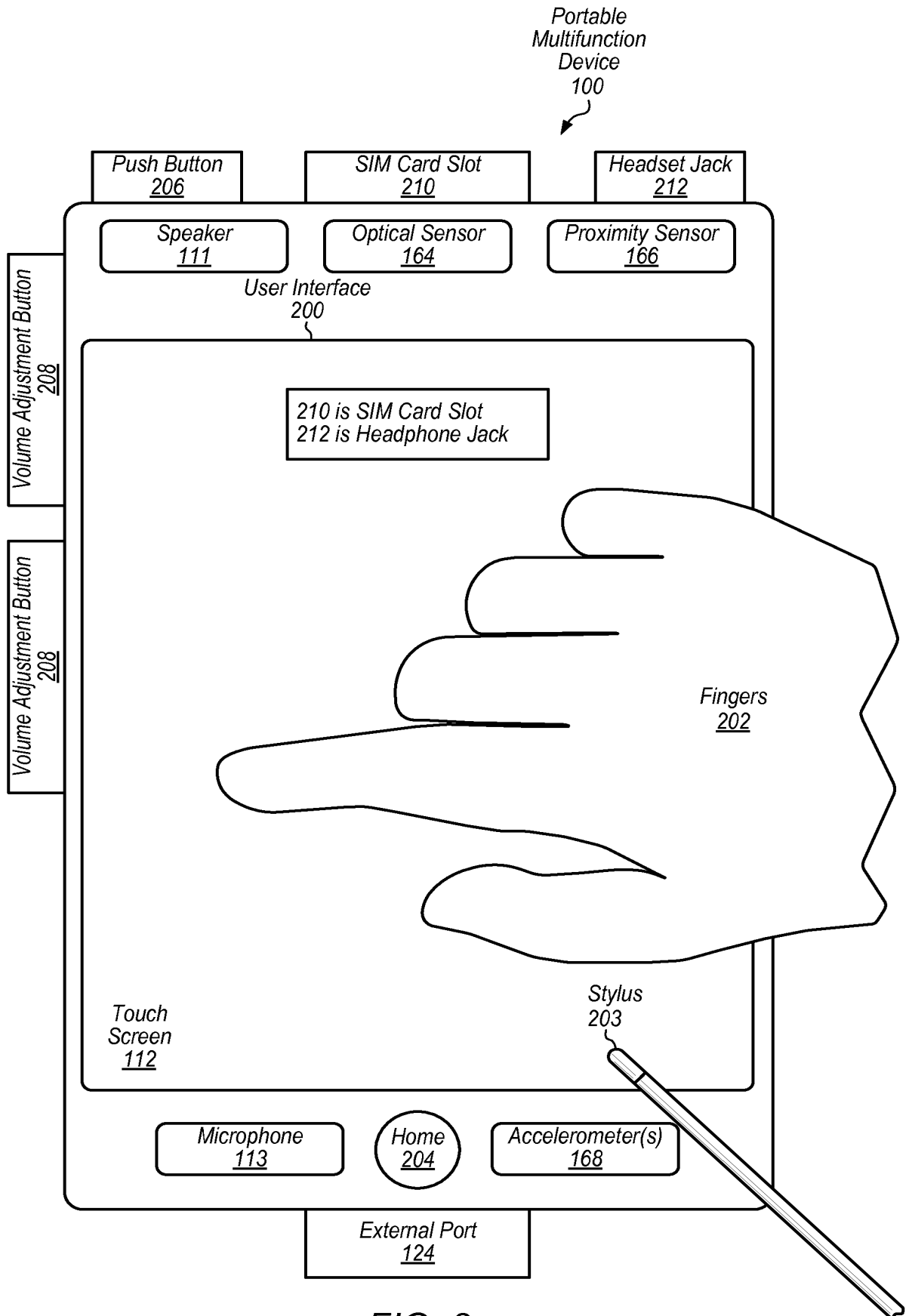


FIG. 2

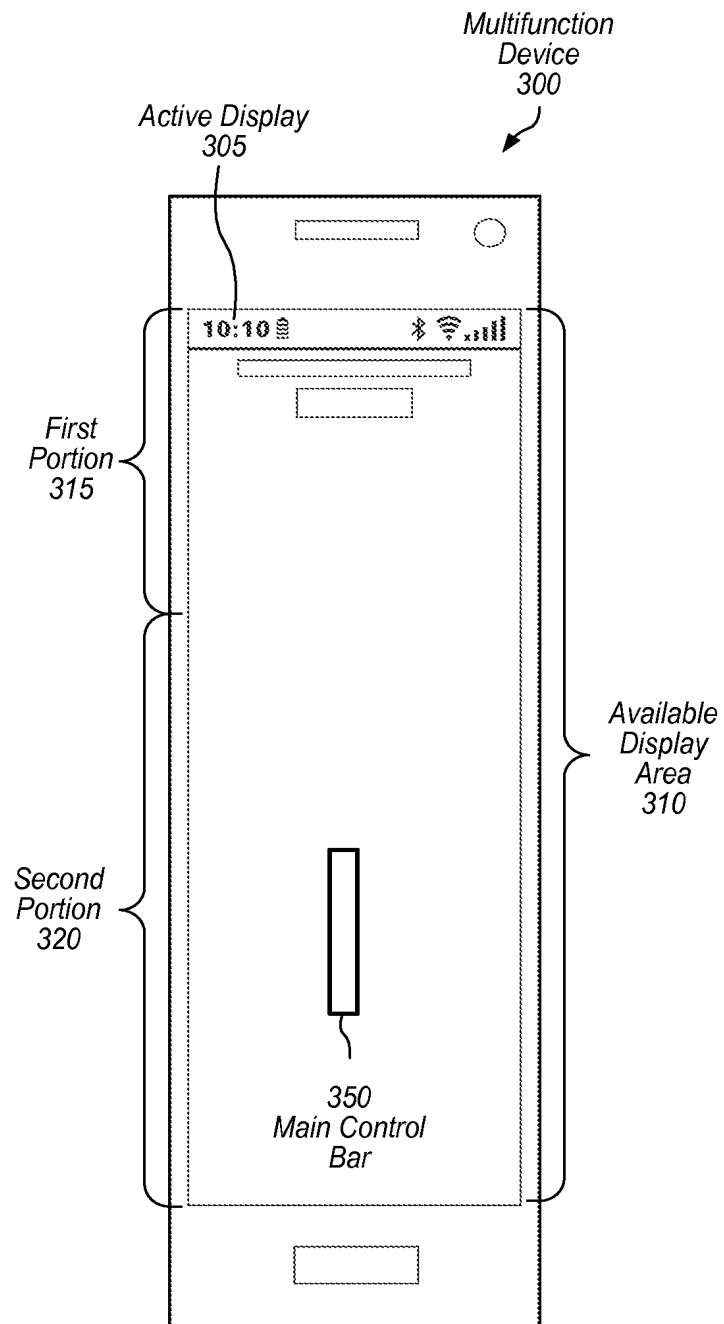


FIG. 3

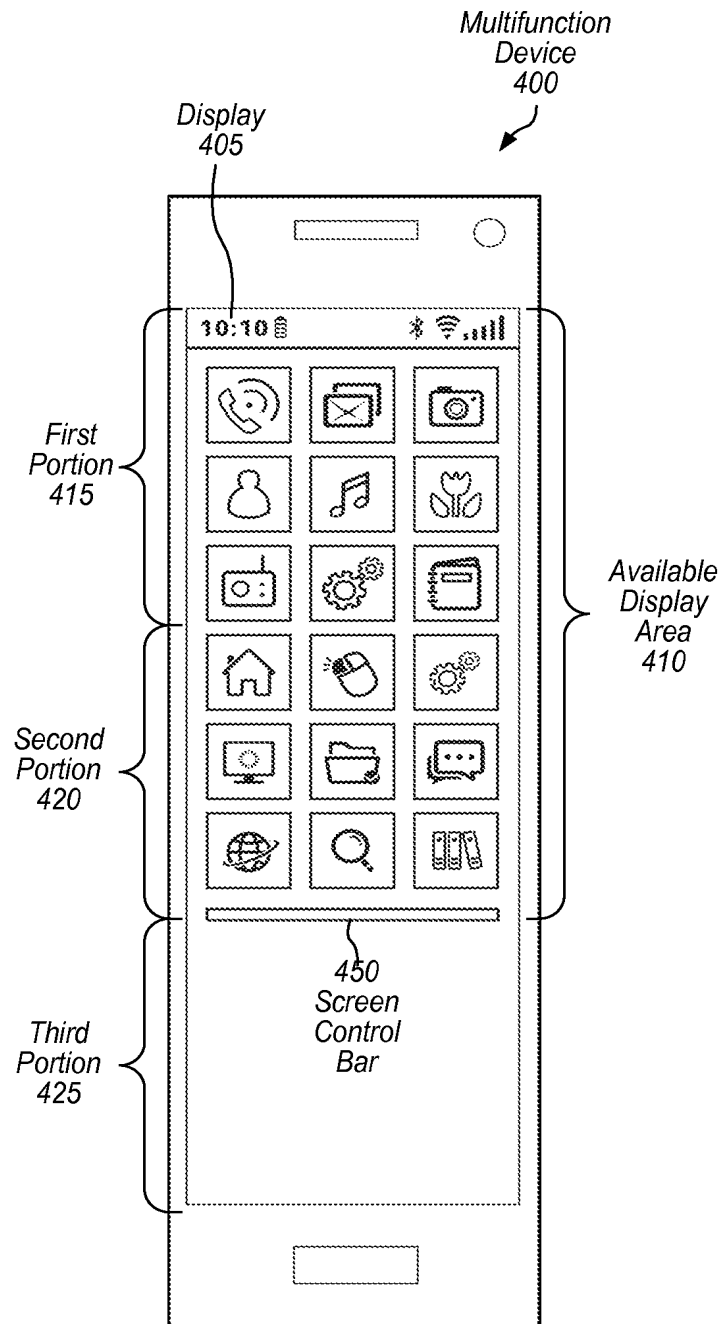
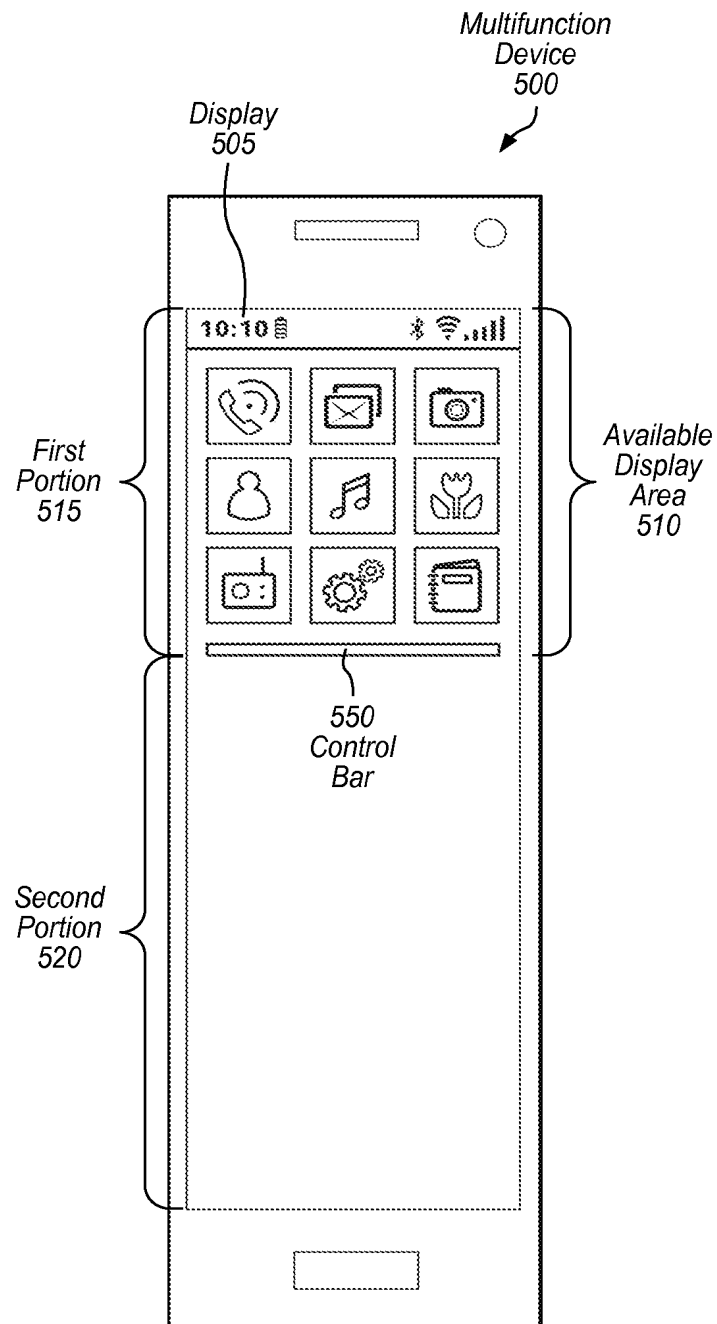


FIG. 4



**FIG. 5**

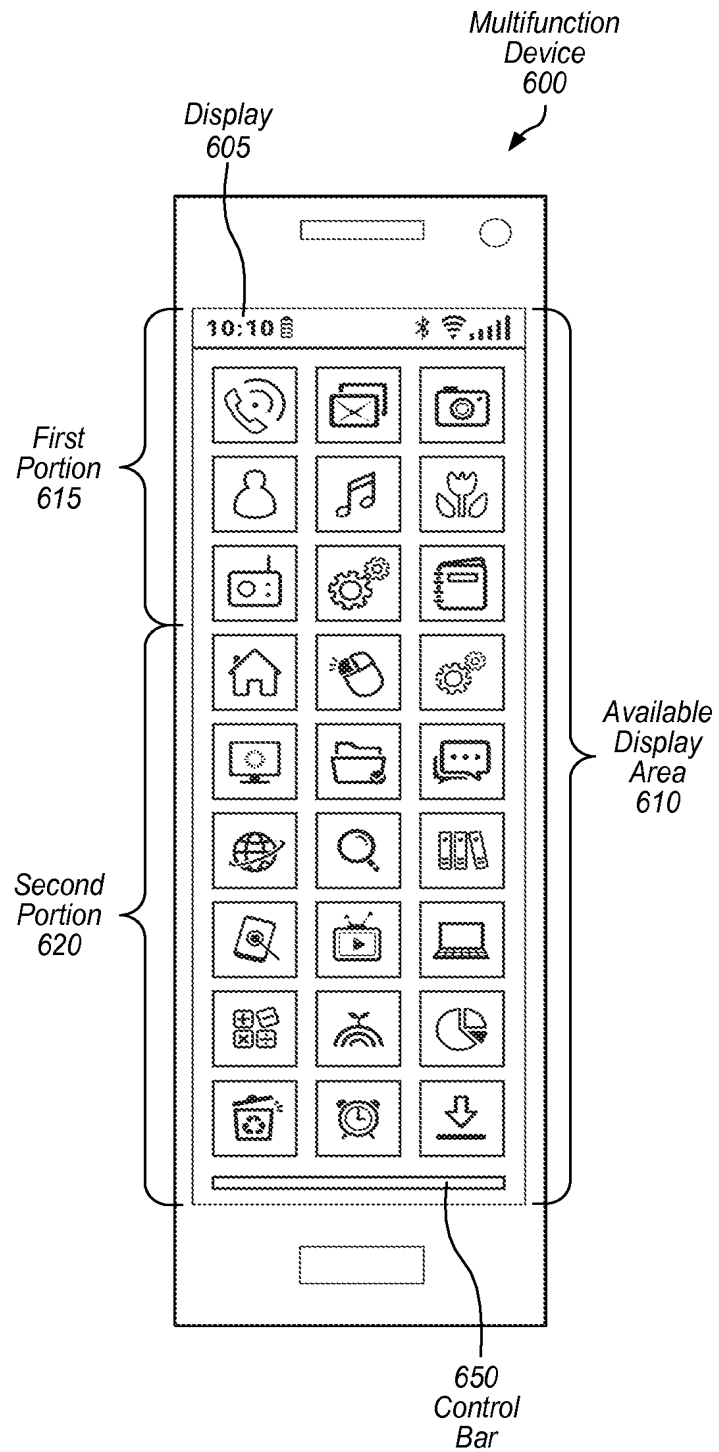


FIG. 6

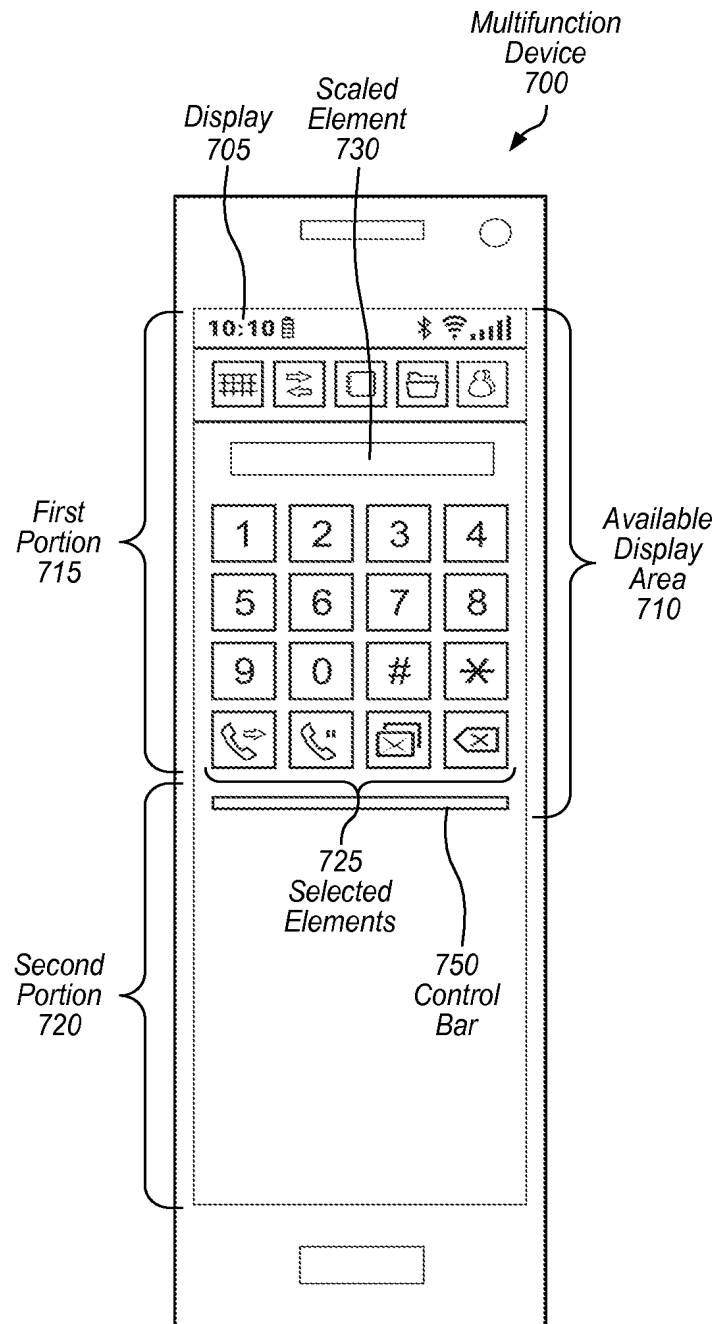


FIG. 7



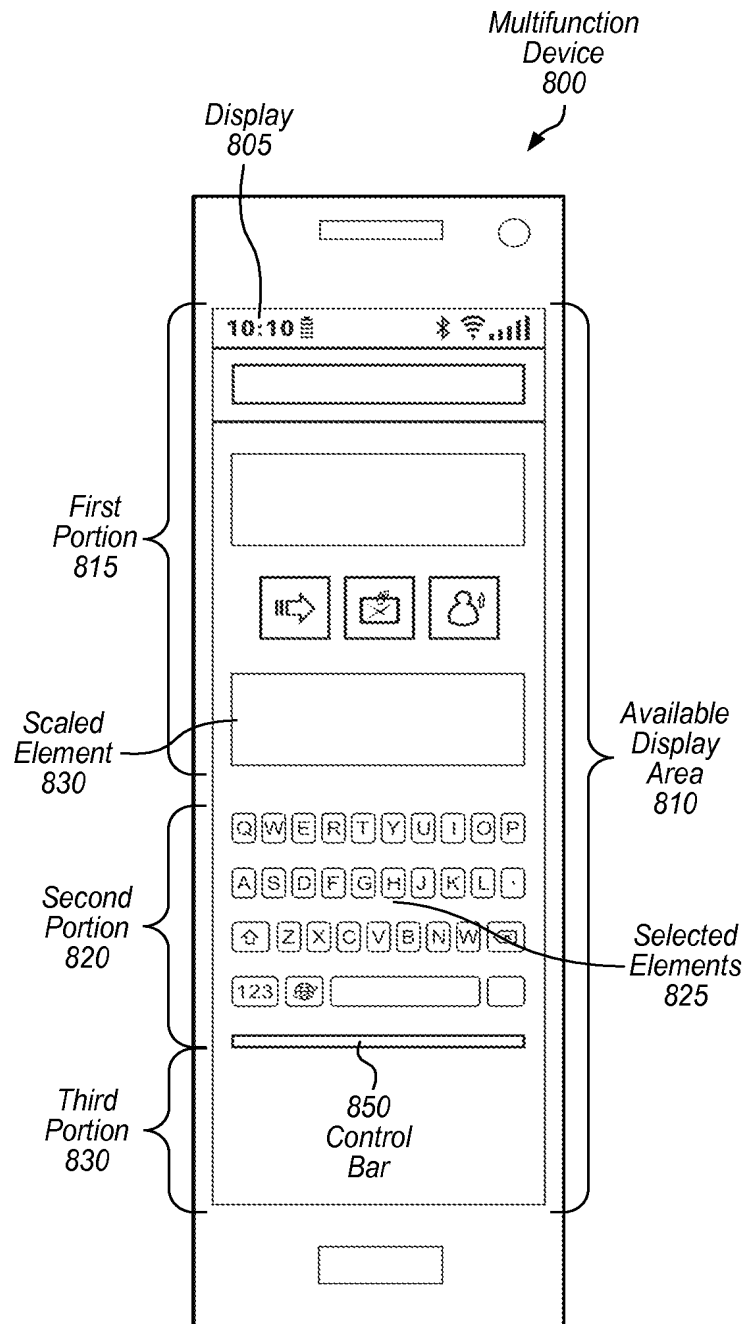
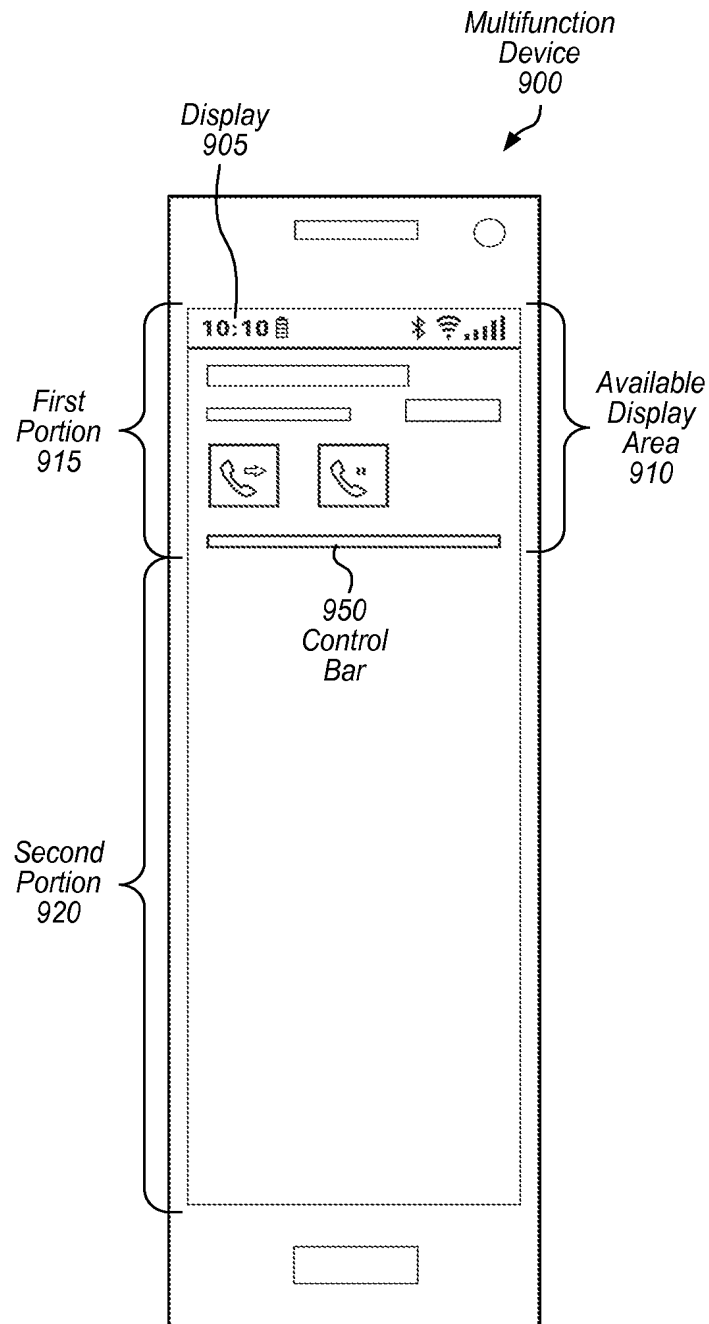


FIG. 8



**FIG. 9**

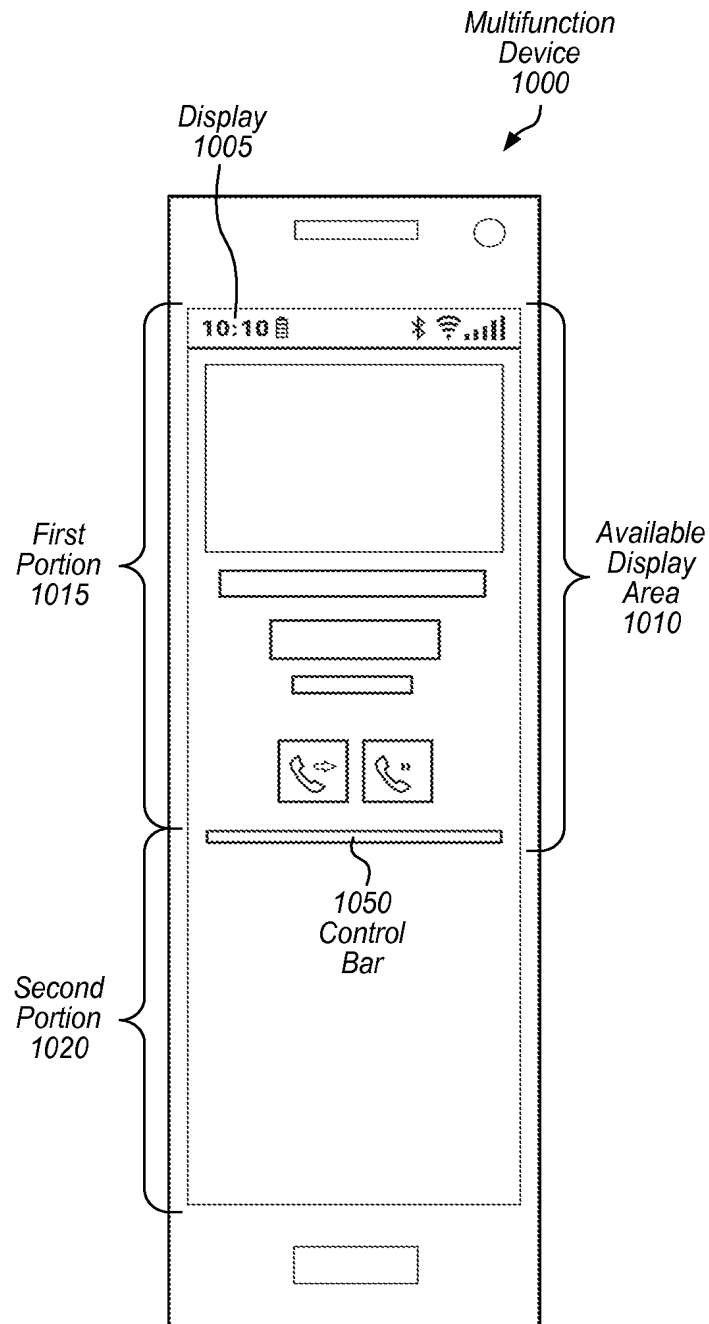


FIG. 10

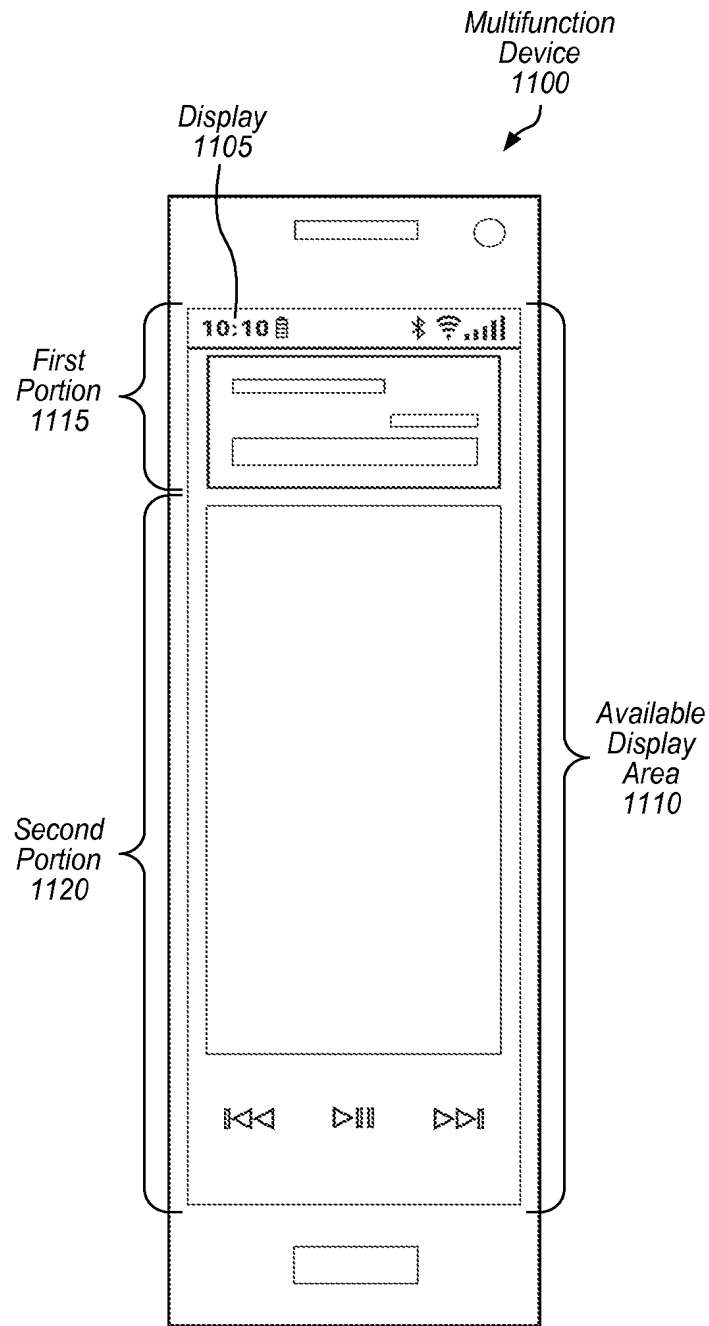


FIG. 11

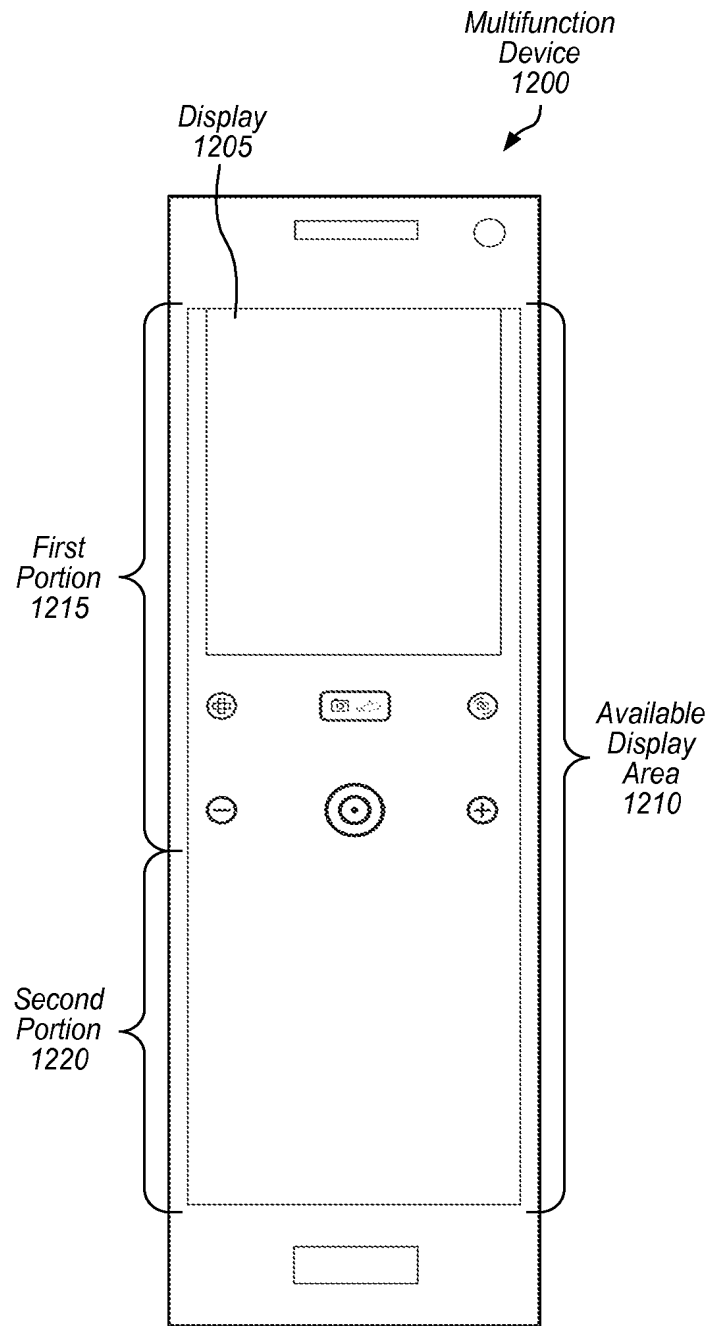


FIG. 12

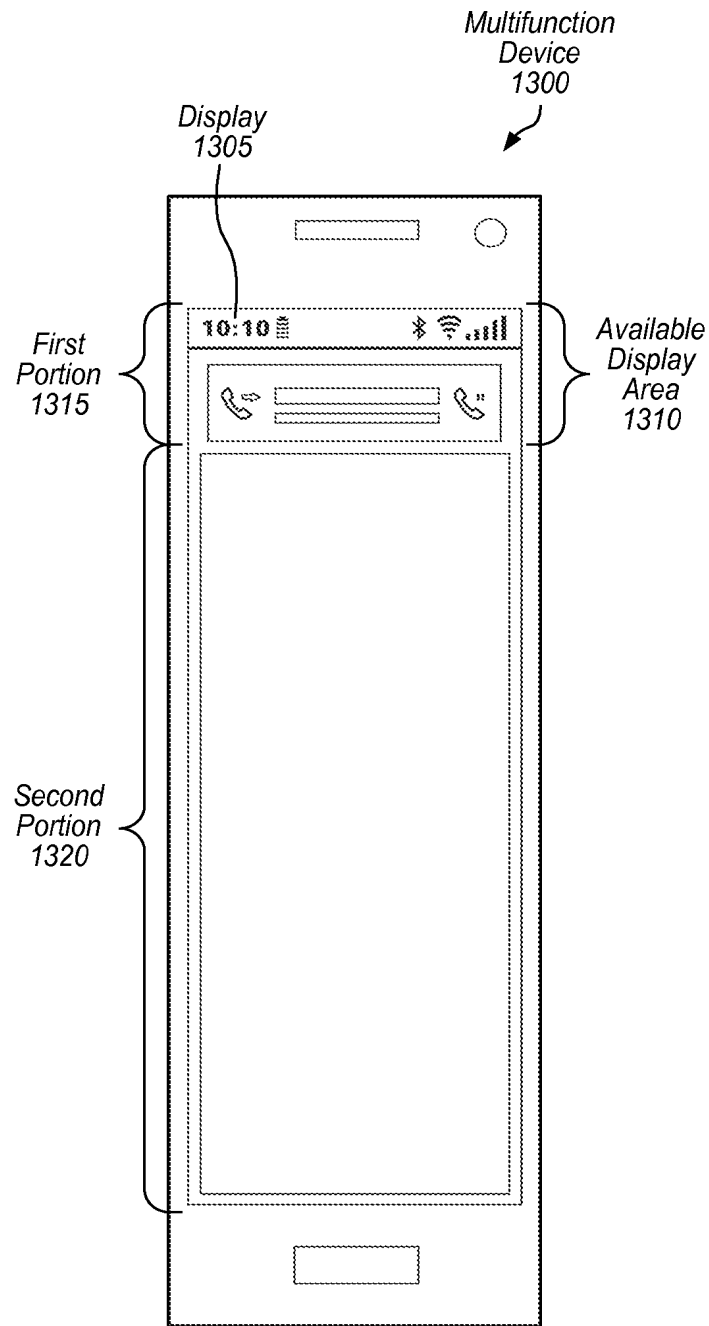


FIG. 13

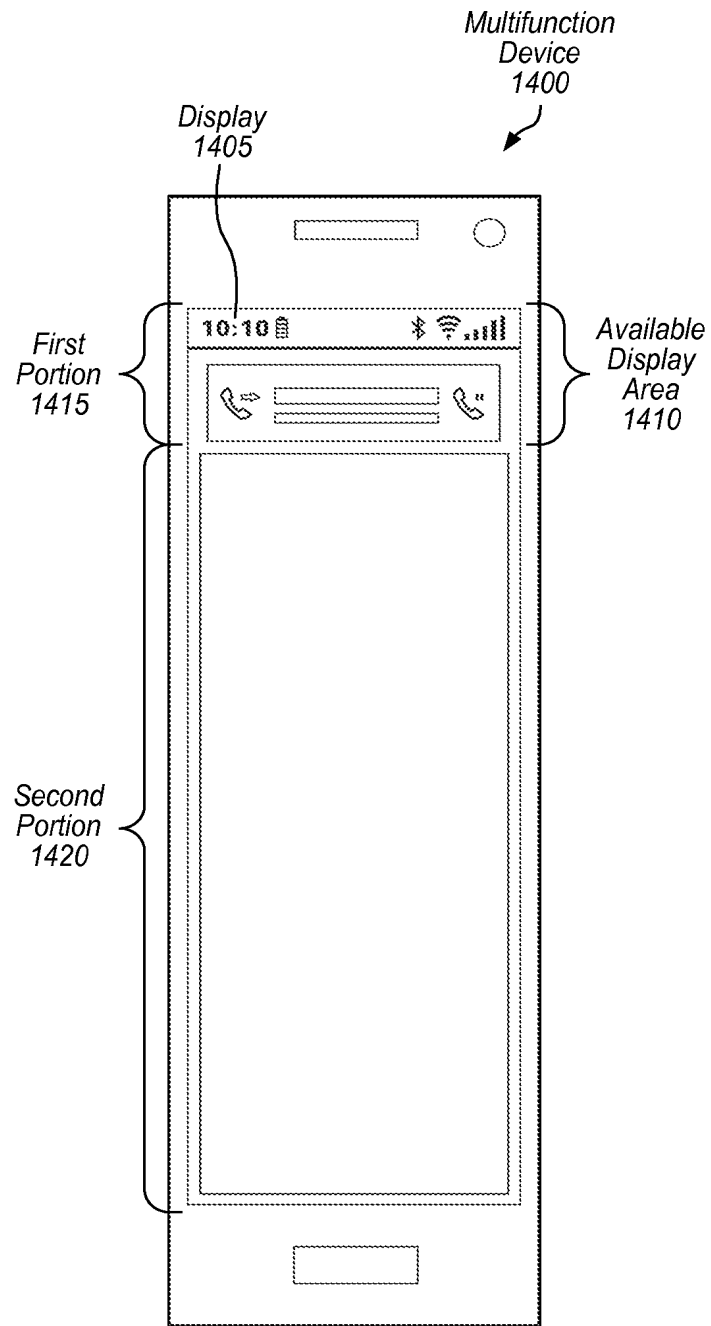


FIG. 14

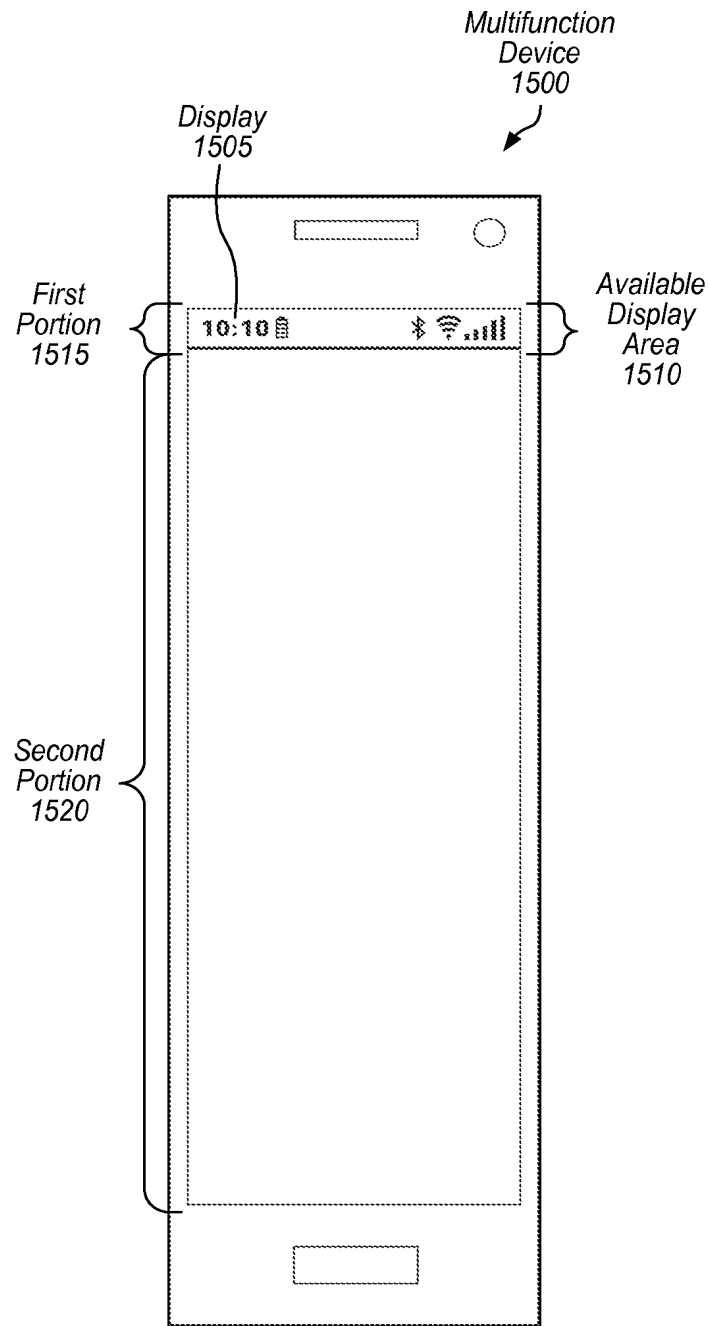


FIG. 15



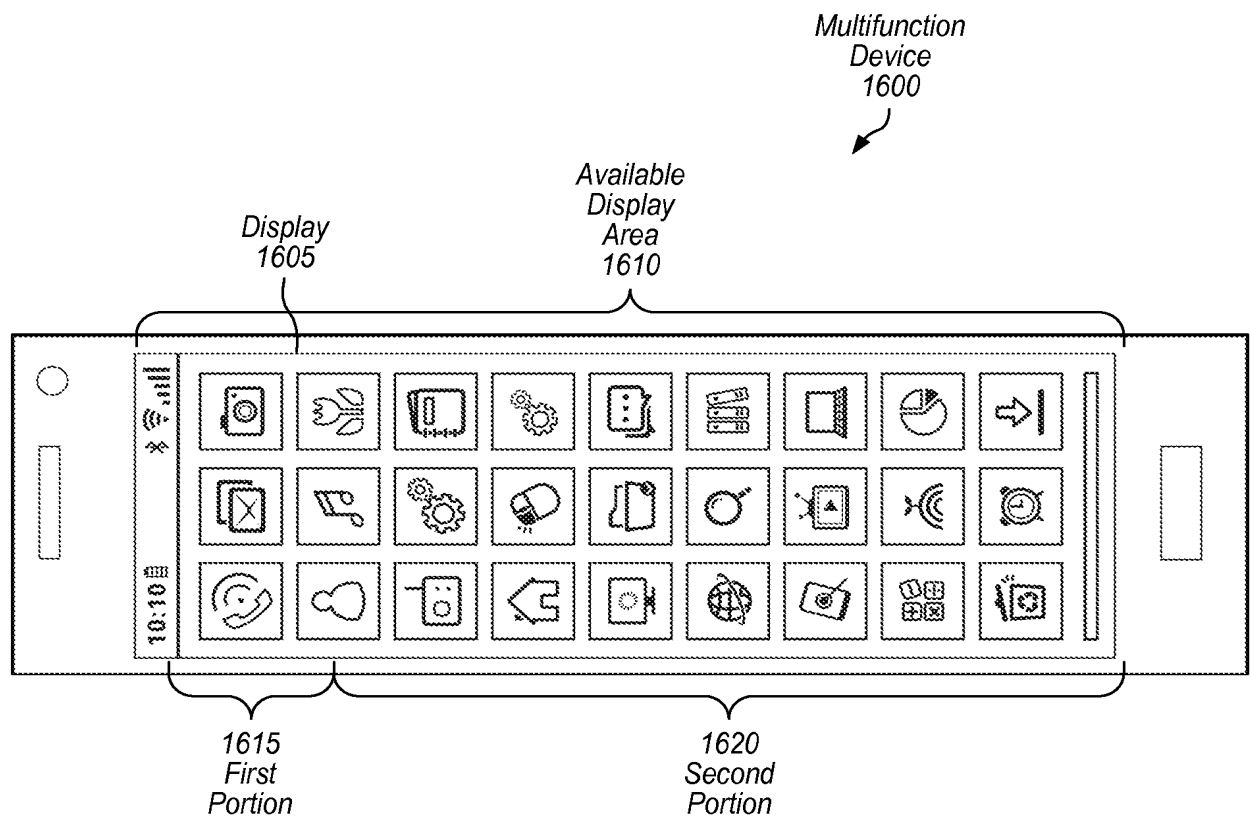


FIG. 16

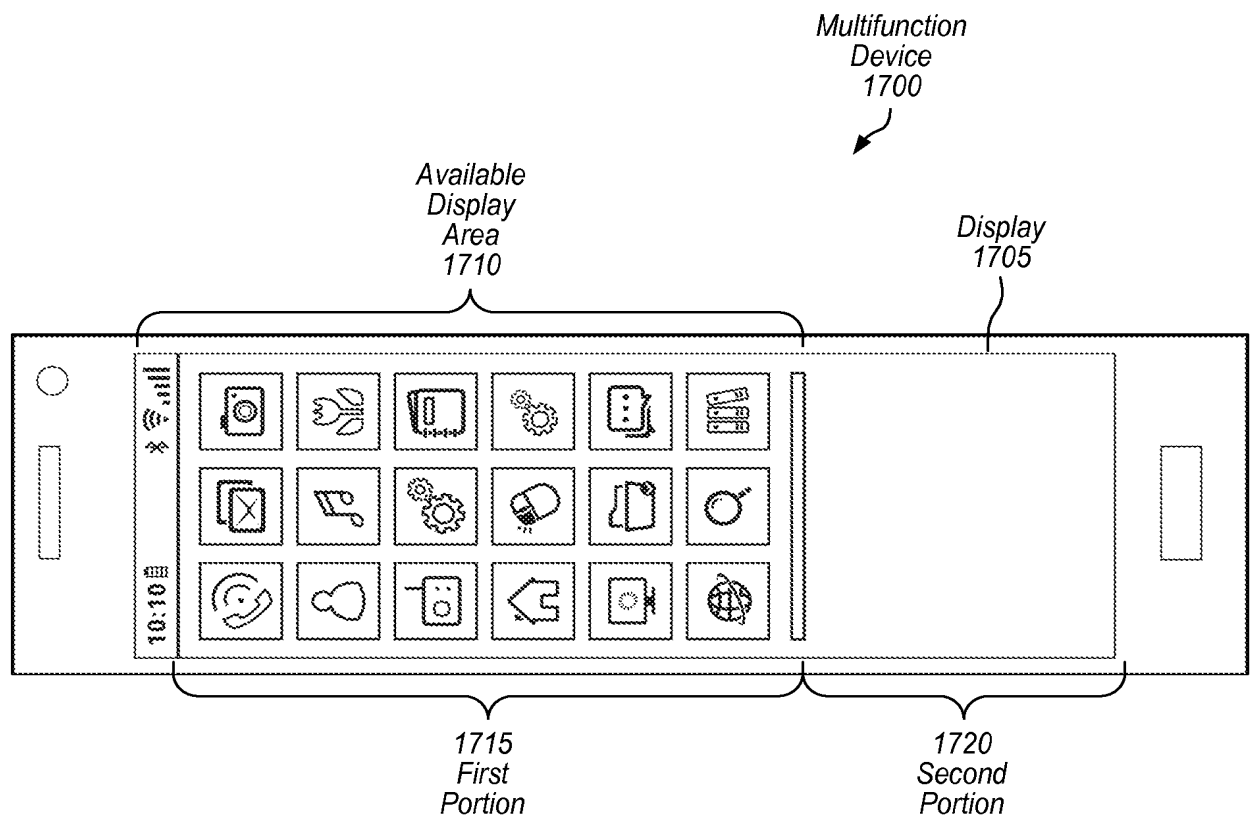


FIG. 17

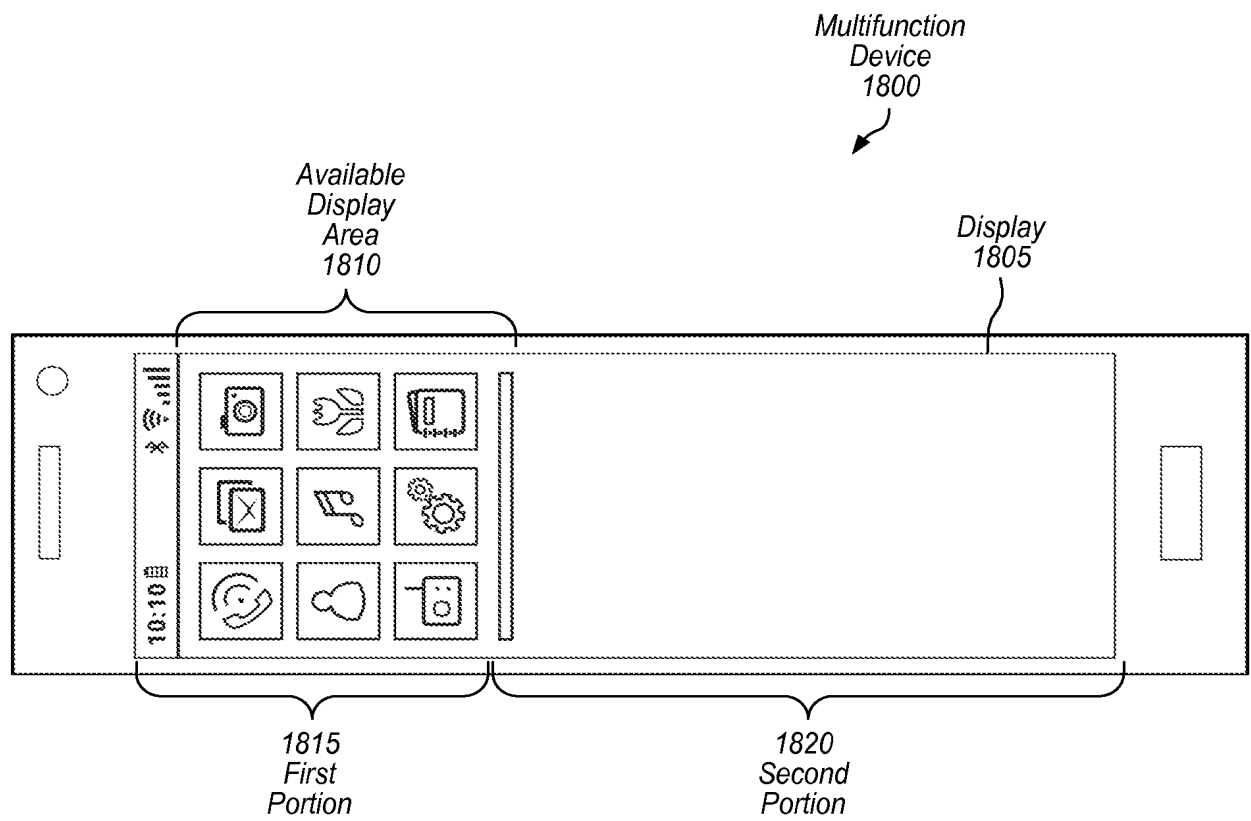


FIG. 18

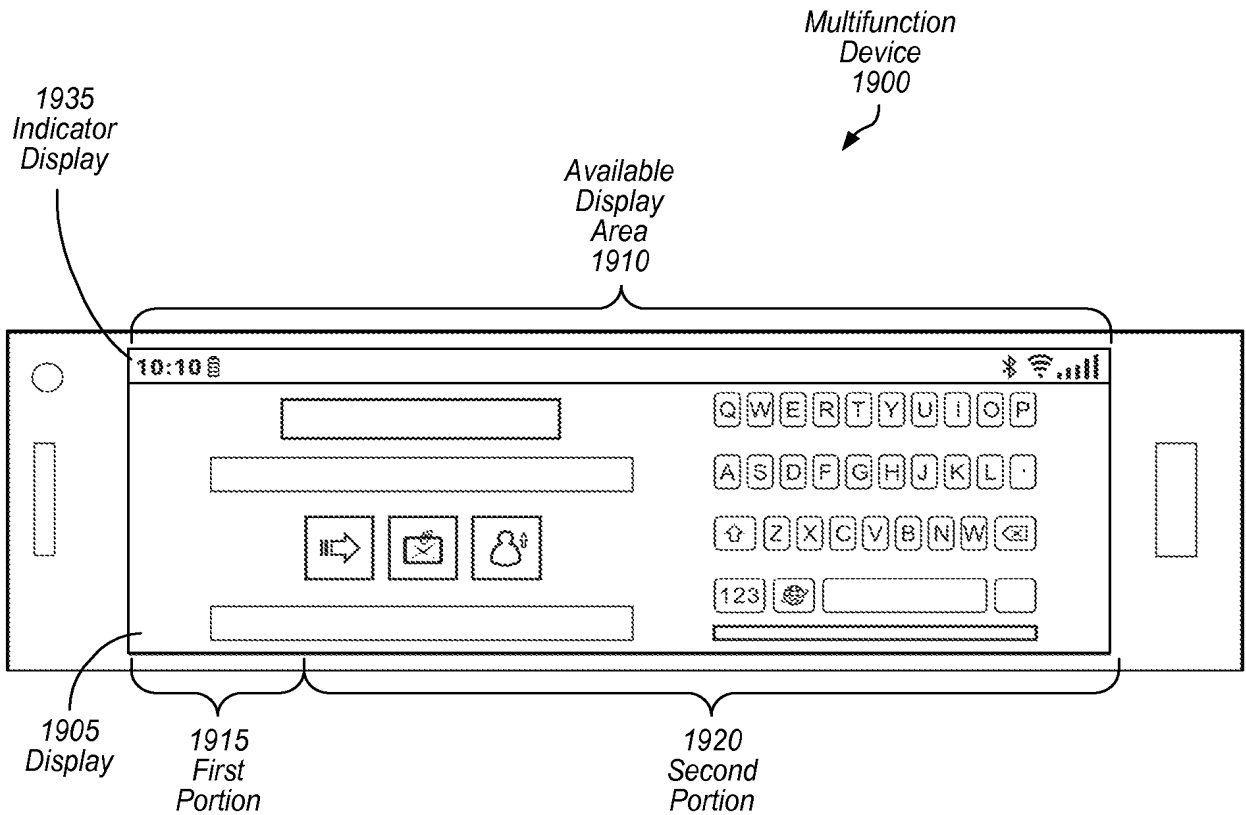


FIG. 19

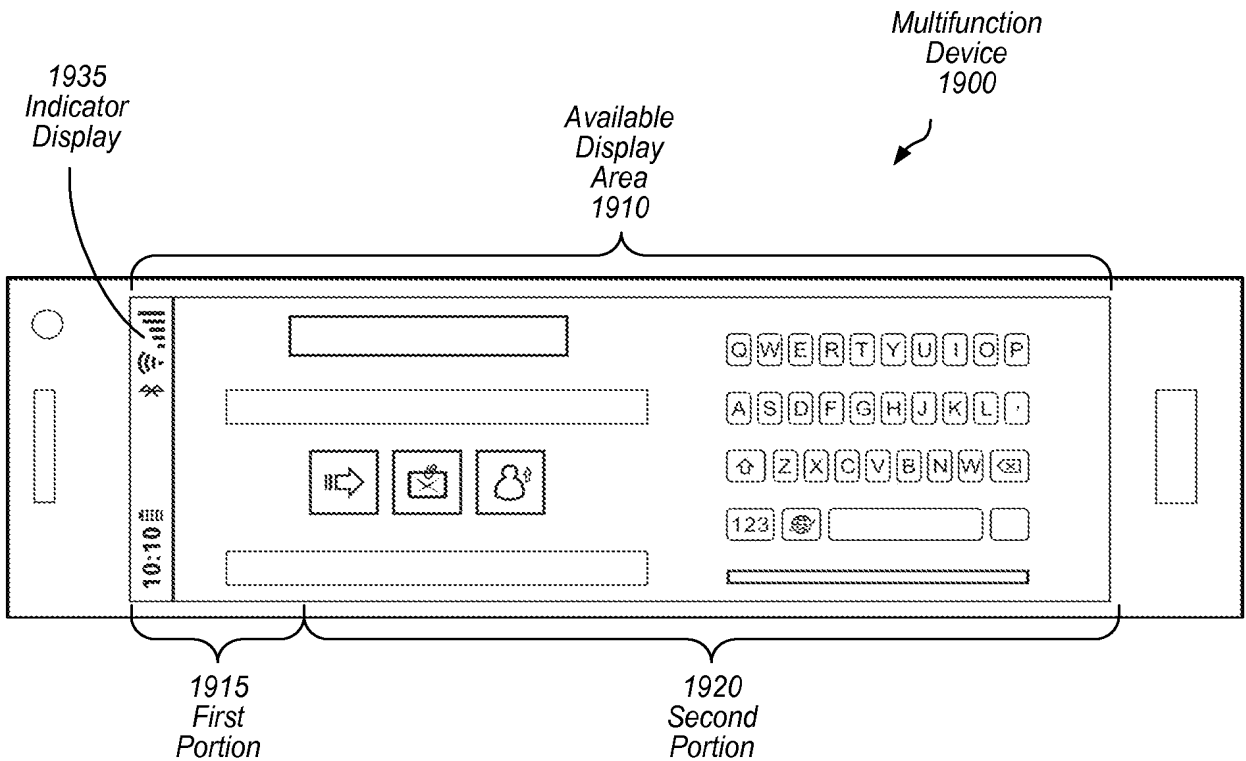


FIG. 19A

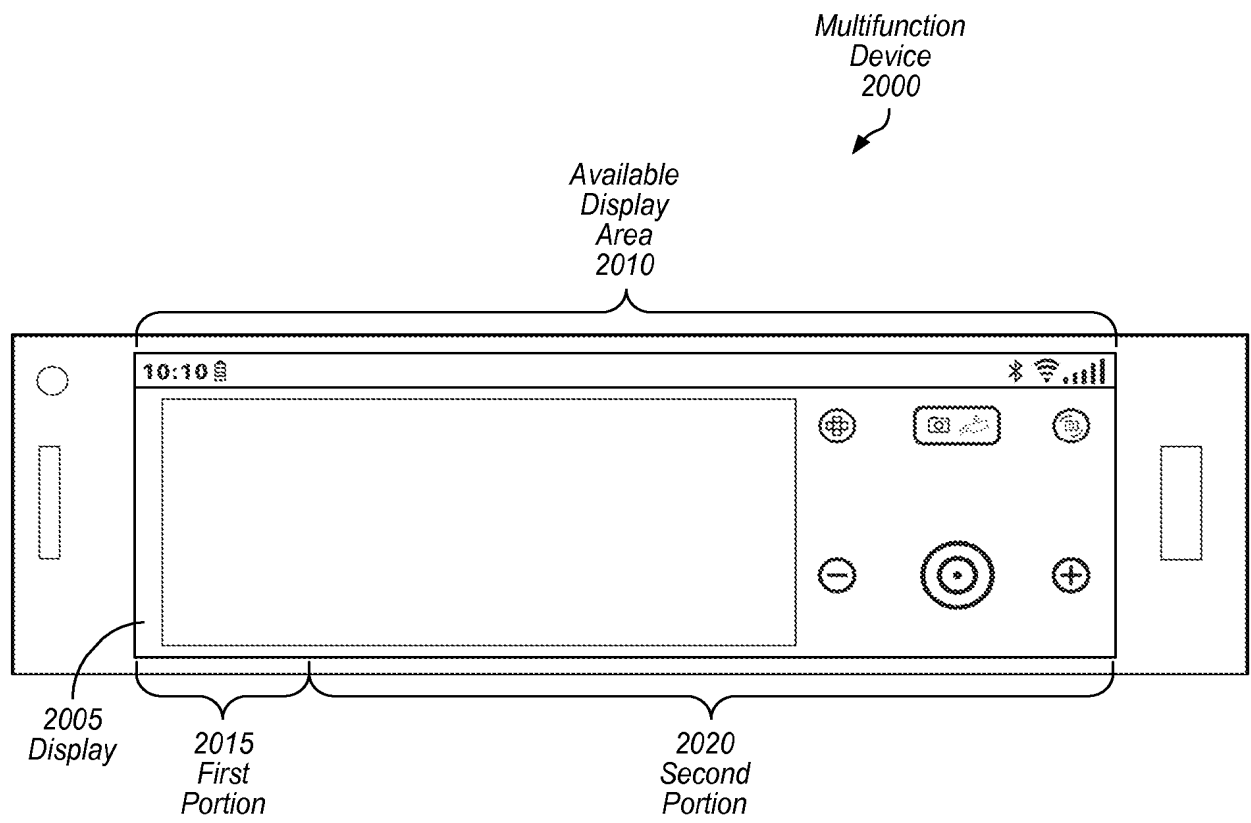


FIG. 20

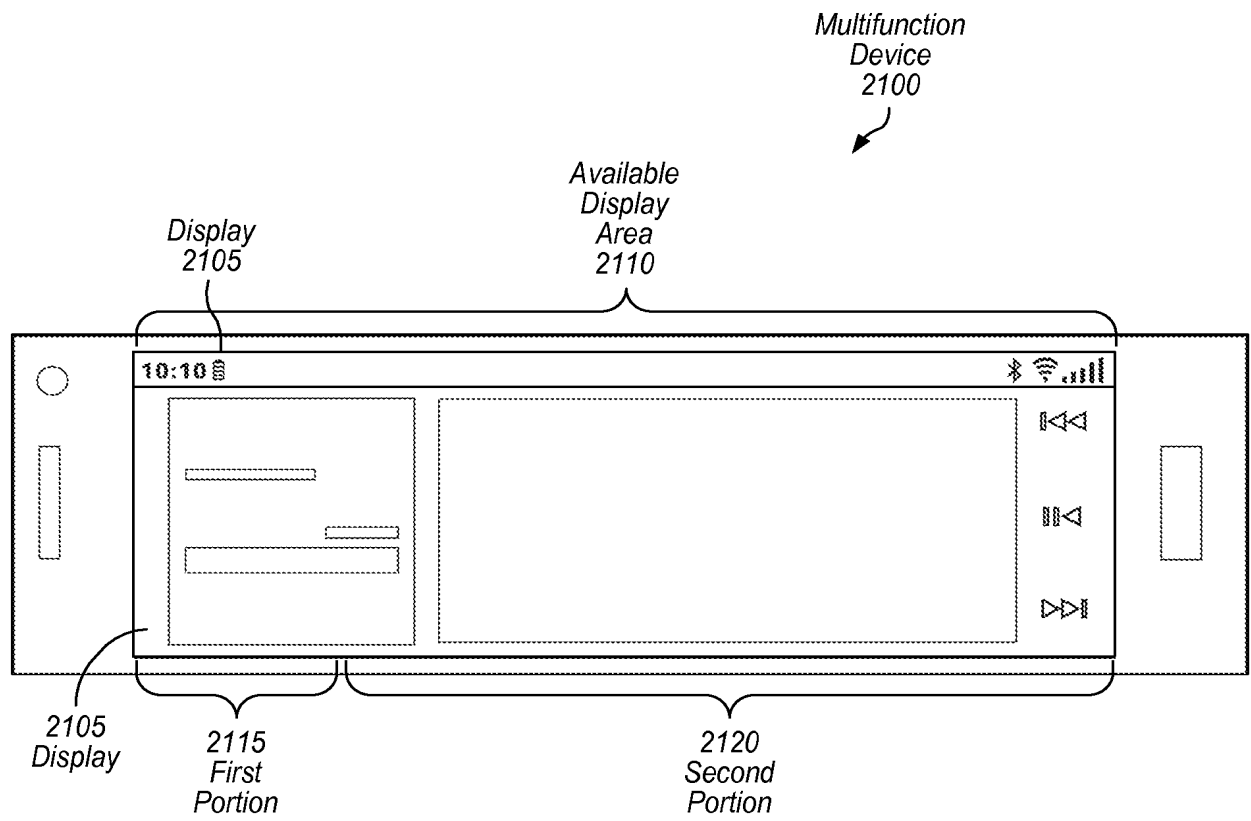


FIG. 21

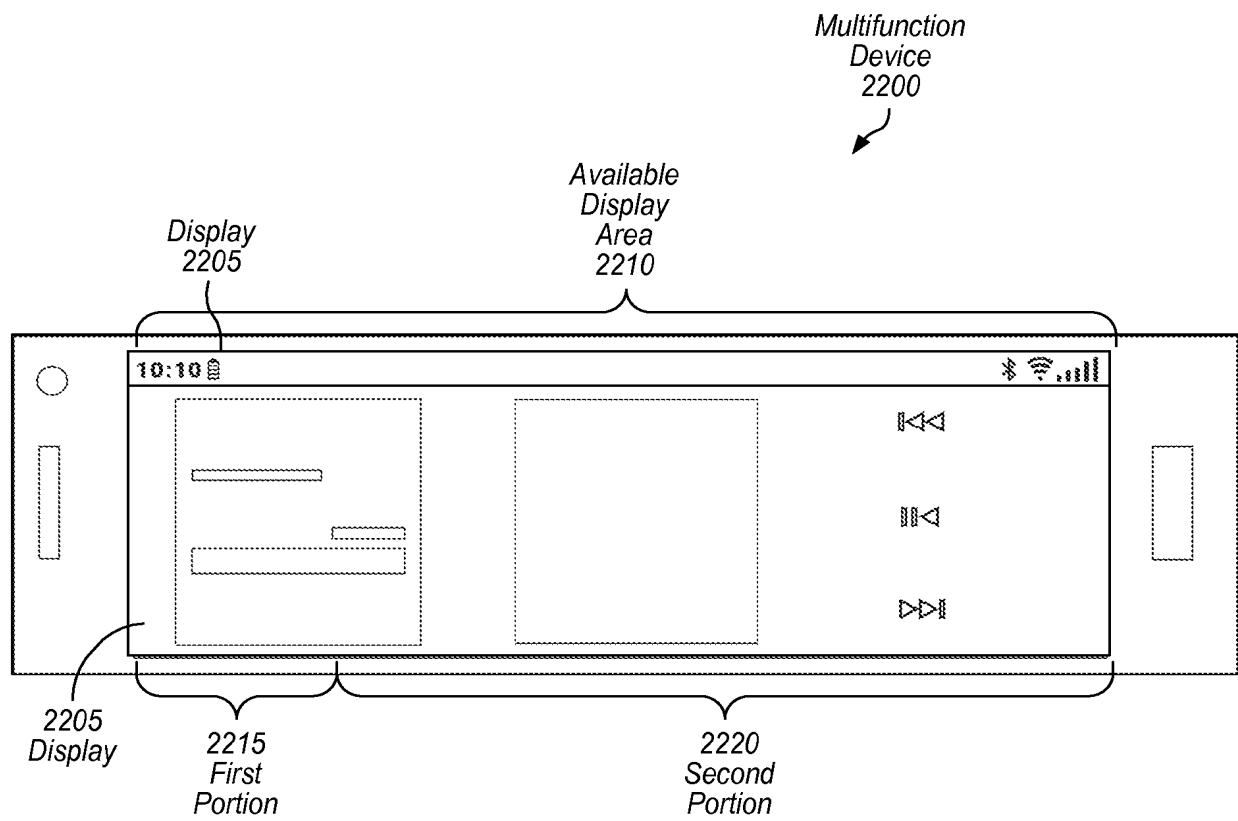


FIG. 22

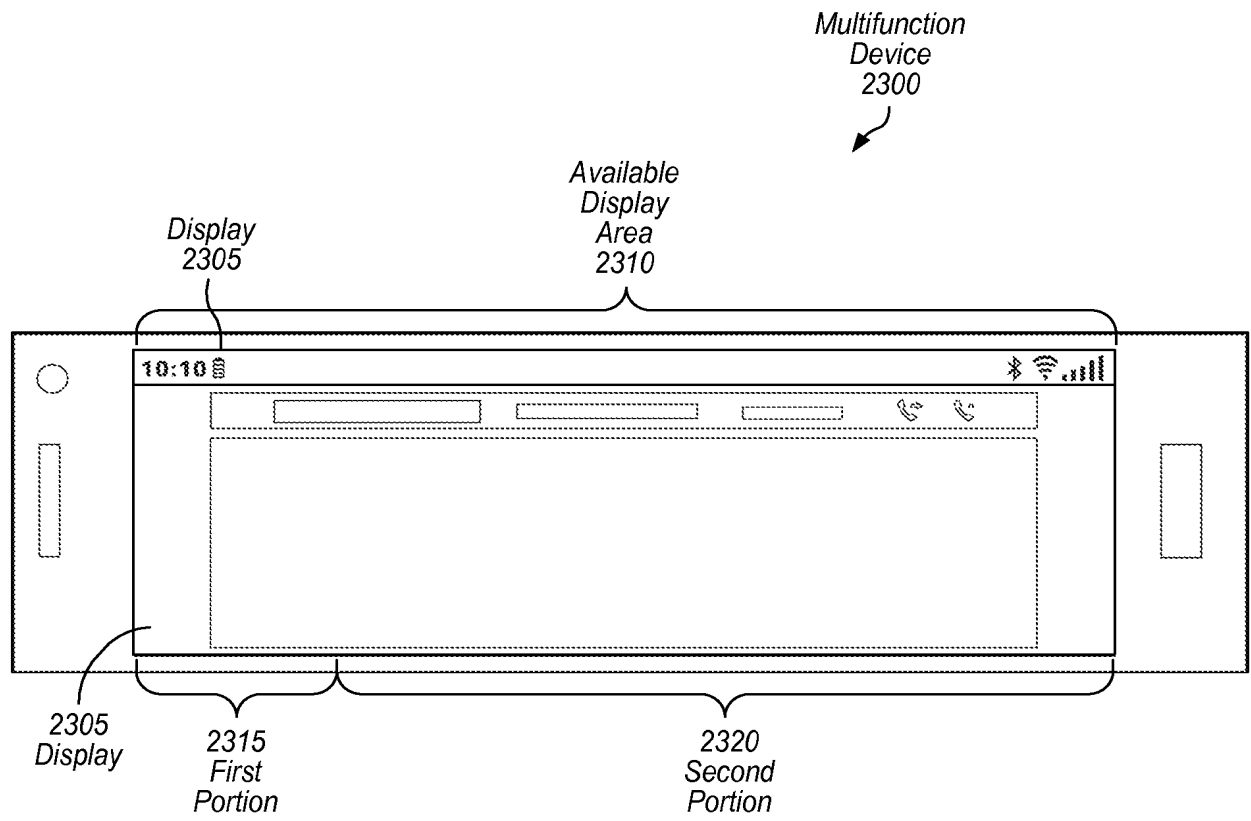


FIG. 23



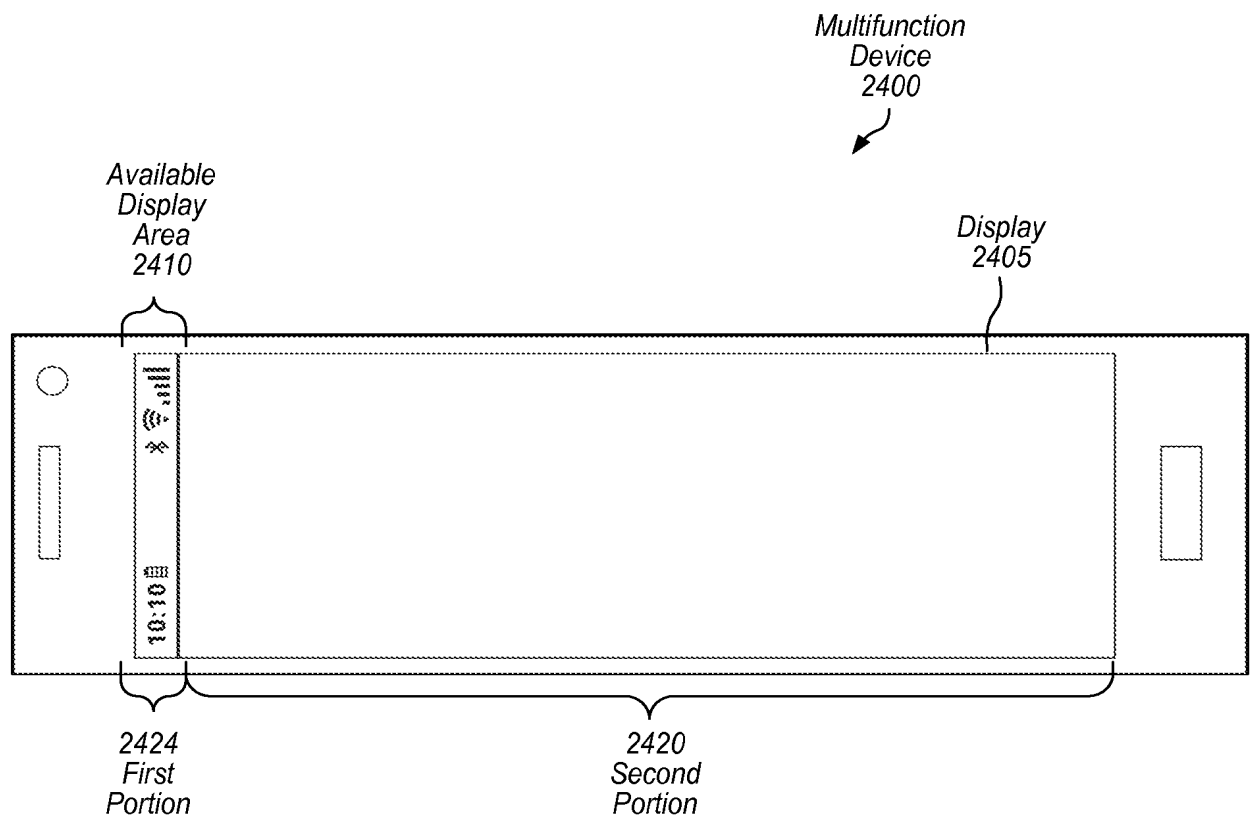


FIG. 24

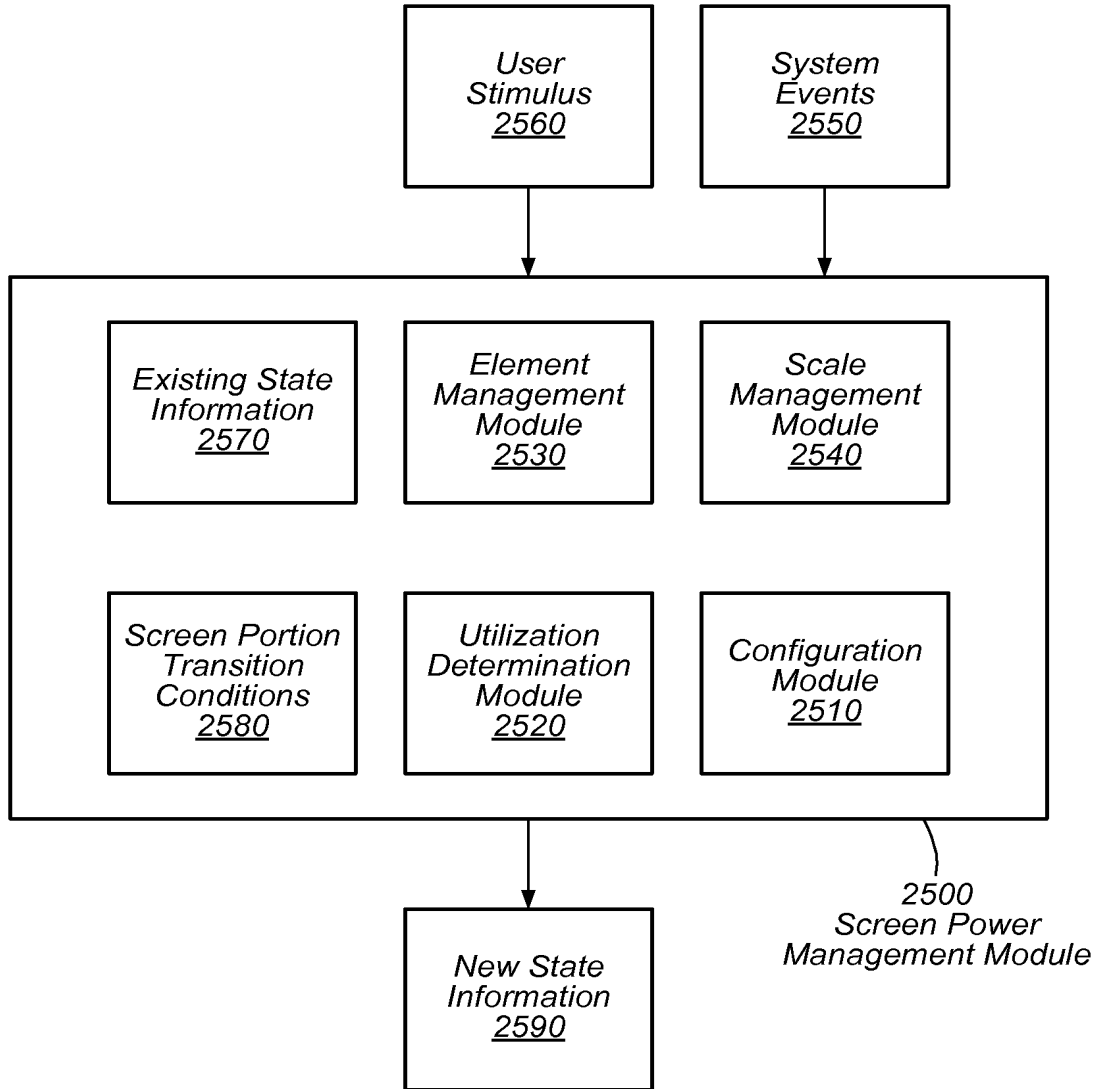


FIG. 25

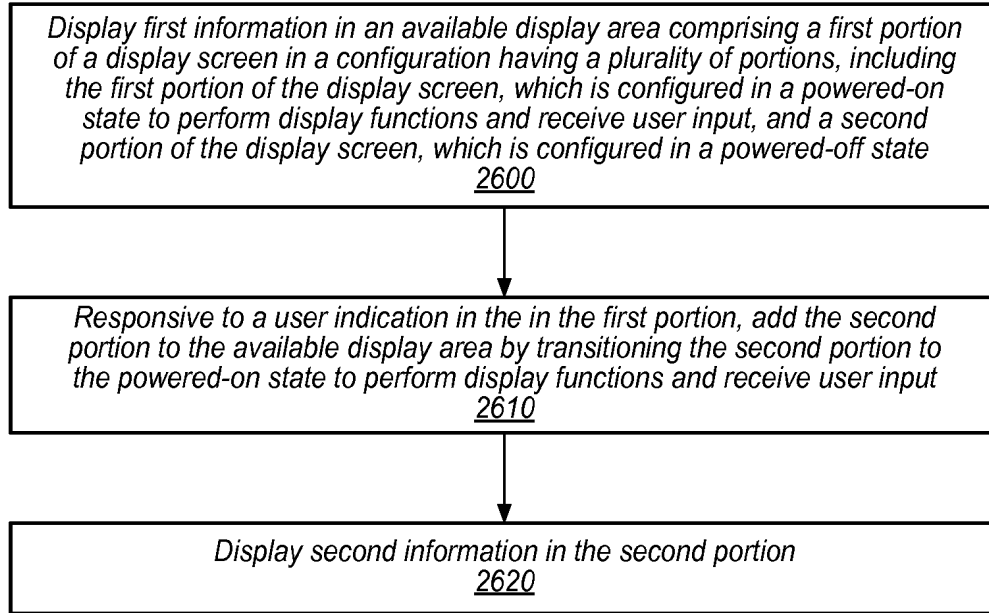


FIG. 26

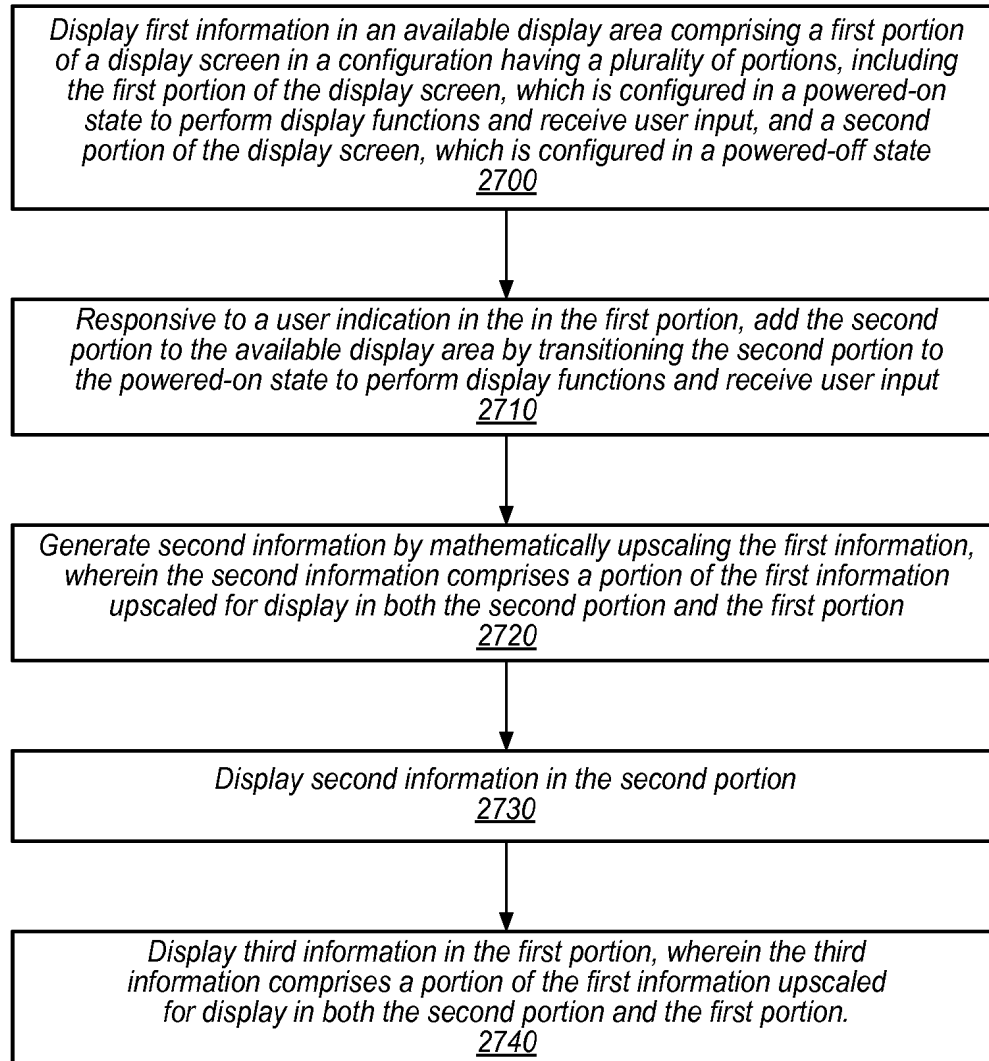


FIG. 27

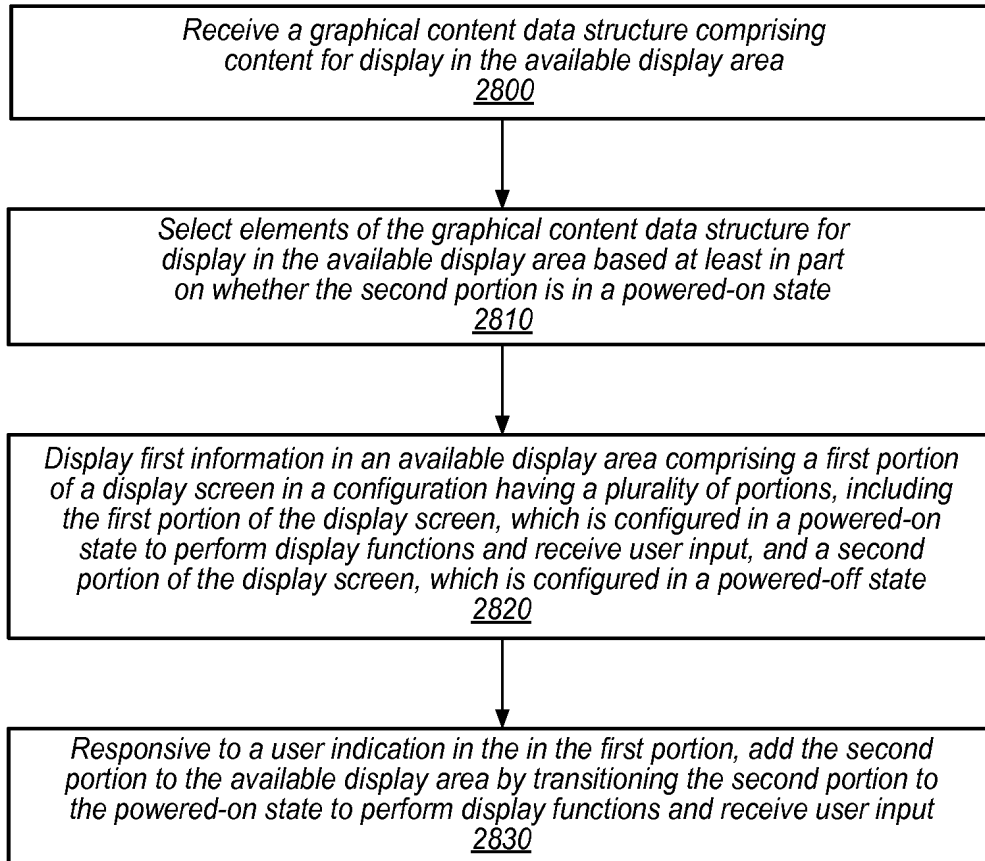


FIG. 28

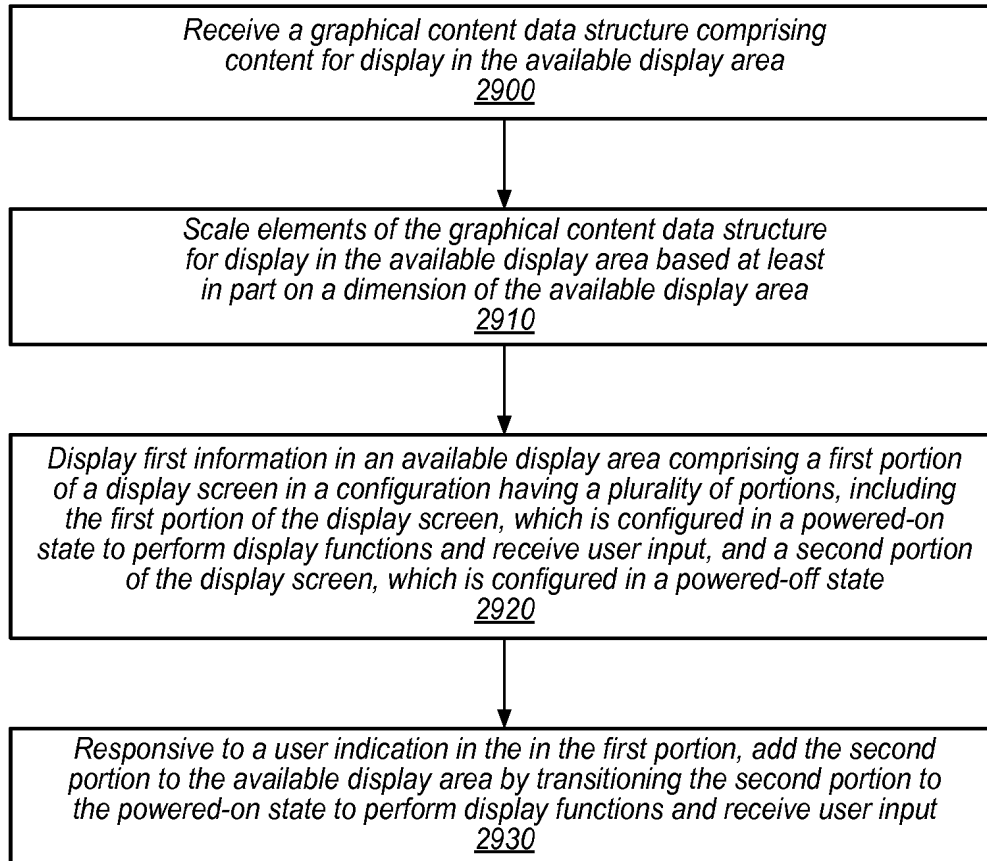


FIG. 29

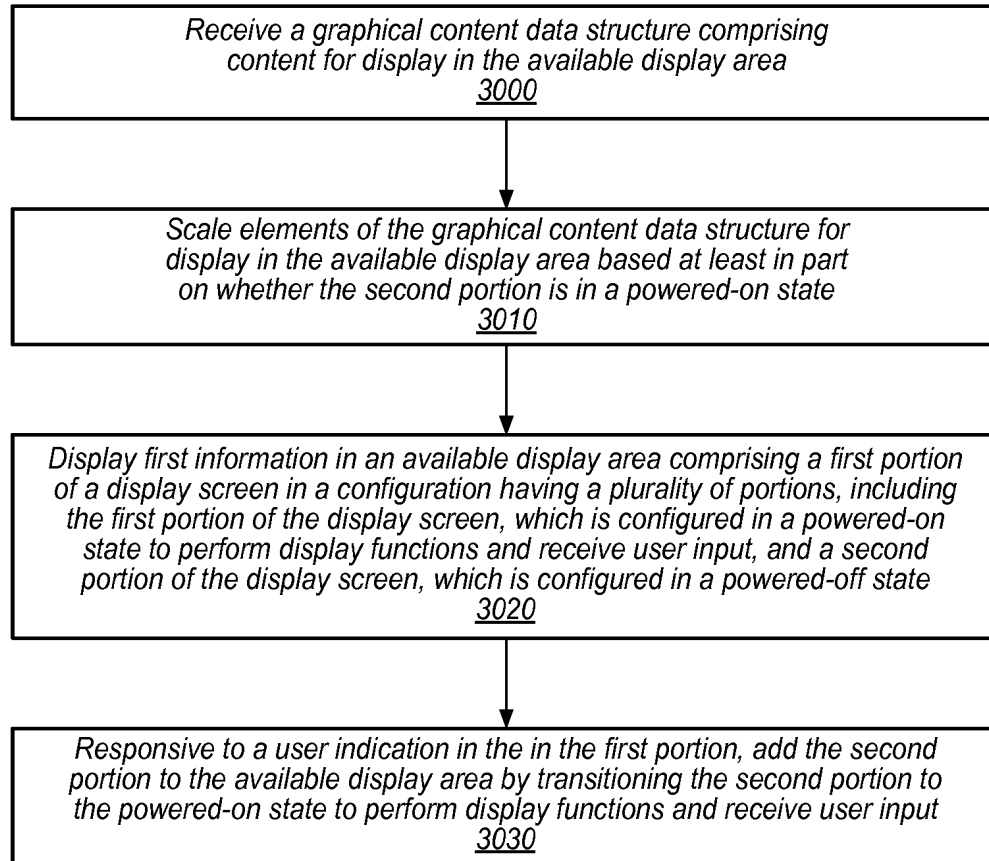


FIG. 30

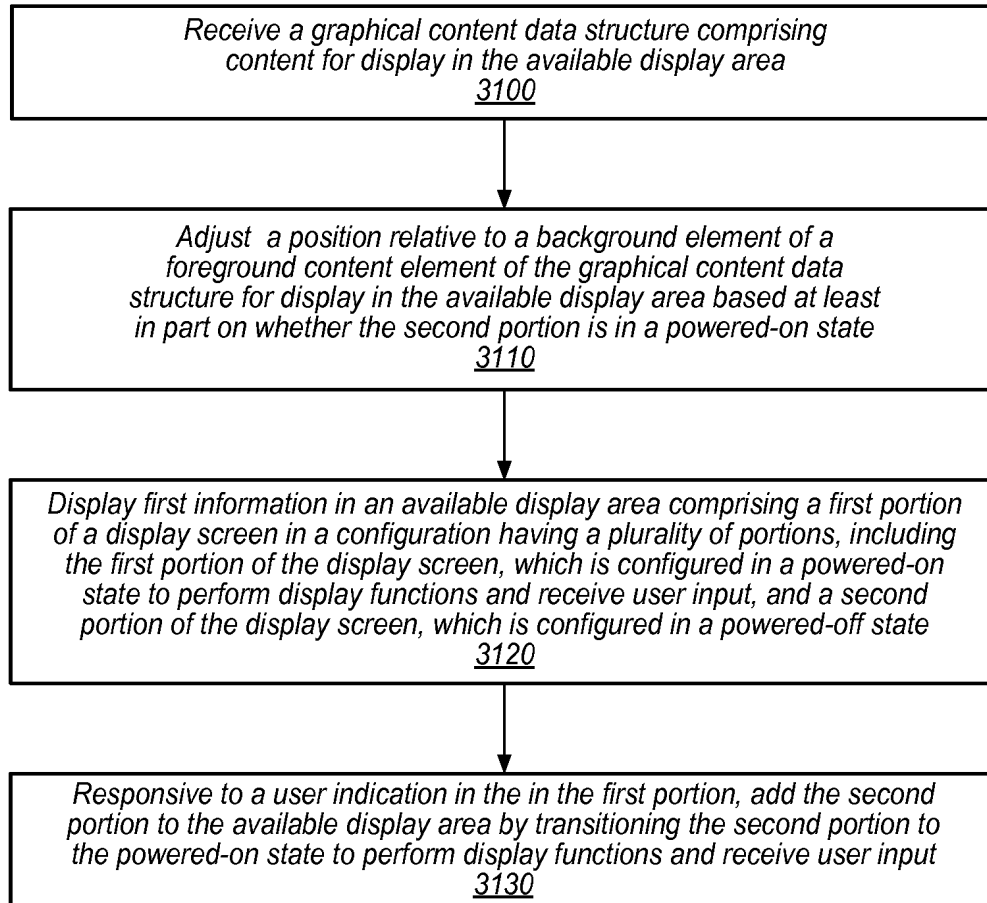


FIG. 31



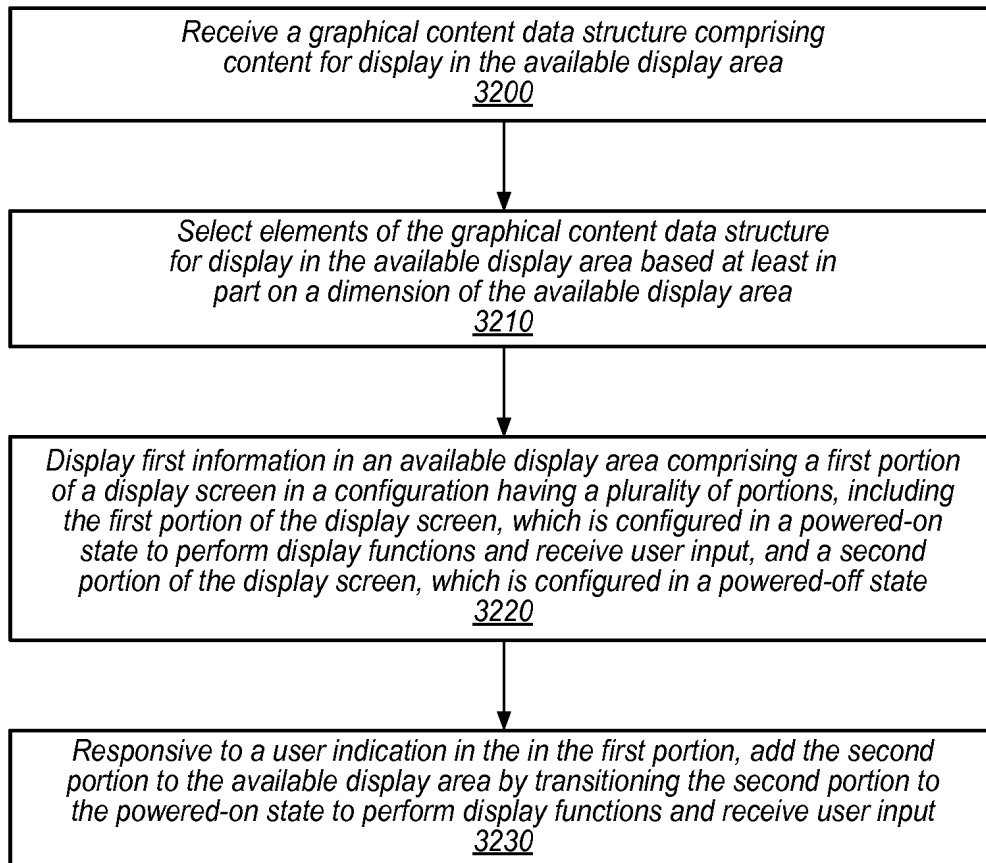


FIG. 32

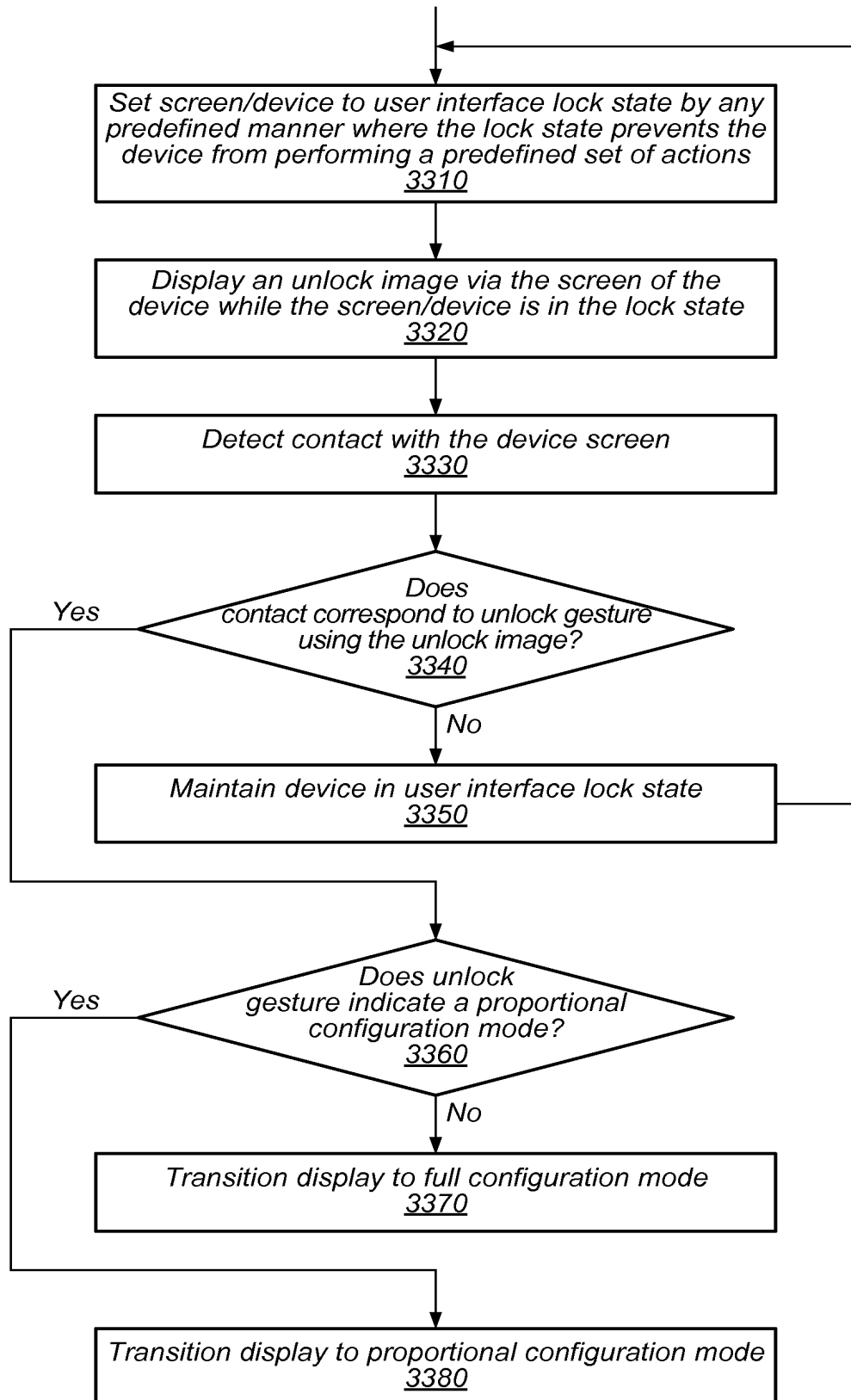
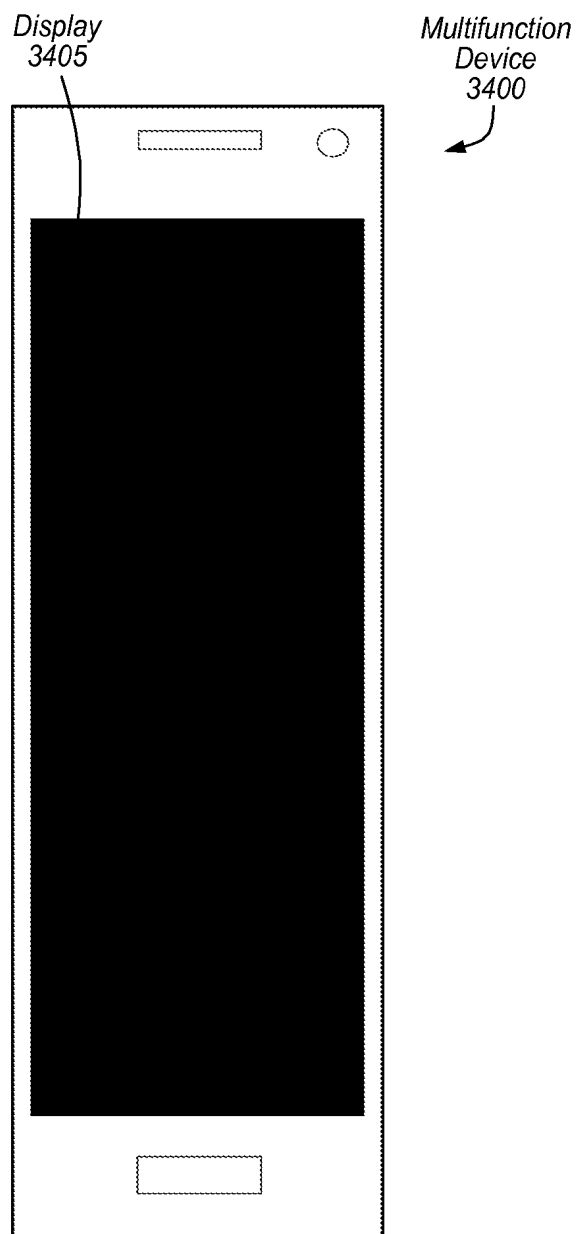


FIG. 33



*FIG. 34*

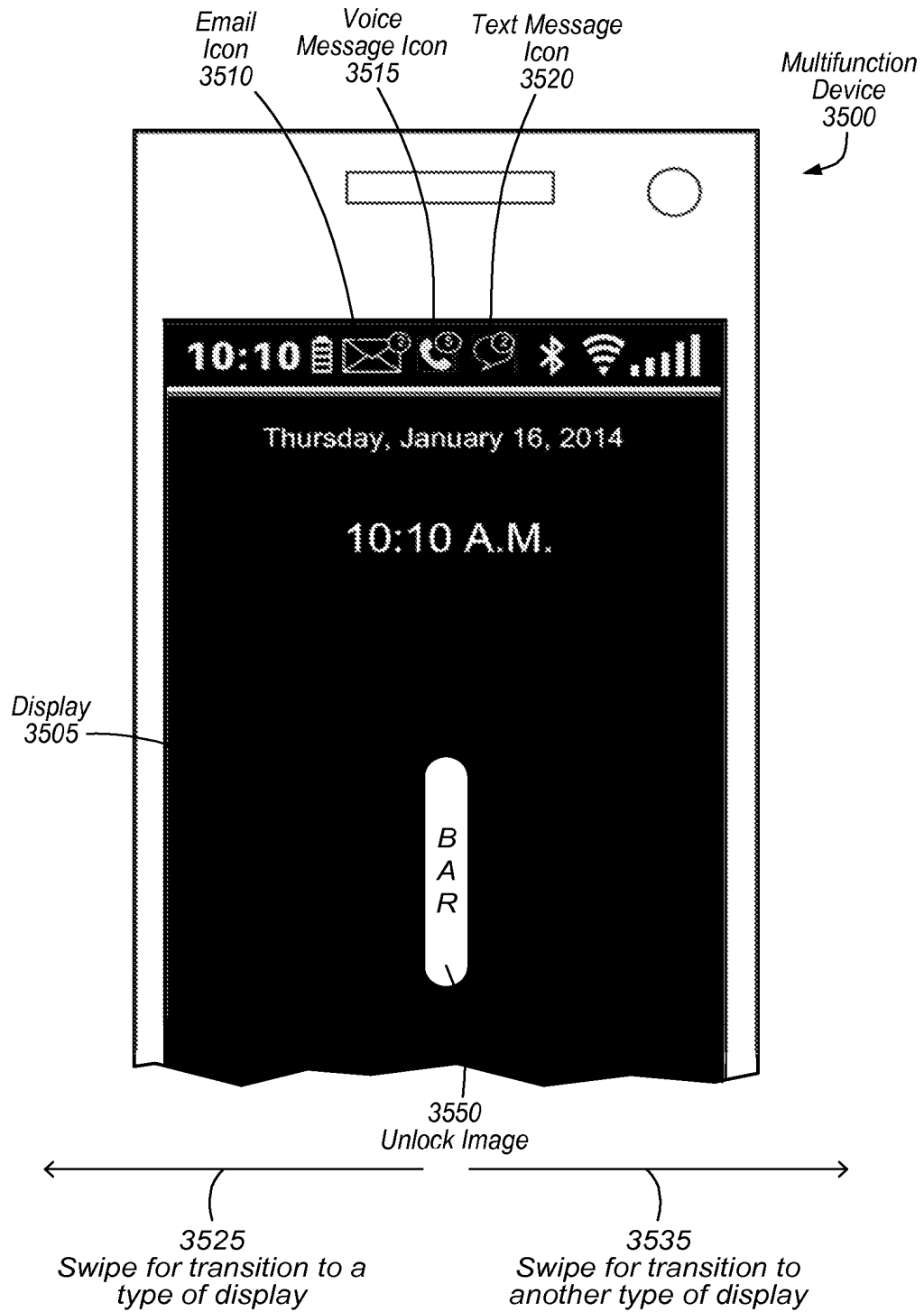


FIG. 35

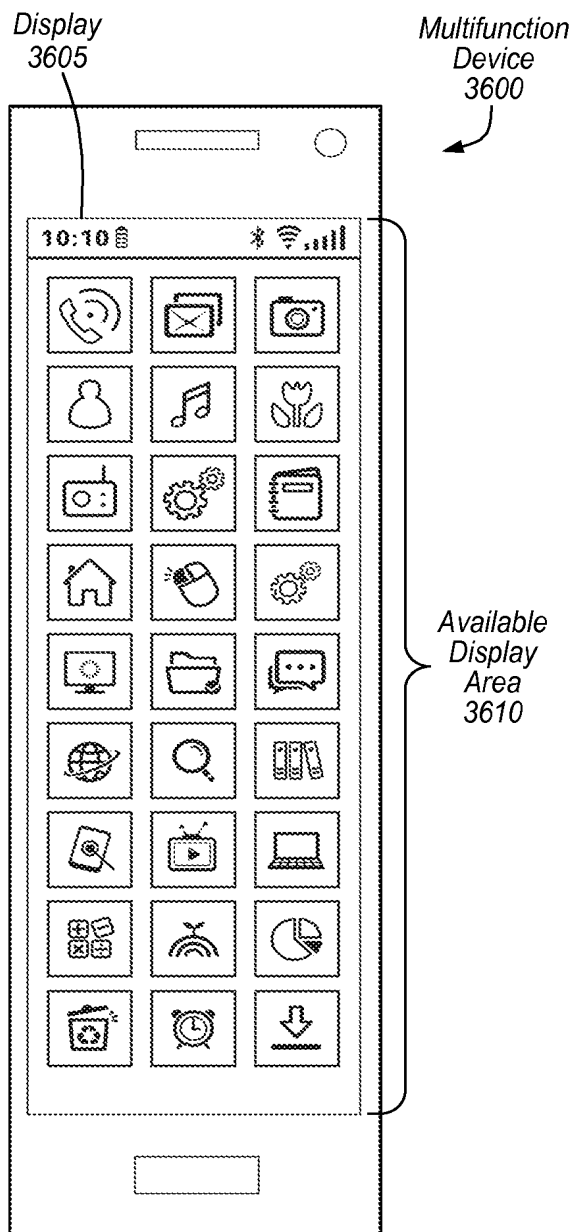


FIG. 36

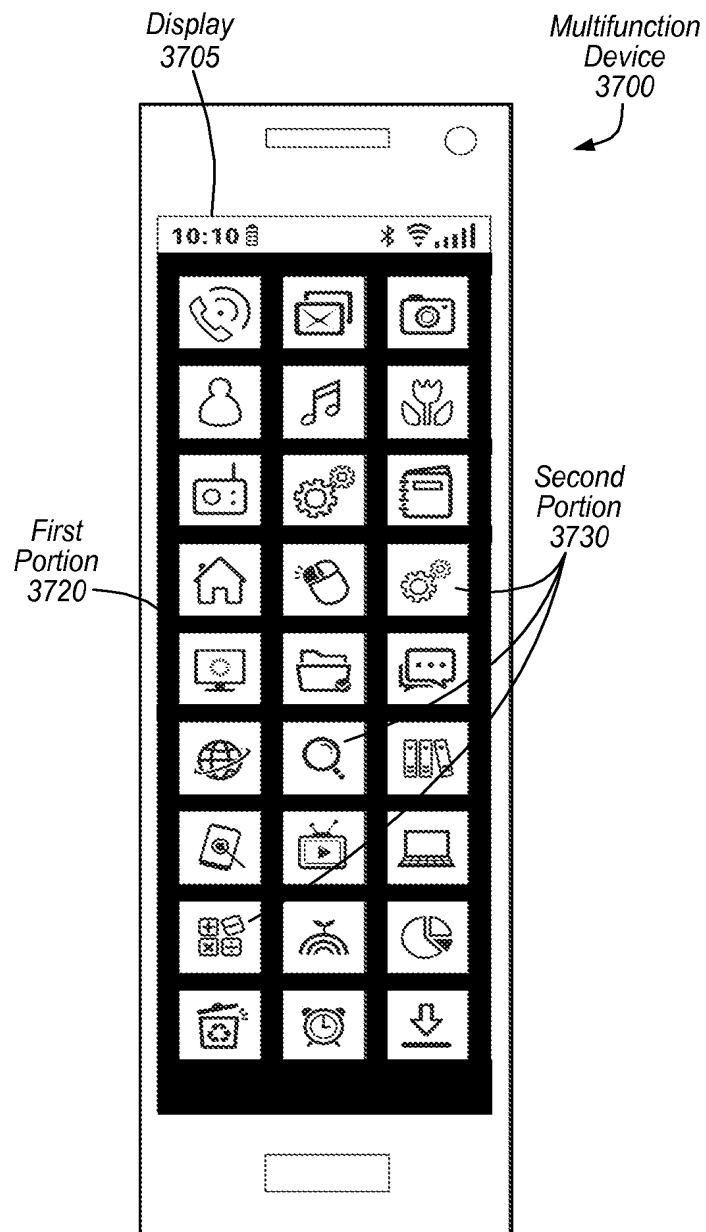


FIG. 37

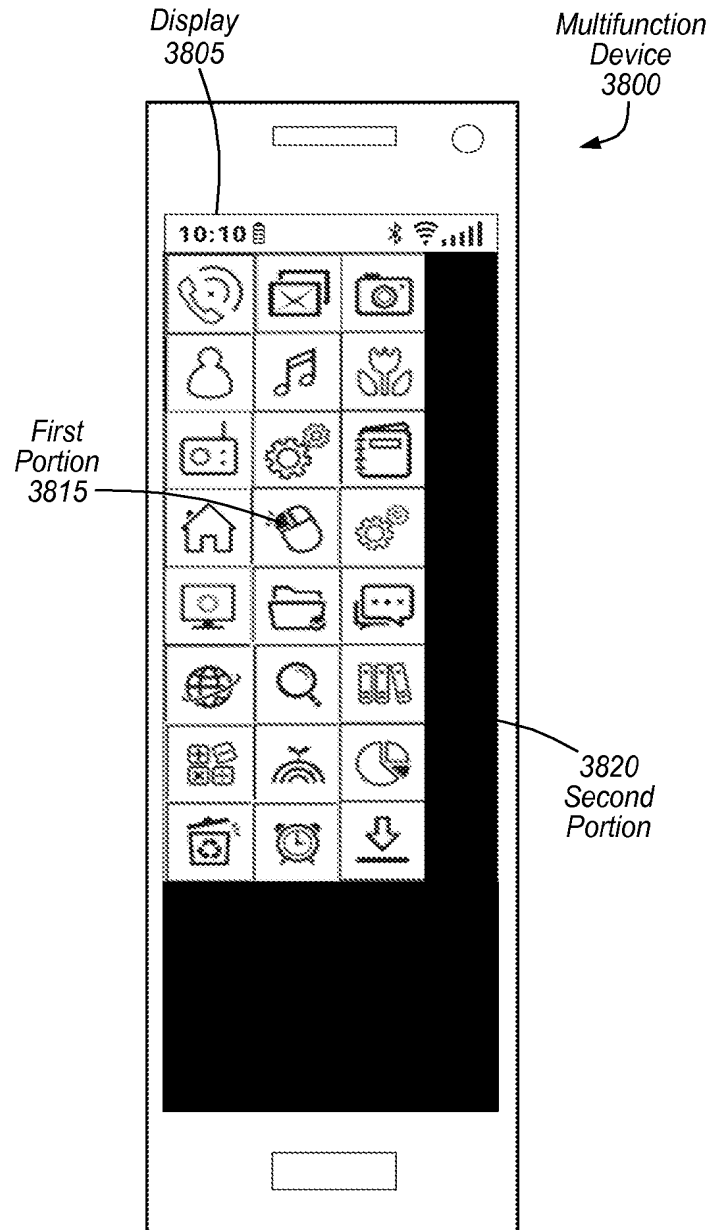


FIG. 38

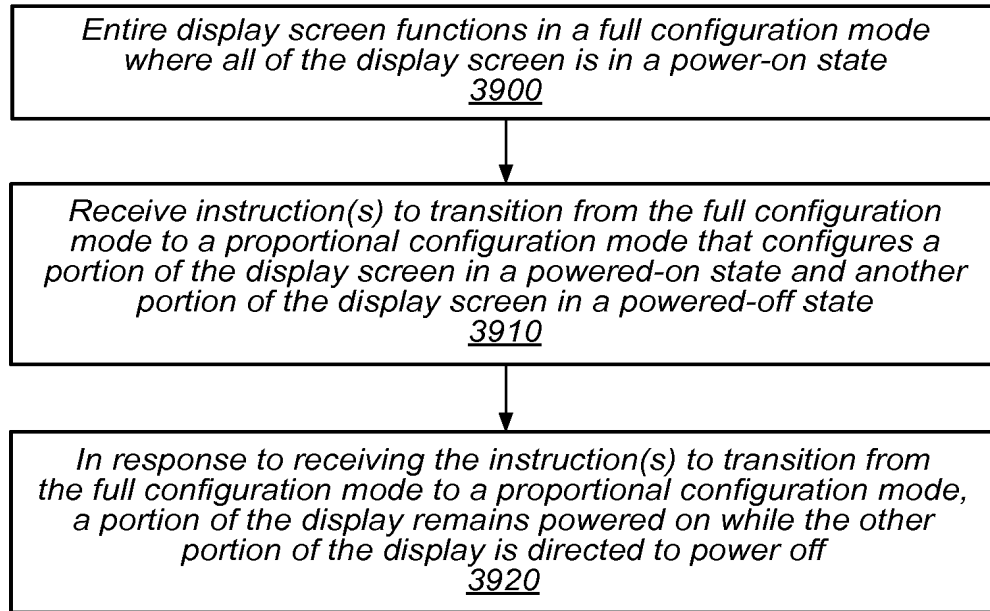


FIG. 39



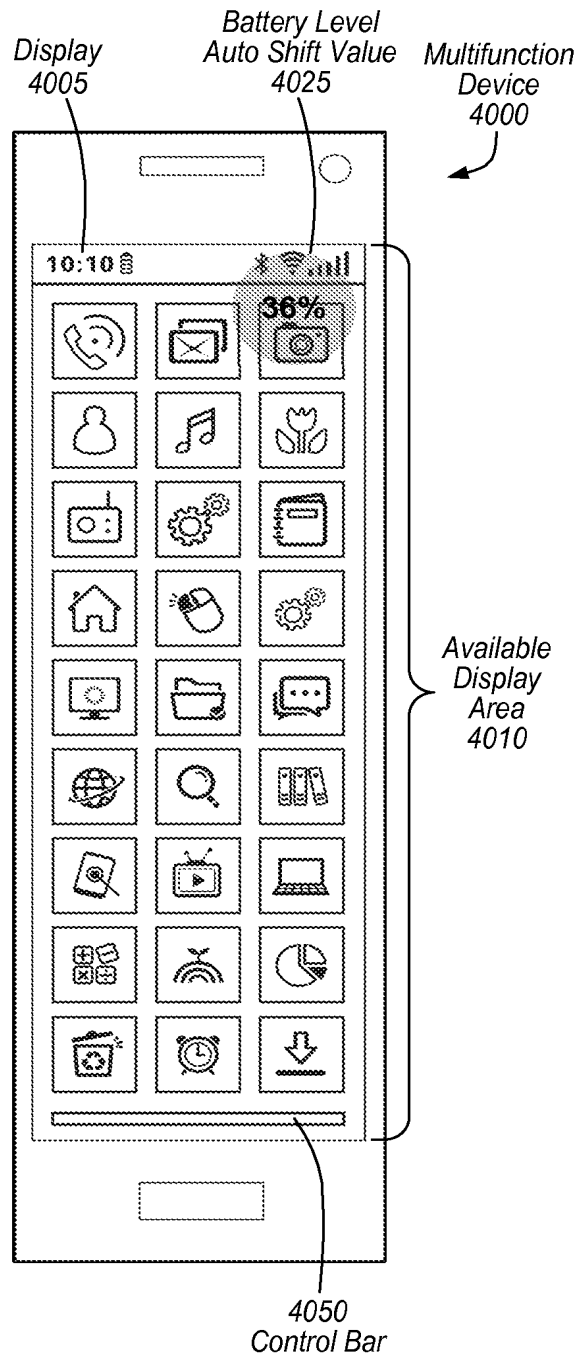


FIG. 40

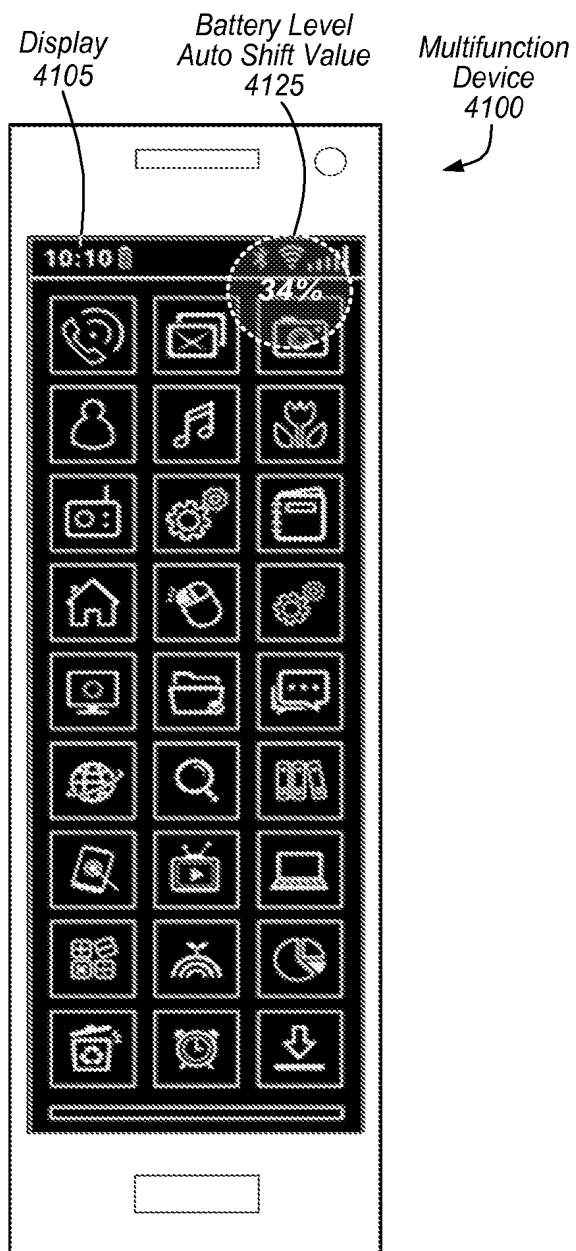


FIG. 41

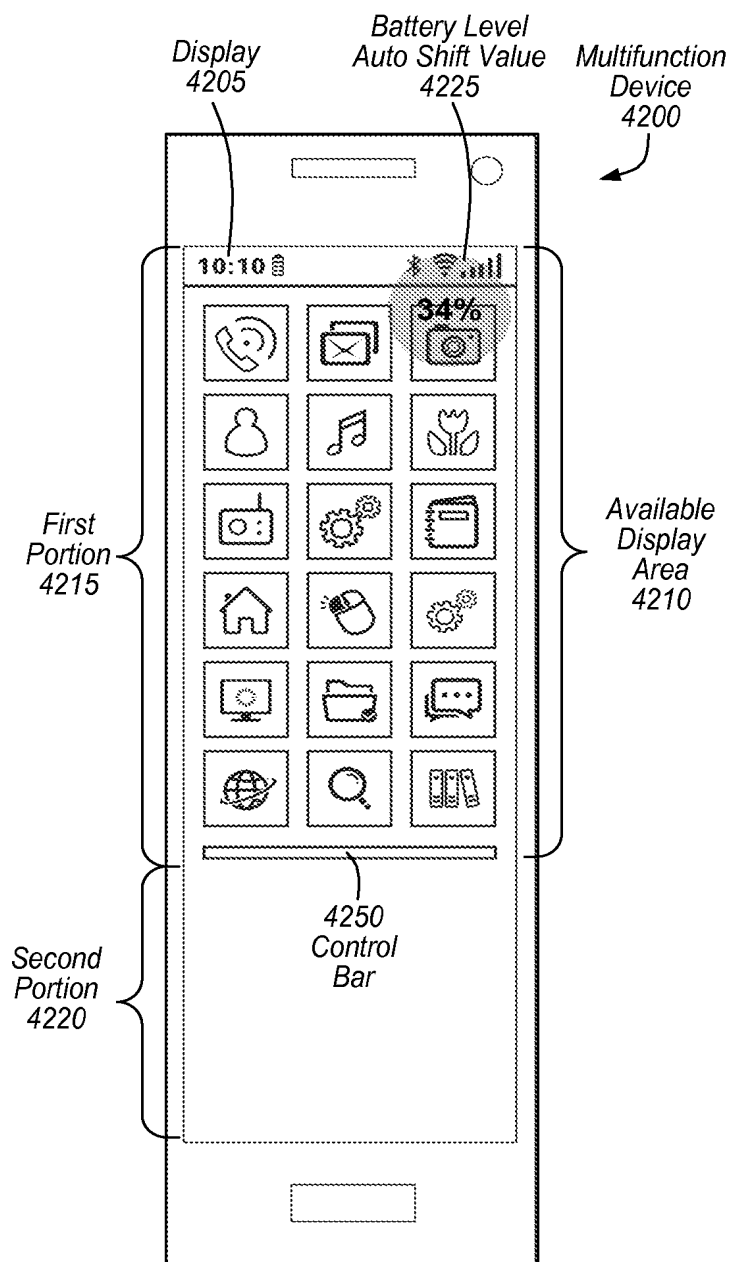


FIG. 42

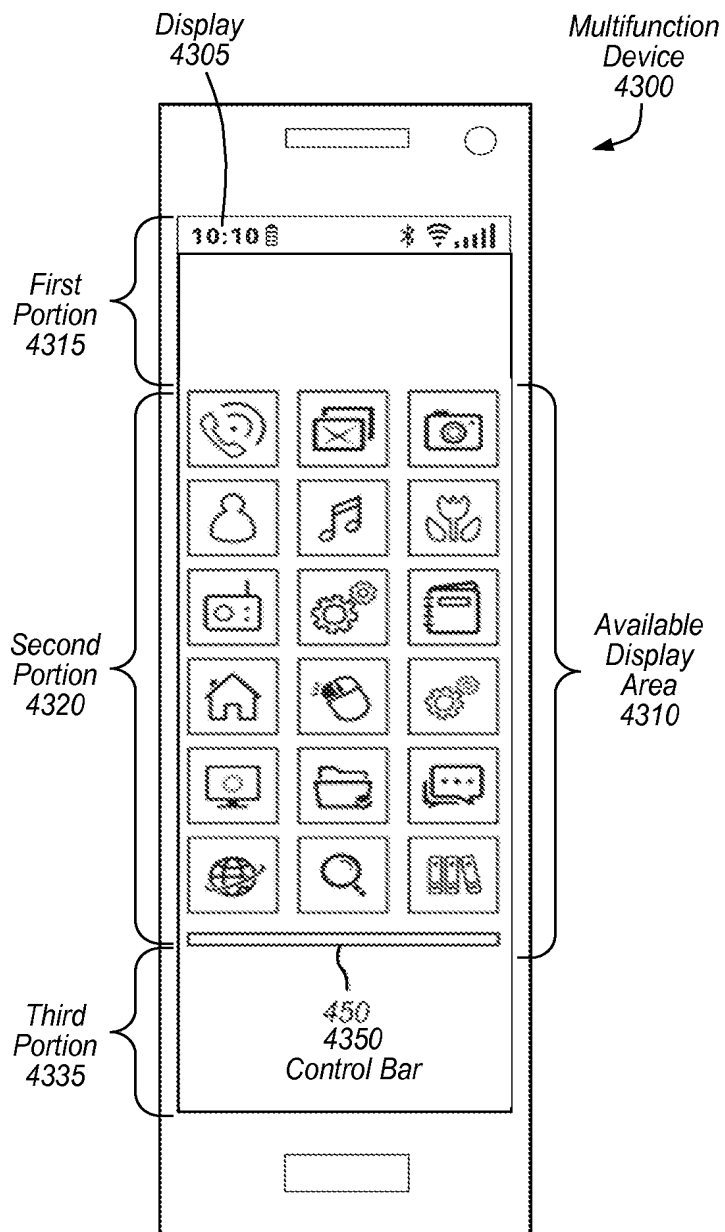


FIG. 43

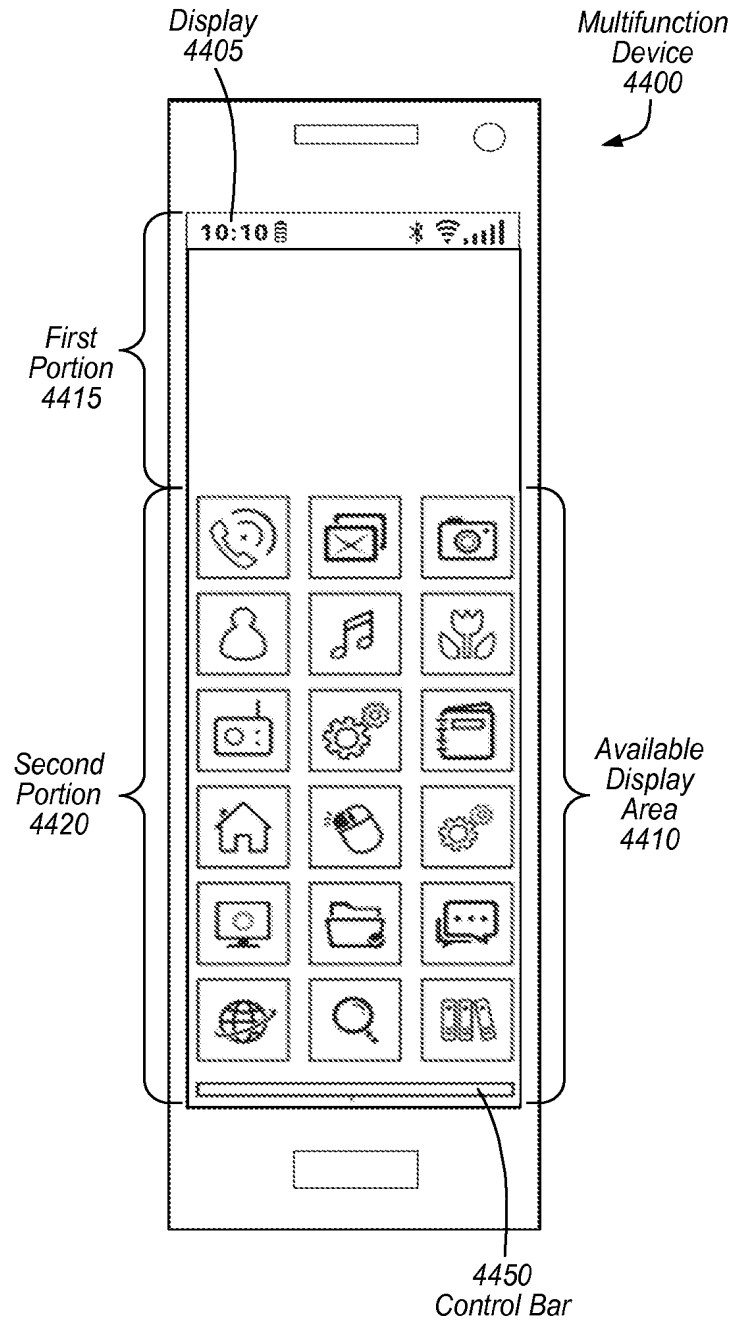


FIG. 44

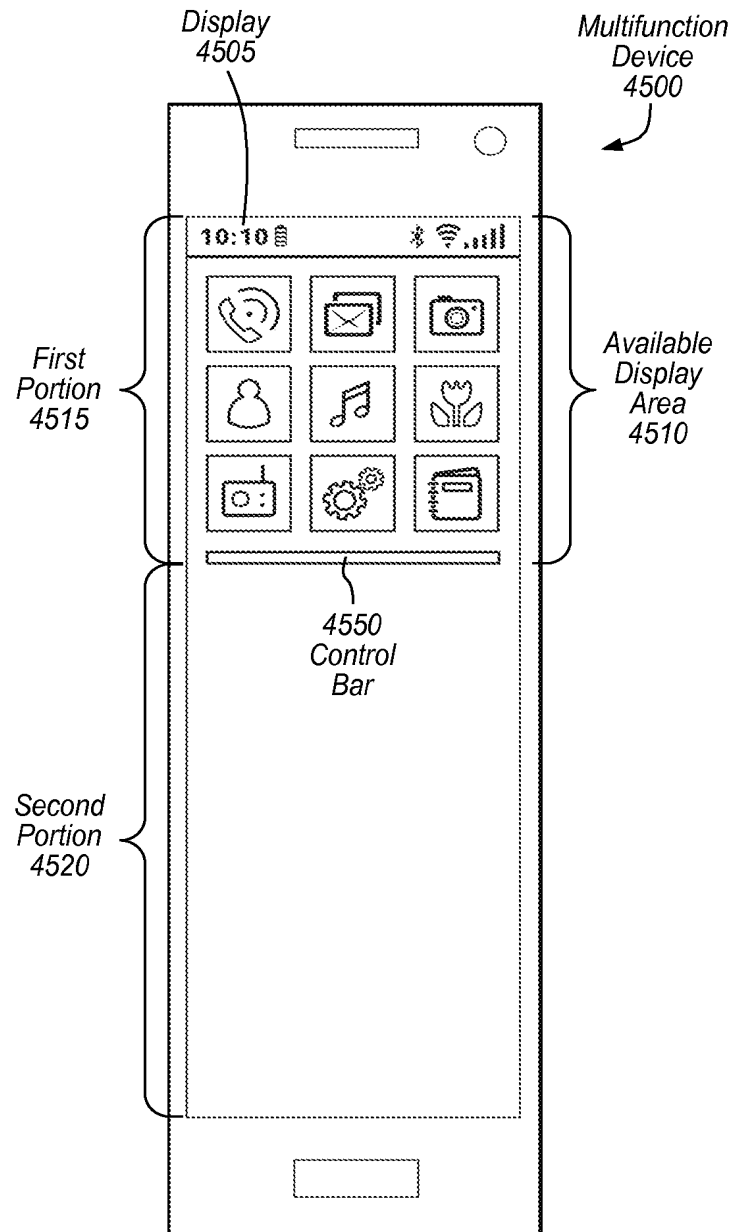


FIG. 45

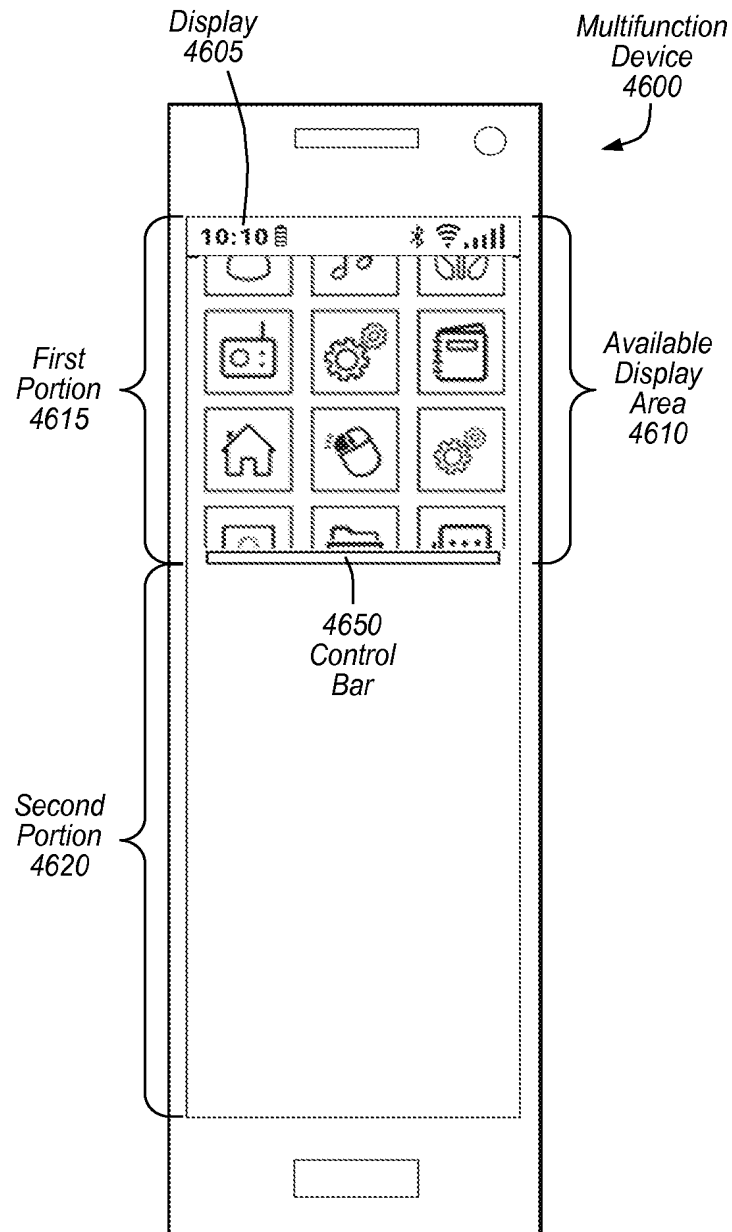


FIG. 46

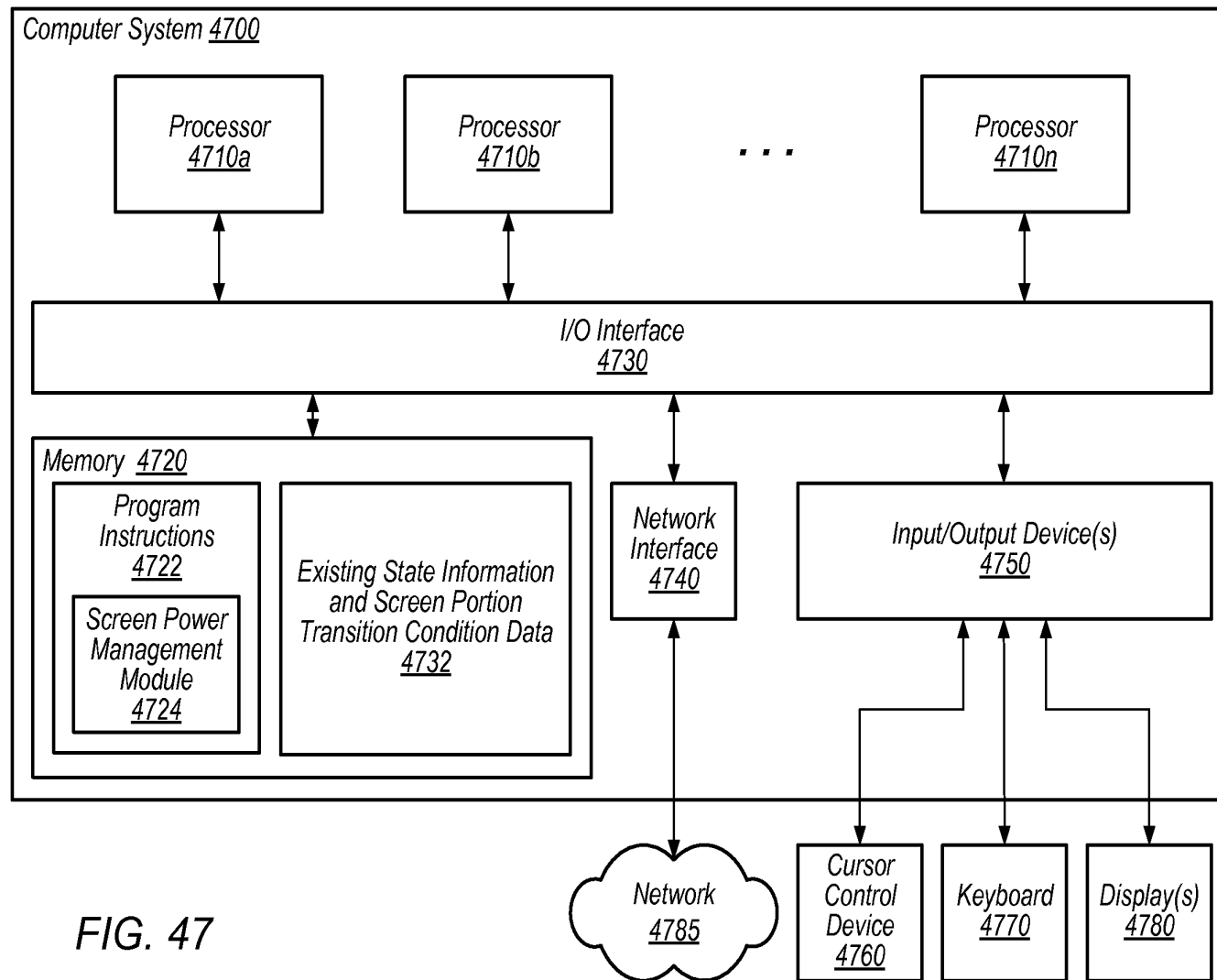


FIG. 47

47 / 47



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<b>Application Data Sheet 37 CFR 1.76</b>		Attorney Docket Number	6755-00105
		Application Number	
Title of Invention	SYSTEM AND METHOD FOR MANAGING DISPLAY POWER CONSUMPTION		
<p>The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76.</p> <p>This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.</p>			

## Secrecy Order 37 CFR 5.2

<input type="checkbox"/>	Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)
--------------------------	---

## Inventor Information:

<b>Inventor 1</b>					<b>Remove</b>
<b>Legal Name</b>					
<b>Prefix</b>	<b>Given Name</b>	<b>Middle Name</b>	<b>Family Name</b>	<b>Suffix</b>	
	Jinrong		Yang		
<b>Residence Information (Select One)</b> <input type="radio"/> US Residency <input checked="" type="radio"/> Non US Residency <input type="radio"/> Active US Military Service					
<b>City</b>	Shanghai	<b>Country of Residence i</b>	CN		

### Mailing Address of Inventor:

<b>Address 1</b>	Rm1502, Gate1228, NO, 1288 Xinsong Road				
<b>Address 2</b>					
<b>City</b>	Shanghai	<b>State/Province</b>			
<b>Postal Code</b>	2016	<b>Country i</b>	CN		

<b>Inventor 2</b>					<b>Remove</b>
<b>Legal Name</b>					
<b>Prefix</b>	<b>Given Name</b>	<b>Middle Name</b>	<b>Family Name</b>	<b>Suffix</b>	
	Ramzi	Khalil	Maalouf		
<b>Residence Information (Select One)</b> <input checked="" type="radio"/> US Residency <input type="radio"/> Non US Residency <input type="radio"/> Active US Military Service					
<b>City</b>	Chevy Chase	<b>State/Province</b>	MD	<b>Country of Residence i</b>	US

### Mailing Address of Inventor:

<b>Address 1</b>	4850 Langdrum Lane				
<b>Address 2</b>					
<b>City</b>	Chevy Chase	<b>State/Province</b>	MD		
<b>Postal Code</b>	20815	<b>Country i</b>	US		

All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the **Add** button.

**Add**

## Correspondence Information:

<b>Application Data Sheet 37 CFR 1.76</b>		Attorney Docket Number	6755-00105
		Application Number	
Title of Invention	SYSTEM AND METHOD FOR MANAGING DISPLAY POWER CONSUMPTION		

Enter either Customer Number or complete the Correspondence Information section below.  
For further information see 37 CFR 1.33(a).

☐ An Address is being provided for the correspondence information of this application.

Customer Number	35690		
Email Address		<input type="button" value="Add Email"/>	<input type="button" value="Remove Email"/>

## Application Information:

Title of the Invention	SYSTEM AND METHOD FOR MANAGING DISPLAY POWER CONSUMPTION		
Attorney Docket Number	6755-00105	Small Entity Status Claimed	<input checked="" type="checkbox"/>
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	47	Suggested Figure for Publication (if any)	

## Filing By Reference :

Only complete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country

## Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

☐ **Request Not to Publish.** I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application **has not and will not** be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

## Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32). Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.

Please Select One:	<input checked="" type="radio"/> Customer Number	<input type="radio"/> US Patent Practitioner	<input type="radio"/> Limited Recognition (37 CFR 11.9)
Customer Number	35690		

<b>Application Data Sheet 37 CFR 1.76</b>		Attorney Docket Number	6755-00105
		Application Number	
Title of Invention	SYSTEM AND METHOD FOR MANAGING DISPLAY POWER CONSUMPTION		

## Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, or 365(c) or indicate National Stage entry from a PCT application. Providing this information in the application data sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.

When referring to the current application, please leave the application number blank.

Prior Application Status	Pending	<a href="#">Remove</a>			
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)		
	Continuation in part of	14058731	2013-10-21		
Prior Application Status	Patented	<a href="#">Remove</a>			
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
14058731	Continuation of	13905064	2013-05-29	8593427	2013-11-26
Prior Application Status	Pending	<a href="#">Remove</a>			
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)		
13905064	Claims benefit of provisional	61822267	2013-05-10		
Prior Application Status	Pending	<a href="#">Remove</a>			
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)		
13905064	Claims benefit of provisional	61826673	2013-05-23		
Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the <b>Add</b> button.					<a href="#">Add</a>

## Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55(d). When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX) the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(h)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

<a href="#">Remove</a>			
Application Number	Country <sup>i</sup>	Filing Date (YYYY-MM-DD)	Access Code <sup>i</sup> (if applicable)
Additional Foreign Priority Data may be generated within this form by selecting the <b>Add</b> button.			<a href="#">Add</a>

<b>Application Data Sheet 37 CFR 1.76</b>		Attorney Docket Number	6755-00105
		Application Number	
Title of Invention	SYSTEM AND METHOD FOR MANAGING DISPLAY POWER CONSUMPTION		

## Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

<p>This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013.</p> <p><input type="checkbox"/> NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.</p>
--

## Authorization to Permit Access:

<input checked="" type="checkbox"/> Authorization to Permit Access to the Instant Application by the Participating Offices
<p>If checked, the undersigned hereby grants the USPTO authority to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the World Intellectual Property Office (WIPO), and any other intellectual property offices in which a foreign application claiming priority to the instant patent application is filed access to the instant patent application. See 37 CFR 1.14(c) and (h). This box should not be checked if the applicant does not wish the EPO, JPO, KIPO, WIPO, or other intellectual property office in which a foreign application claiming priority to the instant patent application is filed to have access to the instant patent application.</p> <p>In accordance with 37 CFR 1.14(h)(3), access will be provided to a copy of the instant patent application with respect to: 1) the instant patent application-as-filed; 2) any foreign application to which the instant patent application claims priority under 35 U.S.C. 119(a)-(d) if a copy of the foreign application that satisfies the certified copy requirement of 37 CFR 1.55 has been filed in the instant patent application; and 3) any U.S. application-as-filed from which benefit is sought in the instant patent application.</p> <p>In accordance with 37 CFR 1.14(c), access may be provided to information concerning the date of filing this Authorization.</p>

## Applicant Information:

<p>Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.</p>
--

<b>Application Data Sheet 37 CFR 1.76</b>		Attorney Docket Number	6755-00105
		Application Number	
Title of Invention	SYSTEM AND METHOD FOR MANAGING DISPLAY POWER CONSUMPTION		

<b>Applicant 1</b>			<a href="#">Remove</a>
<p>If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.</p>			
<a href="#">Clear</a>			
<input checked="" type="radio"/> Assignee	<input type="radio"/> Legal Representative under 35 U.S.C. 117	<input type="radio"/> Joint Inventor	
<input type="radio"/> Person to whom the inventor is obligated to assign.		<input type="radio"/> Person who shows sufficient proprietary interest	
If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:			
Name of the Deceased or Legally Incapacitated Inventor :			
If the Applicant is an Organization check here. <input type="checkbox"/>			

Prefix	Given Name	Middle Name	Family Name	Suffix
<b>Mailing Address Information:</b>				
Address 1				
Address 2				
City		State/Province		
Country i		Postal Code		
Phone Number		Fax Number		
Email Address				
Additional Applicant Data may be generated within this form by selecting the Add button. <a href="#">Add</a>				

## Assignee Information including Non-Applicant Assignee Information:

<p>Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.</p>
<b>Assignee 1</b>
<p>Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication. An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication.</p>
<a href="#">Remove</a>

<b>Application Data Sheet 37 CFR 1.76</b>		Attorney Docket Number	6755-00105
		Application Number	
Title of Invention	SYSTEM AND METHOD FOR MANAGING DISPLAY POWER CONSUMPTION		

If the Assignee or Non-Applicant Assignee is an Organization check here.	<input type="checkbox"/>
--	--------------------------

Prefix	Given Name	Middle Name	Family Name	Suffix

**Mailing Address Information For Assignee including Non-Applicant Assignee:**

Address 1				
Address 2				
City		State/Province		
Country i		Postal Code		
Phone Number		Fax Number		
Email Address				

Additional Assignee or Non-Applicant Assignee Data may be generated within this form by selecting the Add button.

**Signature:**


NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications

Signature	/Stephen A. Mason/		Date (YYYY-MM-DD)	2014-04-21
First Name	Stephen	Last Name	Mason	Registration Number
			64303	

Additional Signature may be generated within this form by selecting the Add button.

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

## Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

## TRANSMITTAL FOR POWER OF ATTORNEY TO ONE OR MORE REGISTERED PRACTITIONERS

**NOTE:** This form is to be submitted with the Power of Attorney by Applicant form (PTO/AIA/82B or equivalent) to identify the application to which the Power of Attorney is directed, in accordance with 37 CFR 1.5. If the Power of Attorney by Applicant form is not accompanied by this transmittal form or an equivalent, the Power of Attorney will not be recognized in the application.

Application Number	
Filing Date	April 21, 2014
First Named Inventor	Jinrong Yang
Title	SYSTEM AND METHOD FOR MANAGING DISPLAY POWER CONSUMPTION
Art Unit	
Examiner Name	
Attorney Docket Number	6755-00105

### SIGNATURE of Applicant or Patent Practitioner

Signature	/Stephen A. Mason/	Date	April 21, 2014
Name	Stephen A. Mason	Telephone	512-853-8800
Registration Number	64,303		

**NOTE:** This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications.

☐ \*Total of \_\_\_\_\_ forms are submitted.

This collection of information is required by 37 CFR 1.31, 1.32 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

*If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.*



**POWER OF ATTORNEY BY APPLICANT**

I hereby revoke all previous powers of attorney given in the application identified in the attached transmittal letter.

- ☒ I hereby appoint Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the application referenced in the attached transmittal letter (form PTO/AIA/82A or equivalent):

35690

OR

- ☐ I hereby appoint Practitioner(s) named below as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the application referenced in the attached transmittal letter (form PTO/AIA/82A or equivalent):

Name	Registration Number	Name	Registration Number

Please recognize or change the correspondence address for the application identified in the attached transmittal letter to:

- ☒ The address associated with the above-mentioned Customer Number.

OR

- ☐ The address associated with Customer Number:

35690

OR

☐ Firm or  
Individual Name

Address

City

State

Zip

Country

Telephone

Email

I am the Applicant:

- ☒ Inventor or Joint Inventor
- ☐ Legal Representative of a Deceased or Legally Incapacitated Inventor
- ☐ Assignee or Person to Whom the Inventor is Under an Obligation to Assign
- ☐ Person Who Otherwise Shows Sufficient Proprietary Interest (e.g., a petition under 37 CFR 1.46(b)(2) was granted in the application or is concurrently being filed with this document)

**SIGNATURE of Applicant for Patent**

Signature

Jinrong Yang

Date

May 24, 2013

Name

JINRONG YANG

Telephone

+86-139-01722940

Title and Company

**NOTE:** Signature - This form must be signed by the applicant in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. Submit multiple forms for more than one signature, see below.

- ☒ \*Total of 2 forms are submitted

This collection of information is required by 37 CFR 1.31, 1.32 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 123 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

**POWER OF ATTORNEY BY APPLICANT**

I hereby revoke all previous powers of attorney given in the application identified in the attached transmittal letter.

- ☒ I hereby appoint Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the application referenced in the attached transmittal letter (form PTO/AIA/82A or equivalent):

**35690****OR**

- ☐ I hereby appoint Practitioner(s) named below as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the application referenced in the attached transmittal letter (form PTO/AIA/82A or equivalent):

Name	Registration Number	Name	Registration Number

Please recognize or change the correspondence address for the application identified in the attached transmittal letter to:

- ☒ The address associated with the above-mentioned Customer Number.

**OR**

- ☐ The address associated with Customer Number:

**35690****OR**

☐ Firm or  
Individual Name

Address

City

State

Zip

Country

Telephone

Email

I am the Applicant:

- ☒ Inventor or Joint Inventor
- ☐ Legal Representative of a Deceased or Legally Incapacitated Inventor
- ☐ Assignee or Person to Whom the Inventor is Under an Obligation to Assign
- ☐ Person Who Otherwise Shows Sufficient Proprietary Interest (e.g., a petition under 37 CFR 1.46(b)(2) was granted in the application or is concurrently being filed with this document)

**SIGNATURE of Applicant for Patent**

Signature

Date

May 24, 2013

Name

RAMZI KHALIL MAALOUF

Telephone

+1-301-6372434

Title and Company

NOTE: Signature - This form must be signed by the applicant in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. Submit multiple forms for more than one signature, see below \*.

- ☒ \*Total of 2 forms are submitted.

This collection of information is required by 37 CFR 1.31, 1.32 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing this form, call 1-800-PTO-9199 and select option 2.

Electronic Patent Application Fee Transmittal				
Application Number:				
Filing Date:				
Title of Invention:		SYSTEM AND METHOD FOR MANAGING DISPLAY POWER CONSUMPTION		
First Named Inventor/Applicant Name:		Jinrong Yang		
Filer:		Stephen Anthony Mason/Dena Poudrier		
Attorney Docket Number:		6755-00105		
Filed as Small Entity				
Track I Prioritized Examination - Nonprovisional Application under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Utility filing Fee (Electronic filing)	4011	1	70	70
Utility Search Fee	2111	1	300	300
Utility Examination Fee	2311	1	360	360
Request for Prioritized Examination	2817	1	2000	2000
Pages:				
Claims:				
Miscellaneous-Filing:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Publ. Fee- Early, Voluntary, or Normal	1504	1	0	0
PROCESSING FEE, EXCEPT PROV. APPLS.	2830	1	70	70
<b>Petition:</b>				
<b>Patent-Appeals-and-Interference:</b>				
<b>Post-Allowance-and-Post-Issuance:</b>				
<b>Extension-of-Time:</b>				
<b>Miscellaneous:</b>				
<b>Total in USD (\$)</b>				<b>2800</b>

## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	18815102
<b>Application Number:</b>	14257888
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	6790
<b>Title of Invention:</b>	SYSTEM AND METHOD FOR MANAGING DISPLAY POWER CONSUMPTION
<b>First Named Inventor/Applicant Name:</b>	Jinrong Yang
<b>Customer Number:</b>	35690
<b>Filer:</b>	Stephen Anthony Mason/Dena Poudrier
<b>Filer Authorized By:</b>	Stephen Anthony Mason
<b>Attorney Docket Number:</b>	6755-00105
<b>Receipt Date:</b>	21-APR-2014
<b>Filing Date:</b>	
<b>Time Stamp:</b>	19:37:40
<b>Application Type:</b>	Utility under 35 USC 111(a)

### Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$2800
RAM confirmation Number	5666
Deposit Account	501505
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)

## File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	TrackOne Request	Prioritized-Exam.pdf	156692 e914d6076e0af7e6a03214adf649dd24ed807778	no	2

### Warnings:

### Information:

2		6755-00105-Application.pdf	264952 04879dc8387f391a93b84e9b125e494354eb7c71	yes	74
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### Multipart Description/PDF files in .zip description

Document Description	Start	End
Specification	1	68
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### Warnings:

### Information:

3	Oath or Declaration filed	6755-00105-Dec-Ram.pdf	723196 51a39eb406073a54386b6edb360da8d57560f4dd	no	1
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### Warnings:

### Information:

4	Oath or Declaration filed	6755-00105-Dec-Yang.pdf	2065393 7e03650799146a3e51e3edd53aa6d72e99ade8b2	no	1
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### Warnings:

### Information:

5	Drawings-only black and white line drawings	6755-00105-Formal-Drawings.pdf	4427182 86cf27d05652eb16ff1876d0b77b4dcfa53b2c11	no	47
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### Warnings:

### Information:

6	Application Data Sheet	Application-Data-Sheet.pdf	1561125 6ac86822e2ec225104b9e351cd6f7a918670d7a	no	7
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### Warnings:

### Information:

7	Power of Attorney	POA.pdf	2449213	no	3
			817b9f91c7748d5271af32e1175ac69ab9438c9a		
Warnings:					
Information:					
8	Fee Worksheet (SB06)	fee-info.pdf	40380	no	2
			f9c153f010ad1083f9754fcc3f0e4ff35e38d431		
Warnings:					
Information:					
Total Files Size (in bytes):			11688133		
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Application Number: 14257888

Document Date: 04/21/2014

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