#### Application Number Information

Examiner Number: 79020 / WOOD, WILLIAM Application Number: 90/011098 Assignments Filing or 371(c) Date: 07/16/2010 eDan Group Art Unit: 3992 Class/Subclass: 434/307.00A Effective Date: 07/16/2010 Application Received: 07/16/2010 Lost Case: NO Patent Number: Interference Number: Issue Date: 00/00/0000 Unmatched Petition: NO Date of Abandonment: 00/00/0000 L&R Code: Secrecy Code: Attorney Docket Number: SCEA.146736 Third Level Review: NO Status: 420 /REEXAM TERMINATED - REQUEST DENIED IN GROUP Confirmation Number: 4621 Oral Hearing: NO Title of Invention: INTERACTIVE COMMUNICATION SYSTEM FOR COMMUNICATING VIDEO GAME AND KARAOKE SOFTWARE

PALM Location Bar Code Location Date Charge to Loc Charge to Name Employee Name Location Appln Info Contents Petition Info Atty/Agent Info Continuity/Reexam Foreign Data Inventors Address Fees Post Info Pre Grant Pub Search Another: Application # Search or Patent# Search Search Search **PCT** /<sup>1</sup> \_/\_ or PG PUBS # Search Attorney Docket # Search Bar Code #

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http://EXPOWEB1:8001/cgi-bin/expo/GenInfo/snquery.pl?APPL\_ID=90011098

Froceedings Concluded

S. C. S.

IFW Madras

Secrecy Order: NO

Status Date: 02/02/2011

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## Content Information for 90/011098

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02/02/2011 420	RXTERM	REEXAMINATION TERMINATED				
10/14/2010 416	RXREXD	DETERMINATION REEXAM DENIED				
10/19/2010	NRX.	NOTICE OF REEXAM PUBLISHED IN OFFICIAL GAZETTE				
08/03/2010	RXLITSR	REEXAM LITIGATION SEARCH CONDUCTED				
08/02/2010 412	DOCK	CASE DOCKETED TO EXAMINER IN GAU				
07/30/2010 410	RXPCOM	COMPLETION OF PREPROCESSING - RELEASED TO ASSIGNED GAU				
08/02/2010	RXNREQAU	NOTICE OF ASSIGNMENT OF REEXAMINATION REQUEST				
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	ed States Patent an		UNITED STATES DEPAR United States Patent and Address: COMMISSIONER F P. Do Box 1450 Alexandria, Virginia 223 www.uspto.gov	Trademark Office OR PATENTS
APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
90/011,098	07/16/2010	6193520	SCEA.146736	4621
164 75	90 10/14/2010		EXAM	INER
312 SOUTH TH	& LANGE BUILDING		ART UNIT	PAPER NUMBER
MINNEAPOLI	S, MN 55415-1002		DATE MAILED: 10/14/2010	0

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

#### UNITED STATES PATENT AND TRADEMARK OFFICE



Commissioner for Patents United States Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450 www.uspro.gov

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(THIRD PARTY REQUESTER'S CORRESPONDENCE ADDRESS)

Shook, Hardy & Bacon LLP Intellectual Property Department 2555 Grand Blvd. Kansas City, MO 64108-2613 OCT 1 4 2010 CENTRAL REEXAMINATION UNIT

## **EX PARTE REEXAMINATION COMMUNICATION TRANSMITTAL FORM**

REEXAMINATION CONTROL NO. 90/011,098.

PATENT NO. <u>6193520</u>.

ART UNIT <u>3992</u>.

Enclosed is a copy of the latest communication from the United States Patent and Trademark Office in the above identified *ex parte* reexamination proceeding (37 CFR 1.550(f)).

Where this copy is supplied after the reply by requester, 37 CFR 1.535, or the time for filing a reply has passed, no submission on behalf of the *ex parte* reexamination requester will be acknowledged or considered (37 CFR 1.550(g)).

		Control No.	Patent Under Re	examination
		90/011,098	6193520	
Order Granting / Denying Req		Examiner	Art Unit	
Ex Parte Reexamination	on in the second se			
		WILLIAM H. WOOD	3992	
The MAILING DATE of this comm	nunication app	ears on the cover sheet v	with the correspondend	ce address
The request for <i>ex parte</i> reexamir been made. An identification of the determination are attached.				
Attachments: a) PTO-892,	b) 🗍 🏼 Р	ГO/SB/08, c)∏ O	ther:	
1. The request for <i>ex parte</i> ree	examination is	S GRANTED.		
RESPONSE TIMES A	RE SET AS	FOLLOWS:		
	For Patent Owner's Statement (Optional): TWO MONTHS from the mailing date of this communication (37 CFR 1.530 (b)). EXTENSIONS OF TIME ARE GOVERNED BY 37 CFR 1.550(c).			
For Requester's Reply (optional): TWO MONTHS from the <b>date of service</b> of any timely filed Patent Owner's Statement (37 CFR 1.535). <b>NO EXTENSION OF THIS TIME PERIOD IS PERMITTED.</b> If Patent Owner does not file a timely statement under 37 CFR 1.530(b), then no reply by requester is permitted.				
2. 🛛 The request for <i>ex parte</i> ree	examination is	B DENIED.		· .
This decision is not appealable (35 U.S.C. 303(c)). Requester may seek review by petition to the Commissioner under 37 CFR 1.181 within ONE MONTH from the mailing date of this communication (37 CFR 1.515(c)). EXTENSION OF TIME TO FILE SUCH A PETITION UNDER 37 CFR 1.181 ARE AVAILABLE ONLY BY PETITION TO SUSPEND OR WAIVE THE REGULATIONS UNDER 37 CFR 1.183.				
In due course, a refund under 37	7 CFR 1.26 (	c) will be made to reque	ester:	
a) 🗌 by Treasury check or	, ,			
b) 🔲 by credit to Deposit Account No, or				
c) 🔀 by credit to a credit card account, unless otherwise notified (35 U.S.C. 303(c)).				
/William H. Wood/				
Examiner, Art Unit 3992				
CC: Requester ( if third party requester ) U.S. Patent and Trademark Office PTOL-471 (Rev. 08-06)	Office Action i	n <i>Ex Parte</i> Reexamination	Part of P	aper No. 20101012

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## DECISION ON REQUEST FOR REEXAMINATION

Reexamination (*Ex Parte*) has been requested by a third party for claims 1, 3, 10, 15, 17 and 22-38 of U.S. Patent 6,193,520 to Okamoto (herein *Okamoto*) which issued on 02/27/2001.

No substantial new question of patentability is raised by the request for reexamination (filed 07/16/2010) and prior art cited therein for the reasons set forth below.

## **Request Established References**

The request argues the following patents and/or printed publications provide teachings relevant to the patent claims requested for reexamination:

- a) Kaniwa (USPN 5,699,370), issued 12/16/1997, filed 02/17/1995. (herein *Kaniwa*)
- b) Tsumura (USPN 5,547,202), issued 08/20/1996, filed 12/30/1994. (herein *Tsumura*)
- c) Suzuki et al. (JP Laid-Open Patent Application 01-166218), published
   06/30/1989. (herein Suzuki)
- d) Sanbe (Japanese Patent Publication H04-32898), published 02/04/1992.
   (herein Sanbe)
- e) Thatcher et al. (USPN 5,083,271), issued 01/21/1992, filed 08/03/1988. (herein *Thatcher*)

f) Roskowski (USPN 5,624,316), issued 04/29/1997, filed 06/06/1994.
 (herein *Roskowski*)

## **Prosecution History Summary**

The Okamoto patent (U.S. Patent 6,193,520) issued from U.S. Application 09/109,784 which was filed on filed 07/02/1998 as a continuation in part of U.S. Application 08/642,560 (now U.S. Patent 5,775,995) filed 05/03/1996 as a division of U.S. Application 08/555,400 (now U.S. Patent 5,735,744) filed 11/09/1995 as a continuation in part of U.S. Application 08/232,862 (now U.S. Patent 5,489,103) filed 04/25/1994 and which claims foreign priority to 5-108303 filed 05/10/1993. The following is a summary of relevant portions of the prosecution history of application 09/109,784.

**Prosecution of 6,193,520 (09/109,784)**. Non-Final Office Action (05/09/2000): rejected some application claims under doctrine of double patenting over claims 1-3 of patent 5,775,995; and objected to some application claims as being allowable if rewritten in independent form. A Terminal Disclaimer was filed 08/04/2000. Notice of Allowance (08/25/2000) allowed all the application claims.

**Prosecution of 5,775,995 (08/642,560)**. Non-Final Office Action (02/26/1997) rejected the claims under 35 U.S.C. 112 and the doctrine of double patenting over claims 1-20 of copending Application 08/555,400. A Terminal Disclaimer was filed. Notice of Allowance (01/26/1998) allowed the three pending claims.

**Prosecution of 5,735,744 (08/555,400)**. Non-Final Office Action (04/04/1997) rejected the claims under 35 U.S.C. 112. Notice of Allowance (10/30/1997) allowed the three pending claims.

Prosecution of 5,489,103 (08/232,862). Non-Final Office Action (03/31/1995): rejected some of the claims under 35 U.S.C. 102(a) as being anticipated by Teshima (USPN 5,273,288); rejected some of the claims under 35 U.S.C. 102(b) as being anticipated by *Pearson* (USPN 5,018,726); and rejected some of the claims under 35 U.S.C. 103(a) as being unpatentable over Teshima or Pearson, either one taken in combination with *Tsumura* (USPN 5,250,747). Applicant's Response (06/22/1995): cancelled the pending claims and added new pending claims, including a limitation to a "charging means"; argued the claims recite a terminal device connected via communication lines to a host facility so that game data is transmitted from the host facility; argued the claims recite game data being deleted in a predetermined time after the game data was transmitted from the host facility to the terminal device (related to the limitation "interference means for interfering with the execution of said executing means by blocking"); argued Teshima disclosed game terminals communicating; argued in *Pearson* game data collected at a central controller; and argued *Tsumura* does not disclose deletion of data in a predetermined time period after the data was received from the host computer. Notice of Allowance (08/16/1995) allowed newly added pending claims.

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Reexamination Proceeding 90/009,524 was filed 08/17/2009 for patent 6,193,520 and reexamination ordered 11/14/2009.

Reexamination Proceeding 90/010,666 was filed 09/04/2009 for patent 6,193,520 and reexamination ordered 12/03/2009.

Reexamination Proceedings 90/009,524 and 90/010,666 were merged on 03/12/2010.

## Substantial New Question of the Request

The requester asserts a substantial new question of patentability with respect to issued claims 3, 10 and 17 of U.S. Patent 6,193,520 (*Okamoto*).

Since Requester did not request reexamination of claims 2, 4-9, 11-16 and 18-21 (as currently in effect) and did not assert the existence of a substantial new question of patentability (SNQ) for such claims (see 35 U.S.C. § 311 (b)(2); see also 37 CFR 1.915b and 1.923), such claims will not be reexamined. This legal issue was addressed in *Sony Computer Entertainment America Inc., et al. v. Jon W. Dudas*, Civil Action No. 1:05CV1447 (E.D. Va. May 22, 2006), Slip Copy, 2006 WL 1472462. The District Court upheld the Office's discretion to not reexamine claims in an *inter partes* reexamination proceeding other than those claims for which reexamination had specifically been requested. The Court stated:

"To be sure, a party may seek, and the PTO may grant, ... review of each and every claim of a patent. Moreover, while the PTO in its discretion may review claims for which ..... review was not requested, nothing in the statute compels it to do so. To ensure that the PTO considers a claim for ..... review,  $\S 311$  (b)(2)

> requires that the party seeking reexamination demonstrate why the PTO should reexamine each and every claim for which it seeks review. Here, it is undisputed that Sony did not seek review of every claim under the '213 and '333 patents. Accordingly, Sony cannot now claim that the PTO wrongly failed to reexamine claims for which Sony never requested review, and its argument that AIPA compels a contrary result is unpersuasive."

Only claims 3, 10 and 17 have been evaluated for this issue and only as the SNQ's

specify (addressed in the below analysis of the prior art). Note MPEP 2243, which

states:

"The Office's determination in both the order for reexamination and the examination stage of the reexamination will generally be limited solely to a review of the claim(s) for which reexamination was requested. If the requester was interested in having all of the claims reexamined, requester had the opportunity to include them in its request for reexamination. However, if the requester chose not to do so, those claim(s) for which reexamination was not requested will generally not be reexamined by the Office. It is further noted that 35 U.S.C. 302 requires that "[t]he request must set forth the pertinency and manner of applying cited prior art to every claim for which reexamination is requested." If the requester fails to apply the art to certain claims, then the requester is not statutorily entitled to reexamination of such claims."

Following is a discussion of the proposed substantial new questions:

## <u>SNQ 1</u>

The requester asserts a substantial new question of patentability is raised by

Tsumura as to claims 3, 10 and 17 of Okamoto.

Tsumura is seen to constitute teachings pertinent to the claim limitations

(Request: pages 3-4).

Tsumura is found to provide prior art teachings that would be considered

important to a reasonable examiner in evaluating the patentability of claims 3, 10 and 17

of Okamoto. However, these teachings are similar to the teachings presented in related

reexamination 90/009,524 and 90/010,666 (now merged). Further, the limitations of claims 3, 10 and 17 are addressed in the merged proceeding based in part on the previously mentioned teachings. Accordingly, *Tsumura* does not raise a substantial new question of patentability with respect to claims 3, 10 and 17.

## <u>SNQ 2-3</u>

Substantial new questions of patentability 2 and 3 are based on the same reasoning as substantial new question of patentability 1 (Request: page 4). For the same reasons discussed above, SNQ 2 and 3 do not raise a substantial new question of patentability with respect to claims 3, 10 and 17.

## <u>SNQ 4-7</u>

Amendments (claims 1 and 15 have been amended in a live reexamination proceeding) and/or new claims (claims 22-38 have been added in a live reexamination proceeding) presented in any copending reexamination or reissue proceeding for the patent to be reexamined will **NOT** (see MPEP § 2240, subsection II.) be considered nor commented upon when deciding a request for reexamination. Please see MPEP 2243.

## Important Reexamination Notices

## Extensions of Time

Extensions of time under 37 CFR 1.136(a) will not be permitted in these proceedings because the provisions of 37 CFR 1.136 apply only to "an applicant" and

not to parties in a reexamination proceeding. Additionally, 35 U.S.C. 305 requires that reexamination proceedings "will be conducted with special dispatch" (37 CFR 1.550(a)). Extension of time in *ex parte* reexamination proceedings are provided for in 37 CFR 1.550(c).

## Service of Papers

After filing of a request for ex parte reexamination by a third party requester, any document filed by either the patent owner or the third party requester must be served on the other party (or parties where-two or more third party requester proceedings are merged) in the reexamination proceeding in the manner provided in 37 CFR 1.248. The document must reflect service or the document may be refused consideration by the Office. See 37 CFR 1.550(f).

## Amendment To Reexamination Proceedings

Patent Owner is notified that any proposed amendment to the specification and/or claims in this reexamination proceeding must comply with 37 CFR 1.530(d)-(j), must be formally presented pursuant to 37 CFR 1.52(a) and (b), and must contain any fees required by 37 CFR 1.20(c). See MPEP 2250.

In order to ensure full consideration of any amendments, affidavits or declarations, or other documents as evidence of patentability, such documents must be submitted in response to the first Office Action on the merits (which does not result in a close of prosecution). Submissions after the second Office Action on the merits, which

is intended to be a final action, will be governed by the requirements of 37 CFR 1.116, after final rejection and 37 CFR 41.33 after appeal, which will be strictly enforced. See MPEP 2250 (IV) for examples to assist in the preparation of proper proposed amendments in reexamination proceedings.

## Litigation Reminder

The patent owner is reminded of the continuing responsibility under 37 CFR 1.565(a), to apprise the Office of any litigation activity, or other prior or concurrent proceeding, involving Patent No. 6,193,520 throughout the course of this reexamination proceeding. See MPEP §§ 2207, 2282 and 2286.

The patent owner is reminded of the continuing responsibility under 37 CFR 1.565(a) to apprise the Office of any litigation activity, or other prior or concurrent proceeding, involving Patent No. 6,193,520 throughout the course of this reexamination proceeding. The third party requester is also reminded of the ability to similarly apprise the Office of any such activity or proceeding throughout the course of this reexamination proceeding. See MPEP §§ 2207, 2282 and 2286.

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## Correspondence Information

All correspondence relating to this ex parte reexamination proceeding should be

directed:

- By Mail to: Mail Stop *Ex Parte* Reexam Central Reexamination Unit Commissioner for Patents United States Patent & Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450
- By FAX to: (571) 273-9900 Central Reexamination Unit
- By hand: Customer Service Window Randolph Building 401 Dulany Street Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the Reexamination Legal Advisor or Examiner, or as to the status of this proceeding should be directed to the Central Reexamination Unit at telephone number (571)272-7705.

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 form either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR systems, see <u>http://pair-direct.uspto.gov</u>. For questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/William H. Wood/ Primary Examiner, Art Unit 3992 October 12, 2010

Conferees:

/Sam Rimell/

Primary Examiner, Art Unit 3992

p. Frae

ERIC S. KEASEL CRU SPE-AU 3992

Reexamination	Application/Control No. 90/011,098	Applicant(s)/Patent Under Reexamination 6193520
	Certificate Date	Certificate Number

Requester	Correspondence Address:	Patent Owner	🛛 Third Party	
Intellectual P 2555 Grand E	& Bacon LLP operty Department Blvd. MO 64108-2613	,		,

	WW (examiner initials)	08/03/2010 (date)
ADC Technology Inc. U.S. District - Was 2:	ase Name v. Microsoft Corporation et al hington Western (Seattle) 08cv1579	Director Initials
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COPENDING OFFICE PROCEEDINGS			
TYPE OF PROCEEDING	NUMBER		
1. Reexamination USPN 6,193,520	90/010,666		
2. Reexamination USPN 6,193,520	90/009,524		
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U.S. Patent and Trademark Office

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DOC. CODE RXFILJKT

# Litigation Search Report CRU 3999

## Reexam Control No. 90/011,098

TO: Location: CRU Art Unit: 3992 Date: August 3, 2010 From: Patricia Martin Location: CRU 3999 MDW-7C55 Phone: (571) 272-7705

U.S. Patent Number: 6,193,520

## **Search Notes**

1) I performed a Key Cite Search in Westlaw, which retrieves all history on the patent including any litigation.

2) I performed a search in Lexis in the Federal Courts and Administrative Materials databases for any cases found.

3) I performed a search in Lexis in the IP Journal and Periodicals database for any articles on the patent.

4) I performed a search in Lexis in the news databases for any articles about the patent or any articles about litigation on this patent.

5) I performed a search on the patent in Lexis Court Link for any open dockets or closed cases.

Litigation was found involving:

2:08cv1579 - Open

Date of Printing: Aug 03, 2010

#### KEYCITE

#### C US PAT 6193520 INTERACTIVE COMMUNICATION SYSTEM FOR COMMUNICATING VIDEO GAME AND KARAOKE SOFTWARE, Assignee: Yugengaisha Adachi International (Feb 27, 2001) History

#### **Direct History**

=>

1 INTERACTIVE COMMUNICATION SYSTEM FOR COMMUNICATING VIDEO GAME AND KARAOKE SOFTWARE, US PAT 6193520, 2001 WL 187600 (U.S. PTO Utility Feb 27, 2001) (NO. 09/109784)

#### **Patent Family**

2 INTERACTIVE COMMUNICATION SYSTEM FOR VIDEO GAME AND KARAOKE SOFT-WARE - INCLUDES REQUEST TRANSMITTER SENDING IDENTIFYING INFORMATION TO HOST FACILITY TO PROVIDE CORRESP. GAME DATA AND CONTROL GAME DATA STORAGE, Derwent World Patents Legal 1995-056401

#### Assignments

3 ACTION: RE-RECORD TO CORRECT THE ASSIGNEE'S ADDRESS. DOCUMENT PREVI-OUSLY RECORDED ON REEL 011741 FRAME 0837. (ASSIGNOR HEREBY CONFIRMS THE ASSIGNMENT OF THE ENTIRE INTEREST.), (DATE RECORDED: Oct 03, 2002)

4 ACTION: ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DE-TAILS). NUMBER OF PAGES: 002, (DATE RECORDED: Apr 23, 2001)

5 ACTION: ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DE-TAILS). NUMBER OF PAGES: 002, (DATE RECORDED: Jul 02, 1998)

#### Patent Status Files

.. Request for Re-Examination, (OG DATE: Dec 08, 2009)

.. Request for Re-Examination, (OG DATE: Nov 02, 2009)

.. Certificate of Correction, (OG DATE: May 06, 2008)

.. Certificate of Correction, (OG DATE: Apr 15, 2008)

#### **Docket Summaries**

10 ADC TECHNOLOGY INC v. MICROSOFT CORPORATION ET AL, (W.D.WASH. Oct 27, 2008) (NO. 2:08CV01579), (35 USC 271 PATENT INFRINGEMENT)

#### Litigation Alert

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http://web2.westlaw.com/print/printstream.aspx?sv=Split&prft=HTMLE&fn=\_top&mt=Vpethorers=2x9&ph9.pe/gel@7

11 Derwent LitAlert P2009-04-27 (Oct 27, 2008) Action Taken: Complaint

#### Prior Art (Coverage Begins 1976)

- C 12 COMMUNICATION TERMINAL USED AS A GAME MACHINE, US PAT 5273288Assignee: Fujitsu Limited, (U.S. PTO Utility 1993)
- C 13 INTERACTIVE COMMUNICATION SYSTEM FOR COMMUNICATING VIDEO, US PAT 5775995 (U.S. PTO Utility 1998)
- C 14 INTERACTIVE GAME SYSTEM AND METHOD, US PAT 5018736Assignee: Wakeman & amp; deForrest Corporation, (U.S. PTO Utility 1991)

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- C 15 INTERACTIVE MEDIA SYSTEM AND TELECOMPUTING METHOD USING TELEPHONE KEYPAD SIGNALLING, US PAT 5236199 (U.S. PTO Utility 1993)
  - 16 KARAOKE MUSIC REPRODUCTION DEVICE, US PAT 5250747Assignee: Ricos Co., Ltd., (U.S. PTO Utility 1993)

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Search	- 10 Results - 6,193,520 or 619352	20	Page 1 of 2
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	software, Okamoto, Takeya, Nagoy (SEE DOCUMENT FOR DETAILS)., A	/a, Japan(JP); 733541, April 23, 200	mmunicating video game and karaoke 1, ASSIGNMENT OF ASSIGNORS INTEREST 24-CHOME, NAKA-KU, NAGOYA-SHIAICHI, a, Japan(JP)
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	counter, slave, tone, player, printer		memory, master, communication system, le, audio, sub-routine, stored, sound field, depicts
	Kaji et al., United States of Ame America (US),	rica (US), 463#42 <b>6193520</b> , Febru	ary 27, 2001, Okamoto, United States of
	software, Okamoto, Takeya, Nagoy (SEE DOCUMENT FOR DETAILS)., Y CHOME, NAKA-KUNAGOYA, 460-00 Japan(JP), April 23, 2001, ASSIGN TECHNOLOGY INC. 16-8, SAKE 4-C October 3, 2002, RE-RECORD TO C REEL 011741 FRAME 0837. (ASSIG	ra, Japan(JP); 109784, July 2, 1998, /UGENGAISHA ADACHI INTERNATIO 03, (1), reel-frame:009330/0641, Y MENT OF ASSIGNORS INTEREST (SE CHOME, NAKA-KU, NAGOYA-SHIAICH CORRECT THE ASSIGNEE'S ADDRESS NOR HEREBY CONFIRMS THE ASSIG	mmunicating video game and karaoke ASSIGNMENT OF ASSIGNORS INTEREST NAL NAGOYASENI BLDG., 9-27, NISHIKI 2- ugengaisha Adachi International, Nagoya, E DOCUMENT FOR DETAILS)., ADC II, 460-0008, (1), reel-frame:011741/0837; DOCUMENT PREVIOUSLY RECORDED ON SMMENT OF THE ENTIRE INTEREST.), ADC HI, 460-0008, (1), reel-frame:013343/0325

**CORE TERMS:** game, karaoke, communicator, host, player, time period, elapsed, terminal, stored, input, memory, transmission, video, storage, communication system, surcharge, video game, display, audio, song, displayed, cassette, warning, deleted, playing, screen, controller, calculated, software, progress

#### 6193520

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6. 20070060356 (Note: This is a Patent Application only.), March 15, 2007, Interactive communication system for communicating video game and karaoke software, Okamoto, Takeya, Naka-ku, Japan(JP); 598961, ADC TECHNOLOGY INC., Nahoya-shi, Japan(JP), Foreign company or corporation

CORE TERMS: game, karaoke, communicator, host, player, time period, elapsed, terminal, stored, input, memory, transmission, video, storage, communication system, surcharge, video game, display, audio, song, displayed, cassette, warning, deleted, playing, screen, calculated, software, progress, monitor

... No. 09109784, July 2, 1998, GRANTED PATENT 6193520, December 8, 2000, which is a Continuation-in-part of . . .

7. 20050170894 (Note: This is a Patent Application only.), August 4, 2005, Interactive communication system for communicating video game and karaoke software, Okamoto, Takeya, Nagoya, Japan(JP); 090420,

CORE TERMS: game, karaoke, communicator, host, player, time period, elapsed, terminal, stored, input, memory, transmission, video, storage, communication system, surcharge, video game, display, audio, song, displayed, cassette, warning, deleted, playing, screen, controller, calculated, software, progress

... No. 09109784, July 2, 1998, GRANTED PATENT 6193520, December 8, 2000, which is a Continuation-in-part of ...

8. 20030078097 (Note: This is a Patent Application only.), April 24, 2003, Interactive communication system for  $\Box$ communicating video game and karaoke software, Okamoto, Takeya, Nagoya, Japan(JP); 734469,

CORE TERMS: game, user, authorization, karaoke, communicator, host, player, broadcasting, time period, elapsed, stored, input, terminal, memory, transmission, station, video, decryption, storage, implemented, surcharge, display, communication system, video game, personal computer, deleted, audio, song, displayed, cassette

... No. 09109784, July 2, 1998, GRANTED PATENT 6193520 , which is a Continuation-in-part of Ser. No. 08642560,

9. 20030077557 (Note: This is a Patent Application only.), April 24, 2003, Interactive communication system for communicating video game and karaoke software, Okamoto, Takeya, Nagoya, Japan(JP); 307886,

**CORE TERMS:** game, karaoke, communicator, host, player, time period, elapsed, terminal, stored, input, memory, transmission, video, storage, communication system, surcharge, video game, display, audio, song, displayed, cassette, warning, deleted, playing, screen, controller, calculated, software, progress

... No. 09109784, July 2, 1998, GRANTED PATENT 6193520 , which is a Continuation-in-part of Ser. No. 08642560,

10. 20020127527 (Note: This is a Patent Application only.), September 12, 2002, Interactive communication system for communicating video game and karaoke software, Okamoto, Takeya, Nagoya, Japan(JP); 733541,

CORE TERMS: game, karaoke, communicator, host, player, time period, elapsed, terminal, stored, input, memory, transmission, video, storage, communication system, surcharge, video game, display, audio, song, displayed, cassette, warning, deleted, playing, screen, controller, calculated, software, progress

... No. 09109784, July 2, 1998, GRANTED PATENT 6193520 , which is a Continuation-in-part of Ser. No. 08642560, ...

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## **US District Court Civil Docket**

U.S. District - Washington Western (Seattle)

## 2:08cv1579

## Adc Technology Inc v. Microsoft Corporation et al

This case was retrieved from the court on Friday, July 30, 2010

Date Filed: 10/27/2008 Assigned To: Judge Ricardo S Martinez Referred To: Nature of suit: Patent (830) Cause: Patent Infringement Lead Docket: None Other Docket: None Jurisdiction: Federal Question Class Code: Closed: No Statute: 35:271 Jury Demand: Both Demand Amount: \$0 NOS Description: Patent

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Microsoft Corporation Defendant

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Philip P Mann [COR LD NTC] Mann Law Group Seattle Tower 1218 Third Avenue, Suite 1809 Seattle, WA 98101 USA 206-436-0900 Email: PHIL@MANNLAWGROUP.COM

Date	#	Proceeding Text
10/27/2008	1	COMPLAINT FOR PATENT INFRINGEMENT - DEMAND FOR JURY TRIAL against all defendants (Summons(es) issued)(Receipt # SEA 21477), filed by ADC Technology Inc. (Attachments: # 1 Exhibit A-C, # 2 Exhibit D-E, # 3 Civil Cover Sheet, # 4 Transmittal Email)(MKB) (Entered: 10/28/2008)
10/28/2008	2	REPORT on the filing or determination of an action. E-mailed to the US Patent Office. (Attachments: # 1 Copy of Complaint, # 2 Exhibit A-C of Complaint, # 3 Exhibit D-E of Complaint) (MKB) (Entered: 10/28/2008)
01/16/2009	3	MOTION to Dismiss Party Pursuant to Fed.R.Civ.P 41(a) by Plaintiff ADC Technology Inc. Noting Date 1/16/2009, (Whitaker, John) (Entered: 01/16/2009)
02/05/2009	4	ANSWER to 1 Complaint, with JURY DEMAND, COUNTERCLAIM against plaintiff ADC Technology Inc by Microsoft Corporation.(Carraway, J) (Entered: 02/05/2009)
02/06/2009	5	STATEMENT Microsoft Corporations Corporate Disclosure Statement by Defendant Microsoft Corporation. (Carraway, J) (Entered: 02/06/2009)
02/11/2009	6	APPLICATION OF ATTORNEY Matthew J. Brigham FOR LEAVE TO APPEAR PRO HAC VICE for Defendant Nintendo of America Inc (Fee Paid) Receipt No. 0981000000001669852. (Attachments: # 1 ECF Registration Form)(Kelly, Kevin) (Entered: 02/11/2009)
02/11/2009	7	APPLICATION OF ATTORNEY Thomas J. Friel, Jr. FOR LEAVE TO APPEAR PRO HAC VICE for Defendant Nintendo of America Inc (Fee Paid) Receipt No. 0981000000001669869. (Attachments: # 1 ECF Registration Form) (Kelly, Kevin) (Entered: 02/11/2009)
02/11/2009	8	APPLICATION OF ATTORNEY Timothy S. Teter FOR LEAVE TO APPEAR PRO HAC VICE for Defendant Nintendo of America Inc (Fee Paid) Receipt No. 0981000000001669879. (Attachments: # 1 ECF Registration Form)(Kelly, Kevin) (Entered: 02/11/2009)
02/11/2009	9	APPLICATION OF ATTORNEY Matthew P. Gubiotti FOR LEAVE TO APPEAR PRO HAC VICE for Defendant Nintendo of America Inc (Fee Paid) Receipt No. 0981000000001669882. (Attachments: # 1 ECF Registration Form) (Kelly, Kevin) (Entered: 02/11/2009)
02/12/2009	10	ORDER re 6 Application for Leave to Appear Pro Hac Vice. The Court ADMITS Attorney Matthew J Brigham for Nintendo of America Inc, by Bruce Rifkin. (No document associated with this docket entry, text only.)(DS) (Entered: 02/12/2009)
02/12/2009	11	ORDER re 7 Application for Leave to Appear Pro Hac Vice. The Court ADMITS Attorney Thomas J Friel for Nintendo of America Inc, by Bruce Rifkin. (No document associated with this docket entry, text only.)(DS) (Entered: 02/12/2009)
02/12/2009	12	ORDER re 8 Application for Leave to Appear Pro Hac Vice. The Court ADMITS Attorney Timothy S Teter for Nintendo of America Inc, by Bruce Rifkin. (No document associated with this docket entry, text only.)(DS)

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02/18/2009	14	APPLICATION OF ATTORNEY Abran J. Kean FOR LEAVE TO APPEAR PRO HAC VICE for Defendant Sony Computer Entertainment America Inc (Fee Paid) Receipt No. 0981000000001675098. (Attachments: # 1 ECF Registration)(Grady, Douglas) (Entered: 02/18/2009)
02/18/2009	15	STATEMENT Corporate Disclosure Statement by Defendant Nintendo of America Inc. (Brigham, Matthew) (Entered: 02/18/2009)
02/18/2009	16	APPLICATION OF ATTORNEY Eric A. Buresh FOR LEAVE TO APPEAR PRO HAC VICE for Defendant Sony Computer Entertainment America Inc (Fee Paid) Receipt No. 0981000000001675106. (Attachments: # 1 ECF Registration)(Grady, Douglas) (Entered: 02/18/2009)
02/18/2009	17	APPLICATION OF ATTORNEY Megan J. Redmond FOR LEAVE TO APPEAR PRO HAC VICE for Defendant Sony Computer Entertainment America Inc (Fee Paid) Receipt No. 0981000000001675134. (Attachments: # 1 ECF Registration)(Grady, Douglas) (Entered: 02/18/2009)
02/18/2009	18	ANSWER to 1 Complaint, for Patent Infringement, with JURY DEMAND, COUNTERCLAIM against plaintiff ADC Technology Inc by Nintendo of America Inc.(Brigham, Matthew) (Entered: 02/18/2009)
02/18/2009	19	ANSWER to 1 Complaint, with JURY DEMAND, COUNTERCLAIM against plaintiff ADC Technology Inc by Sony Computer Entertainment America Inc.(Grady, Douglas) (Entered: 02/18/2009)
02/19/2009	20	ORDER re 14 Application for Leave to Appear Pro Hac Vice. The Court ADMITS Attorney Abran J. Kean for Sony Computer Entertainment America Inc, by Bruce Rifkin. (No document associated with this docket entry, text only.)(DS) (Entered: 02/19/2009)
02/19/2009	21	ORDER re 16 Application for Leave to Appear Pro Hac Vice. The Court ADMITS Attorney Eric A Buresh for Sony Computer Entertainment America Inc, by Bruce Rifkin. (No document associated with this docket entry, text only.)(DS) (Entered: 02/19/2009)
02/19/2009	22	ORDER re 17 Application for Leave to Appear Pro Hac Vice. The Court ADMITS Attorney Megan J Redmond for Sony Computer Entertainment America Inc, by Bruce Rifkin. (No document associated with this docket entry, text only.)(DS) (Entered: 02/19/2009)
02/19/2009	23	APPLICATION OF ATTORNEY Joseph T. Jakubek FOR LEAVE TO APPEAR PRO HAC VICE for Defendant Microsoft Corporation (Fee Paid) Receipt No. 0981000000001676099. (Attachments: # 1 ECF Registration)(Carraway, J) (Entered: 02/19/2009)
02/19/2009	24	ORDER re 23 Application for Leave to Appear Pro Hac Vice. The Court ADMITS Attorney Joseph T Jakubek for Microsoft Corporation, by Bruce Rifkin. (No document associated with this docket entry, text only.)(DS) (Entered: 02/19/2009)
02/19/2009	25	APPLICATION OF ATTORNEY Salumeh R. Loesch FOR LEAVE TO APPEAR PRO HAC VICE for Defendant Microsoft Corporation (Fee Paid) Receipt No. 0981000000001676195. (Attachments: # 1 ECF Registration)(Carraway, J) (Entered: 02/19/2009)
02/19/2009	26	ORDER re 25 Application for Leave to Appear Pro Hac Vice. The Court ADMITS Attorney Salumeh R. Loesch for Microsoft Corporation, by Bruce Rifkin. (No document associated with this docket entry, text only.)(DS) (Entered: 02/19/2009)
02/19/2009	27	APPLICATION OF ATTORNEY Klaus H. Hamm FOR LEAVE TO APPEAR PRO HAC VICE for Defendant Microsoft Corporation (Fee Paid) Receipt No. 0981000000001676774. (Attachments: # 1 ECF Registration)(Carraway, J) (Entered: 02/19/2009)
02/20/2009	28	ORDER re 27 Application for Leave to Appear Pro Hac Vice. The Court ADMITS Attorney Klaus H Hamm for Microsoft Corporation, by Bruce Rifkin. (No document associated with this docket entry, text only.)(DS) (Entered: 02/20/2009)
02/20/2009	29	STATEMENT of Corporate Disclosure Statement by Defendant Sony Computer Entertainment America Inc. (Graham, Lawrence) (Entered: 02/20/2009)
02/23/2009	30	ORDER REGARDING INITIAL DISCLOSURES, JOINT STATUS REPORT AND EARLY SETTLEMENT by Judge Ricardo S Martinez. Joint Status Report due by 4/6/2009, FRCP 26f Conference Deadline is 3/23/2009, Initial Disclosure Deadline is 3/30/2009. (LC) (Entered: 02/23/2009)
02/25/2009	31	REPLY by Plaintiff ADC Technology Inc to 4 Answer to Complaint, Counterclaim of Defendant Microsoft . (Whitaker, John) (Entered: 02/25/2009)
02/25/2009	32	REPLY by Plaintiff ADC Technology Inc to 18 Answer to Complaint, Counterclaim of Defendant Nintendo . (Whitaker, John) (Entered: 02/25/2009)
02/25/2009	33	REPLY by Plaintiff ADC Technology Inc to 19 Answer to Complaint, Counterclaim of Defendant Sony . (Whitaker, John) (Entered: 02/25/2009)
03/06/2009	34	NOTICE of Appearance by attorney Lawrence D Graham on behalf of Defendant Sony Computer Entertainment America Inc. (Graham, Lawrence) (Entered: 03/06/2009)
03/23/2009	35	ORDER granting 3 Motion to dismiss dft Sony Corporation of America by Judge Ricardo S Martinez.(RS)

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		(Entered: 03/23/2009)
04/06/2009	36	JOINT STATUS REPORT signed by all parties estimated Trial Days: 10 (Whitaker, John) (Entered: 04/06/2009)
04/10/2009	37	NOTICE of Appearance by attorney Stacy Quan on behalf of Defendant Microsoft Corporation. (Quan, Stacy) (Entered: 04/10/2009)
04/10/2009	38	NOTICE of Appearance by attorney Christopher B Durbin Kevin Francis Kelly on behalf of Defendant Nintendo of America Inc, Counter Claimant Nintendo of America Inc. (Kelly, Kevin) Modified on 4/10/2009 (ELS). (Entered: 04/10/2009)
04/10/2009	39	NOTICE OF WITHDRAWAL OF COUNSEL: Attorney Kevin Francis Kelly for Defendant Nintendo of America Inc, Counter Claimant Nintendo of America Inc. (Kelly, Kevin) (Entered: 04/10/2009)
04/10/2009		NOTICE of Docket Text Modification re 38 Notice of Appearance : amended text to correct the name of attorney filing an appearance. (ELS) (Entered: 04/10/2009)
04/15/2009	40	APPLICATION OF ATTORNEY Robert W. Faris FOR LEAVE TO APPEAR PRO HAC VICE for Defendant Nintendo of America Inc (Fee Paid) Receipt No. 0981000000001725840. (Attachments: # 1 Attorneys Registration Form) (Durbin, Christopher) (Entered: 04/15/2009)
04/15/2009	41	APPLICATION OF ATTORNEY Michael J. Shea FOR LEAVE TO APPEAR PRO HAC VICE for Defendant Nintendo of America Inc (Fee Paid) Receipt No. 0981000000001725894. (Attachments: # 1 Attorney Registration Form) (Durbin, Christopher) (Entered: 04/15/2009)
04/16/2009	42	ORDER re 40 Application for Leave to Appear Pro Hac Vice. The Court ADMITS Attorney Robert W. Faris for Nintendo of America Inc, by Bruce Rifkin. (No document associated with this docket entry, text only.)(DS) (Entered: 04/16/2009)
04/16/2009	43	ORDER re 41 Application for Leave to Appear Pro Hac Vice. The Court ADMITS Attorney Michael J. Shea for Nintendo of America Inc, by Bruce Rifkin. (No document associated with this docket entry, text only.)(DS) (Entered: 04/16/2009)
04/27/2009		Set Hearings: Telephonic Scheduling Conference set for 5/11/2009 at 10:00 AM before Judge Ricardo S Martinez. (LC) (Entered: 04/27/2009)
05/11/2009	44	MINUTE ENTRY for proceedings held before Judge Ricardo S Martinez- Dep Clerk: Laurie Cuaresma ; Pla Counsel: Philip Mann, John Whitaker ; Def Counsel: Chris Carraway, Chris Durbin, Matt Brigham,, Eric Buresh ; Time of Hearing: 10:00 AM ; Telephone Conference held on 5/11/2009. Parties agree to 9/20/2010 for jury trial. Court reviews Joint Status Report with counsel to address any areas of concern/disagreement. Parties agree to 10 depositions per side (not per party); concerns re discovery and early mediation discussed. Parties will continue to negotiate proposed Protective Order for Court's consideration. Court will enter Scheduling Order as soon as possible.(LC) (Entered: 05/11/2009)
05/11/2009	45	MINUTE ORDER SETTING TRIAL DATE AND RELATED DATES by Judge Ricardo S Martinez. Length of Trial: *10 days*. Jury Trial is set for 9/20/2010 at 09:00 AM before Judge Ricardo S Martinez. Statement of asserted claims and preliminary infringement contentions due 5/26/2009, Statement of preliminary invalidity contentions due 6/25/2009, Reports from expert witnesses regarding Markman issues due 9/28/2009, Joinder of Parties due by 7/31/2009, Proposed terms and Claim Elements and Preliminary Claim Chart due 8/14/2009, Joint claim chart due 9/28/2009, Opening claim construction briefs due 11/23/2009, Responsive claim construction briefs due 12/8/2009, Markman Hearing set for 3/4/2010 at 09:00 AM before Judge Ricardo S Martinez, Expert Witness Disclosure/Reports under FRCP 26(a)(2) due by 3/25/2010, Rebuttal Expert Disclosure/Reports due by 4/23/2010, Motions due by 4/30/2010, Discovery completed by 5/24/2010, Dispositive motions due by 6/18/2010, 39.1 mediation to be completed by 5/5/2010, Motions in Limine due by 8/23/2010, Pretrial Order due by 9/8/2010, Trial briefs to be submitted by 9/15/2010, Proposed voir dire/jury instructions due by 9/15/2010. (LC) (Entered: 05/11/2009)
06/25/2009	46	NOTICE of Disclosure of Defendants' Joint Invalidity Contentions ; filed by Defendant Sony Computer Entertainment America Inc. (Buresh, Eric) (Entered: 06/25/2009)
06/25/2009	47	NOTICE of Disclosure of Sony Computer Entertainment America Inc.'s Non-Infringement Contentions ; filed by Defendant Sony Computer Entertainment America Inc. (Buresh, Eric) (Entered: 06/25/2009)
06/25/2009	48	NOTICE of Disclosure of Microsoft Corporation's Non-Infringement Contentions ; filed by Defendant Microsoft Corporation. (Carraway, J) (Entered: 06/25/2009)
07/09/2009	49	MOTION to Stay Litigation Pending Reexamination by Plaintiff ADC Technology Inc. (Attachments: # 1 Exhibit A - Requests for Reexamination, # 2 Proposed Order Granting Stay) Noting Date 7/24/2009, (Whitaker, John) (Entered: 07/09/2009)
07/20/2009	50	STIPULATION by parties re 49 MOTION to Stay Litigation Pending Reexamination . (Buresh, Eric) (Entered: 07/20/2009)
07/20/2009	52	MINUTE ORDER directing plaintiff to file status reports by Judge Ricardo S Martinez. (RS) (Entered: 07/21/2009)
07/21/2009	51	STIPULATION AND ORDER granting 49 Motion to Stay by Judge Ricardo S Martinez.(RS) (Entered: 07/21/2009)
01/20/2010	53	STATUS REPORT Status Update by Plaintiff ADC Technology Inc. (Whitaker, John) (Entered: 01/20/2010)

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05/25/2010	54	NOTICE of Change of Address of Attorney John E Whitaker. Filed by Plaintiff ADC Technology Inc. (Whitaker, John) (Entered: 05/25/2010)
05/25/2010	55	NOTICE of Change of Address of Attorney John E Whitaker. Filed by Plaintiff ADC Technology Inc. (Whitaker, John) (Entered: 05/25/2010)
07/19/2010	56	Second STATUS REPORT by Plaintiff ADC Technology Inc. (Whitaker, John) (Entered: 07/19/2010)

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REEXAM CONTROL NUMBER 90/011.098 FILING OR 371 (c) DATE 07/16/2010

PATENT NUMBER 6193520

SHOOK, HARDY & BACON LLP INTELLECTUAL PROPERTY DEPARTMENT 2555 GRAND BLVD KANSAS CITY, MO 64108-2613

### CONFIRMATION NO. 4621 REEXAMINATION REQUEST NOTICE



Date Mailed: 08/02/2010

# NOTICE OF REEXAMINATION REQUEST FILING DATE

# (Third Party Requester)

Requester is hereby notified that the filing date of the request for reexamination is 07/16/2010, the date that the filing requirements of 37 CFR § 1.510 were received.

A decision on the request for reexamination will be mailed within three months from the filing date of the request for reexamination. (See 37 CFR 1.515(a)).

A copy of the Notice is being sent to the person identified by the requester as the patent owner. Further patent owner correspondence will be the latest attorney or agent of record in the patent file. (See 37 CFR 1.33). Any paper filed should include a reference to the present request for reexamination (by Reexamination Control Number).

cc: Patent Owner 164 KINNEY & LANGE, P.A. THE KINNEY & LANGE BUILDING 312 SOUTH THIRD STREET MINNEAPOLIS, MN 55415-1002

/rbell/

Legal Instruments Examiner Central Reexamination Unit 571-272-7705; FAX No. 571-273-9900



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REEXAM CONTROL NUMBER
90/011.098

FILING OR 371 (c) DATE 07/16/2010

6193520

PATENT NUMBER

164 KINNEY & LANGE, P.A. THE KINNEY & LANGE BUILDING 312 SOUTH THIRD STREET MINNEAPOLIS, MN 55415-1002

## CONFIRMATION NO. 4621 REEXAM ASSIGNMENT NOTICE



Date Mailed: 08/02/2010

# NOTICE OF ASSIGNMENT OF REEXAMINATION REQUEST

The above-identified request for reexamination has been assigned to Art Unit 3993. All future correspondence to the proceeding should be identified by the control number listed above and directed to the assigned Art Unit.

A copy of this Notice is being sent to the latest attorney or agent of record in the patent file or to all owners of record. (See 37 CFR 1.33(c)). If the addressee is not, or does not represent, the current owner, he or she is required to forward all communications regarding this proceeding to the current owner(s). An attorney or agent receiving this communication who does not represent the current owner(s) may wish to seek to withdraw pursuant to 37 CFR 1.36 in order to avoid receiving future communications. If the address of the current owner(s) is unknown, this communication should be returned within the request to withdraw pursuant to Section 1.36.

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Legal Instruments Examiner Central Reexamination Unit 571-272-7705; FAX No. 571-273-9900

Total Assignn	nents: 3				
Application #: 0		Filing Dt: 07/02/1998	Patent #: 6193520	<u>Issue Dt:</u> 02/	27/2001
PCT #: N	•		Publication #: NONE	- Pub Dt:	
Inventor: T	ΑΚΕΥΑ ΟΚΑΜΟΤΟ				
Title: I	NTERACTIVE COM	MUNICATION SYSTEM FOR CO	MMUNICATING VIDEO GAME	E AND KARAOKE SOFTWARE	2
Assignment:	1				
Reel/Frame:	<u>009330 / 0641</u>	Received: 07/24/1998	Recorded: 07/02/1998	Mailed: 10/06/1998	Pages: 2
Conveyance:	ASSIGNMENT OF	ASSIGNORS INTEREST (SEE	DOCUMENT FOR DETAILS).		
Assignor:	OKAMOTO, TAKE	YA	·	Exec Dt: 06/26/1998	
Assignee:	YUGENGAISHA A	DACHI INTERNATIONAL			
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Conveyance:	ASSIGNMENT OF	ASSIGNORS INTEREST (SEE	DOCUMENT FOR DETAILS).		
		DACHI INTERNATIONAL		Exec Dt: 04/12/2001	
	ADC TECHNOLOG				
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Assignor:	<u>YUGENGAISHA A</u>	DACHI INTERNATIONAL	I	Exec Dt: 04/12/2001	
Assignee:	ADC TECHNOLOG	<u>GY INC.</u>			
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	MANCHESTER, N	MERICAL STREET H 03101-1151			
	- Anoneored in the				
				Search Results as of: 07	7/28/2010 10:59 AM

# Patent Assignment Abstract of Title

If you have any comments or questions concerning the data displayed, contact PRD / Assignments at 571-272-3350. Web interface last modified: October 18, 2008 v.2.0.1

# **EXHIBIT** A

# (12) United States Patent Okamoto

#### (54) INTERACTIVE COMMUNICATION SYSTEM FOR COMMUNICATING VIDEO GAME AND KARAOKE SOFTWARE

- (75) Inventor: Takeya Okamoto, Nagoya (JP)
- (73) Assignce: Yugengaisha Adachi International, Nagoya (JP)
- (\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

- (21) Appl. No.: 09/109,784
- (22) Filed: Jul. 2, 1998

#### **Related U.S. Application Data**

- (63) Continuation-in-part of application No. 08/642,560, filed on May 3, 1996, now Pat. No. 5,775,995.
- (30) Foreign Application Priority Data
- May 10, 1993 (JP) ..... 5-108303
- (51) Int. Cl.<sup>7</sup> ...... G09B 5/08; G10H 3/18; G10H 7/00; A63F 9/22

#### US006193520B1

# (10) Patent No.: US 6,193,520 B1 (45) Date of Patent: \*Feb. 27, 2001

#### (56) **References Cited**

#### **U.S. PATENT DOCUMENTS**

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Primary Examiner—Joe H. Cheng (74) Attorney, Agent, or Firm—Davis and Bujold

#### (57) ABSTRACT

A communication system is proposed for transmitting at least one of the data, the program, and a combination of them from a host facility to a communicator such as a communication terminal device. In this communication system, the data or the program becomes unable to be used when a predetermined time has elapsed after it is transmitted from the host facility to the communicator. This communication system is provided with the function of giving a warning before the use of the transmission becomes unable and the function of resuming the use in accordance with the user's instruction even after the use becomes unable.

#### 21 Claims, 12 Drawing Sheets





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FIG.1









FIG.4





FIG.5

X: DESIRED GAME NUMBER [ Y: EXPLANATION [ Z: PRINT				-315 -317 311
GAME NUMBER	GAME NAME	NUMBER OF PLAYER	CHARGE	
1 2 3 4 5	···· CART ···· PAINT SUPER···· ··· LEGEND STREET···	$ \begin{array}{r} 1-2 \\ 1 \\ 1-2 \\ 1-2 \\ 1-2 \\ 1-2 \end{array} $	( ) ( ) ( ) ( )	313

FIG.6



FIG.7



FIG.8A















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IMAGE DATA USE FIG. 12 PREVENT/RES. PROCESS - S1300 READ STARTING TIME OF DATA USE S1310 READ CURRENT TIME AND CALCULATE ELAPSED TIME S1320 FIRST NO TIME PERIOD ELAPSED? YES - S1330 WARN - S1340 CALCULATE ELAPSED TIME S1350 SECOND NO TIME PERIOD ELAPSED? YES - S1360 PREVENT DATA USE S1370 NO SURCHARGE PAID? S1380 YES THIRD NO - S1390 TIME PERIOD RESUME DATA USE ELAPSED? YES END

PROGRAM USE PREVENT FIG. 13 /RES. PROCESS S1400 READ ENDING TIME OF PROGRAM USE S1410 READ CURRENT TIME AND CALCULATE ELAPSED TIME S1420 FIRST NO TIME PERIOD ELAPSED? YES - S1430 WARN -S1440 CALCULATE ELAPSED TIME ~S1450 SECOND NO TIME PERIOD ELAPSED? YES -S1460 PREVENT PROGRAM USE S1470 SURCHARGE NO PAID? S1480 YES THIRD NO - S1490 TIME PERIOD RESUME PROGRAM USE ELAPSED? YES END

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#### INTERACTIVE COMMUNICATION SYSTEM FOR COMMUNICATING VIDEO GAME AND KARAOKE SOFTWARE

This is a Continuation-in-Part of Application Ser. No. 5 08/642,560 filed May 3, 1996, now U.S. Pat. No. 5,775,995.

#### FIELD OF THE INVENTION

This invention relates to an interactive communication 10 system for transmitting video game and karaoke software from a host facility to communication terminal devices.

#### BACKGROUND OF THE INVENTION

Video games have become a very popular form of family 15 entertainment. In order to play a video game, a game cassette is first installed in a video game machine body. Game data, contained in the cassette and including video information and usually audio information, is read and outputted to a common television receiver. Accordingly, the one who 20 wishes to play a video game must have a video game machine and a game cassette, besides a television set. Once the game cassette is installed, the player can play the game whenever and as many times as the player wishes.

However, therein lies a problem: the player has to pur-<sup>25</sup> chase each and every game cassette he wishes to play, which can be very costly. For all the advantage that the player can play the game repeatedly, he may soon get tired of the game, or the game content may not be oriented for repeated play.

Another form of entertainment increasing in popularity is <sup>30</sup> "karaoke", i.e. singing to recorded instrumental accompaniment. More and more "karaoke bars" can be seen in major cities, and karaoke machines for domestic use are becoming widely accepted. Such family karaoke machines need, by definition, karaoke music software, which can be found, for example, on video disk, video tape containing video and audio information, and music tape containing only audio information. Karaoke singers, tempted by changing trends in music, tend to purchase newly available karaoke programs, one after another. Thus, there arise problems of accumulated expenditure and limited storage space for the increasing number of karaoke programs.

#### SUMMARY OF THE INVENTION

Wherefore, an object of this invention is to provide an interactive communication system in which video game and karaoke software is transmitted via communication lines from a host facility to a calling communication terminal device at each individual home.

In order to attain the stated object, a communication terminal device according to the present invention includes communication means, connected to communication lines, for sending out or receiving data, and a computer for outputting control instructions to the communication means, 55 and outputting or inputting data to or from the communication lines via the communication means. The communication terminal device further includes temporary storage means for temporarily storing the data inputted from the communication lines if the data inputted is game data 60 including video information or video plus audio information, and game data outputting means included in the computer, for outputting, if the data stored in the temporary storage means is game data, the game data to integral or external display means, and, if the game data also includes 65 audio information, to integral or external sound generating means.

In this way, the computer controls the communication means by supplying control instructions thereto. Data is thus sent out, under the control by the computer, via the communication means and the communication lines, or received via the communication lines and the communication means.

From another aspect of the invention, the computer may also include a printer, provided on the computer or provided externally, whereby, the data stored in the computer can be printed. For example, when the player wishes to quit game play, the current status of the game progress, e. g. which player corresponds to which character in the game, or the top scorer at the time, can be stored. When resuming the game, the player can refer to the printed data.

From still another aspect of the invention, a communication system according to the present invention includes the above described communication terminal device and a host facility intercommunicably connected to the communication terminal device. When the communication terminal device requests the host facility to provide game data, the host facility sends out the corresponding game data to the communication terminal device via the communication lines. The game data, received at the communication terminal device, is temporarily stored in the temporary storage means.

From a further aspect of the invention, the game data stored in the temporary storage means is deleted after a predetermined amount of time passes after the game data was received at the communication terminal device. In order to effect this deletion, the communication terminal device may include control means which operates, responsive to receipt of the game data, to delete the game data after a predetermined time period. Alternatively, the host facility may send an instruction concerning the time period, in addition to each game data it sends out. The latter alternative permits alteration of the time period with respect to each game.

By utilizing the communication system, the player need not purchase a game cassette or other software for playing video games, since the game data is provided by the host facility, which received the game data request sent by the player from his communication terminal device. Further, the game data provided to the player is temporarily stored in the temporary storage means of the communication terminal device, thereby releasing the host facility to serve other communication terminal devices requesting game data. The host facility is thus able to respond to a greater number of callers having communication terminal devices.

Furthermore, the game data stored in the temporary 50 storage means is deleted in a predetermined time period after it was received at the communication terminal device. In other words, the useful life of the game data at the communication terminal devices is limited. As a result of this arrangement, in order to continue the game play at the end of the predetermined time period, the player again needs to request the game data from the host facility. This arrangement is therefore prerequisite so long as the game data transmission service is not free of charge. In contrast, if it were possible to keep the game data at the communication terminal device at the end of game play, the player could play the game permanently without calling the host facility. Consequently, the service cost per each transmission would be higher than the normal price of the game cassettes. The above described arrangement solves this problem and meets the need of software distributors.

The arrangement is also beneficial to players since the service cost per each transmission can be considerably lower

than the price of each game cassette. Therefore, the game player who conventionally has to buy an expensive game cassette, even if he plays the game only once, can be satisfied with the reasonable cost of the transmission. The arrangement is also superior with respect to child discipline, 5 since children can only play a limited time.

From still another aspect of the invention, the communication terminal device according to the present invention may be adapted for karaoke.

When the data input from the communication lines is a <sup>10</sup> karaoke data, the temporary storage means temporarily stores the karaoke data, which is then outputted to a sound output device. The sound output device may be provided on the communication terminal device or provided externally. <sup>15</sup> karaoke data is also output to a display. The display may also be provided on the communication terminal device or provided externally.

The communication system according to the present 20 invention includes the above described communication terminal device and a host facility intercommunicably connected to the communication terminal device. Karaoke data is sent and received in a manner similar to the one described above for video games. The system may be configured so 25 that the karaoke data is erased after a certain time period.

Other objects, advantages and novel features of the invention will become apparent from the following detailed description of the invention when considered in conjunction with the accompanying drawings, in which like reference 30 characters designate the same or similar parts through the figures thereof.

#### **BRIEF DESCRIPTION OF THE DRAWINGS**

FIG. 1 is a block diagram of a communication terminal <sup>35</sup> device according to the present invention;

FIG. 2 is a block diagram of a communication system including the communication terminal device shown in FIG. 1;

FIG. 3 is a flowchart of the process to call a host facility; <sup>40</sup> FIG. 4 is an example of screen display in accordance with the method of operation selection in the embodiment;

FIG. 5 is an example of screen display in accordance with the method of further operation selection in the embodiment;  $_{45}$ 

FIG. 6 is a flowchart of the process to be effected when playing a game is requested at the communication terminal device;

FIG. 7 is a flowchart of the process to effect deletion of the game data;

FIGS. 8A through 8D are illustrations showing various forms of modified interference means which interfere with the progress of a game;

FIG. 9 is a flowchart of the game data deletion/restoration process; 55

FIG. 10 is a block diagram schematically showing the system consisting of a host facility and the communication terminal device for receiving the game data from the host facility via wireless transmission;

FIG. 11 is a block diagram schematically showing the system consisting of a broadcasting station and the communication terminal device for receiving the game data from the broadcasting station;

FIG. 12 is a flowchart showing another embodiment;

FIG. 13 is a flowchart showing a further embodiment; and

65

FIG. 14 is a flowchart showing a still further embodiment.

#### DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

In the embodiment of the invention, data, a program, or a combination of the two is transmitted from a host facility to a communicator as a communication terminal device. The data can be game data for playing games, karaoke data for playing karaoke music, image data for displaying static images like still pictures or dynamic images like movies, audio data for reproducing sound or playing music, character data for composing documents, and the like. The program includes a large-scale program, such as a program for word processing, a program for computing with a spread sheet, or a program for communication, and a plug-in-program to be incorporated in a main program. Transmitting a combination of the program and data means, for instance, transmitting a karaoke executing program and the data indicative of karaoke music to be played, or a set of a word processing program and the data indicative of document examples.

In the embodiment of the invention, when a predetermined time has elapsed after the host facility sends out the transmission to the communicator, the data or the program becomes unusable, preferably after a warning has been given. It is also preferable to have a way to resume the use in accordance with the user's instruction, even after the data or program becomes unusable.

As shown in FIG. 2, the communication system according to the present invention includes a host facility 100, a personal communicator 1 as a communication terminal device, and transmission paths 200 as communication lines.

The host facility 100 has game data base 101, karaoke data base 103 and other data base 105. The host facility 100 also has game data transmitter 111, karaoke data transmitter 113 and other data transmitter 115 to retrieve data from corresponding data base and transmit them. The host facility 100 further has control unit 120 to control the transmitters 111, 113 and 115, and a headend 130 to output or input signals.

When a request data is sent out from the personal communicator 1 via the transmission paths 200, the request data is received through the headend 130 and input by the control unit 120. The control unit 120 then controls one of the transmitters 111, 113 and 115 to retrieve data corresponding to the request, and the retrieved data is sent out via the headend 130 to the transmission paths 200.

The transmission paths **200** is coaxial cables and connected to a plurality of personal communicators **1**.

As shown in FIG. 1, the personal communicator 1 50 includes a terminal modem 3, timer 4, CPU 5, input device 6, ROM 7, memory 8, video image circuit 9, sound source 10, audio amplifier 11, speaker 13, image composite circuit 15, monitor 16, controller connector 21, microphone connector 23, data input/output controller 25 and data input/ 55 output connector 27.

The terminal modem 3 is connected to the transmission paths 200 and includes modulator/demodulator 3a and video tuner 3b which selects a channel of the image to be projected.

The input device 6 may be a keyboard or mouse, and is used for inputting a designation of a desired game or karaoke data or other instructions. When a controller 31, which is exclusively used for playing video games, is connected to the controller connector 21, the controller 31 can be operated only for playing games. The controller 31 is provided with joy sticks or other control buttons commonly provided on conventional video game machines. By connecting a microphone 33 to the microphone connector 23, the user can have his voice output to the speaker 13.

The data input/output connector 27 is connected via data output cable 37 to a printer 40, personal computer 41, or  $^{5}$  other apparatus.

The operation effected on the CPU 5 will be now explained referring to the flowchart of FIG. 3.

When power is supplied, a main menu is displayed, 10 offering various selections, including "call host facility", which is selected by a user.

First, category selection pages are displayed at step S1000. The display includes the instruction of "select a category" and a list of available categories such as game and 15 karaoke. The selected category is next determined at step S1010. Subsequently, an operation selection page corresponding to the selected category is displayed at step S1020. The display of the operation selection page includes an instruction to the operator and the list of available operations 20 in the selected category. When the operator inputs direction responsive to this instruction, the corresponding respective operation process is performed at step S1030. In preparation for the respective operation process, the personal communicator 1 is connected to the host facility 100 such that the personal communicator 1 and the host facility 100.

The above procedure is further explained in detail, only for exemplification purpose, hereinafter referring to FIGS. 4, 5, and 6.

When "game" category is selected at step S1000, operation selection page shown in FIG. 4 is displayed, with an instruction 301 and operation list 303 shown on the screen. The operation list has three items of item A, item B and item C. Item A has a first game number box 305, into which the <sup>35</sup> operator can directly input a game number representative of a specific game the operator desires to receive. Item B is the operation to display the list of the game numbers now available from the game data base 101 of the host facility 100. Item C is the operation to display charges, for example <sup>40</sup> the accumulated cost for the month or the past month(s).

When the operator wishes to play a game, item A or B is selected. For example, if the operator knows the game number of the game he wishes to play, the operator moves the cursor on the screen to the first game number input box **305**, and inputs the desired game number therein. If the operator does not know the game number, he selects item B.

When item B is selected, data in the form of the list of game numbers is sent from the host facility **100** and displayed on the screen. As shown in FIG. **5**, the list displayed by selecting item B has an input part **311** and display part **313**. The display of the game list **313** can be scrolled to display further the list of games. The display part **313** displays the number of players able to participate in the play and the charge, in addition to the game numbers and the game name. The operator, referring to these information on the screen, inputs his desired game number into a second game number input box **315** of the input part **311**.

When selecting a game for the first time, the operator may  $_{60}$  wish to know the feature or outline of the game. In this case, the operator inputs the selected game number into an explanation box **317** of item Y of the input part **311**. As a result, the outline of the game is explained on the display part **313**.

The game list can be printed out such that the operator can 65 refer to the printed game list when he selects a game on other occasions. For printing, item Z of "print" in the input part

**311** is selected. In response, the game list is printed, via the data input/output connector **27** and data output cable **37** shown in FIG. **1**, at the printer **40**. The process which is effected when a game number is input in the first game number box **305** of item A shown in FIG. **4** or in the second game number box **315** of item X shown in FIG. **5** will be now explained referring to FIG. **6**.

First, game request data is generated at step S1100. The game request data includes the identification number of the calling personal communicator 1 and the desired game number. The generated game request data is then sent out to the host facility 100 at step S1110.

At the host facility 100, the received request data is input by the control unit 120 through the headend 130. Subsequently, game data corresponding to the request is retrieved from the game data base 101 by the game data transmitter 111. The retrieved game data is sent out via the headend 130 to the transmission paths 200 and to the corresponding personal communicator 1. First, second, and third predetermined time periods, which will be described later in detail, are also sent out to the personal communicator 1.

Turning back to FIG. 6, the game data is received at the personal communicator 1 at step S1120 and stored in the memory 8 at step S1130. When the storage of the game data into the memory 8 is completed, the completion is indicated on the monitor 16 at step S1140. Further, data indicative of the completion of the game data transmission is sent out to the host facility 100 at step S1150 as the last step of the instant process step, and the personal communicator 1 awaits the next operation. When, for example, game play is instructed as the next operation, the game stored in the memory 8 is started.

The game data received by the process shown in FIG. 6 and the game data stored in the memory 8 is automatically deleted, as shown in the flowchart of FIG. 7, in the following manner. First, the time when the data receipt is completed is read out at step S1200. The current time is also read out and the time period which has elapsed after the completion of the data receipt is calculated at step S1210. Next, it is determined, at step S1220, whether or not a first predetermined time period has elapsed. If "NO" is determined at the step S1220, the flow goes back to the step S1210. Thus, when the first predetermined time period has elapsed, a warning is given at step S1230. Further elapsing time period is calculated at step S1240. When it is determined, at step S1250, that a second predetermined time period has elapsed, the game data stored in the memory 8 is deleted at step S1260, and the instant process ends.

The warning given at step S1230 may be a various form of warning, such as a message reading "Time Out in Five Minutes!" on the monitor 16, or an alarming sound. Therefore, the total of the first predetermined time period of the step S1220 and the second predetermined time period of the step S1250 is the useful life period of the received game data. The warning may be provided a plurality of times, such as five minutes, two minutes and one minute before the deletion of the game data. Warned by this warning, the player can print the current status of the game progress, for example, which player corresponds to which character in the game or the top scorer at the time, at the printer 40 before quitting the game play. The printed data is useful when the player resumes the game play.

Furthermore, when the host facility 100 receives the data indicative of the transmission completion at the step S1150, the host facility 100 performs the charging process to

accumulate the cost for its data transmission service. There are two known cost charging systems. One is the fixed amount system and the other is the pay-per-play system. In the fixed amount system, the fixed cost amount per-time period, for example monthly, is predetermined. In the pay- 5 per-play system, the cost is charged per each play.

The charging system is dependent on the form or condition of the communication service to be rendered. In a practical charging system, the cost would be varied with respect to the complicatedness or scale of the game data <sup>10</sup> provided. The cost would also vary depending on whether the game is new or old in the market. In the present embodiment, the pay-per-play system is adopted and the cost for the data service to each terminal communicator is charged every time the data indicative of the transmission <sup>15</sup> completion is sent from the personal communicator 1 at step S1150. The payment would be made, using the automatic transfer system, by debiting the amount to the bank account of the players.

However, the pay-per-play system has a problem: the <sup>20</sup> player cannot know the total amount of the accumulated cost before actual payment. If the payment is made using the automatic transfer system, the player may not even notice his considerable expenditure on the game play. This problem is solved by the arrangement shown in FIG. 4. If the player selects item C of the operation list **303**, the present accumulated cost and the previous cost, such as the payment made previously or the cost accumulated in the past half or whole year, are shown on the screen. Thus, parents can know the accumulated cost of their child's video game play. <sup>30</sup>

By utilizing the communication system, the player need not purchase a game cassette or other software for playing video games, since the game data is provided by the host facility which received the game data request sent by the player from his personal communicator 1. Further, the game data provided to the player is temporarily stored in the memory 8 serving as temporary storage means of the personal communicator 1, thereby releasing the host facility to serve other personal communicators 1 requesting game data. The host facility is thus enabled to respond to a greater number of callers having personal communicators 1.

Furthermore, the game data stored in the memory 8 is deleted in a predetermined time period after it was received at the personal communicator 1. In other words, the useful  $_{45}$ life of the game data at the personal communicator 1 is limited. As a result of this arrangement, in order to continue the game play at the end of the predetermined time period, the player again needs to request the game data from the host facility 100. This arrangement is therefore prerequisite so  $_{50}$ long as the game data transmission service is not free of charge. In contrast, if it were possible to keep the game data at the communication terminal device at the end of game play, the player could play the game permanently without calling the host facility 100. Consequently, the service cost 55 per each transmission would be higher than the normal price of the game cassettes. The above described arrangement solves this problem and meets the need of the software distributors.

The arrangement is also beneficial to the players since the  $_{60}$  service cost per each transmission can be considerably lower than the price of each game cassette. Therefore, the player who conventionally has to buy an expensive game cassette, even if he plays the game only once, can be satisfied with the reasonable cost of the transmission.  $_{65}$ 

The arrangement is also superior with respect to child discipline. Video game players are in most cases younger children, who often become too absorbed in playing video games to quit in the middle thereof. The above arrangement according to the present invention leaves these children no other choice but to quit the play when a predetermined time period has elapsed. Thus, the arrangement meets the rising demand of parents.

The above embodiment is explained on the premise that the game is played by a single player using only a single personal communicator 1. However, a plurality of players in remote places can play the same game together.

For example, the transmission paths 200 or telecommunication lines is utilized to connect a plurality of personal communicators 1 to one another such that the interactive communication can be performed therebetween. When the plurality of personal communicators 1 are supplied with the same game data, the players have the same game characters in common. Therefore, the data to be transmitted among the plurality of personal communicators 1 are only character number data and the position data. Thus, the players together participate, on a real time basis, in the same game on the monitor 16 of respective personal communicators 1.

Map data of a role-playing game may be divided according to the progress degree of the story and the divided map data be sold separately. When the game progresses and the player wishes to play on a more advanced map data, the player purchases and downloads the advanced map data. In this case, arrangement is provided such that the player cannot purchase the advanced map data until the "capacity" or the progress degree of the characters in the game reaches a predetermined degree or level. Accordingly, using the interactive communication system, the player is to ask the host facility 100 for the proof of the capacity. In response, data proving the capacity or level of the characters may be transmitted from the host facility 100. The capacity proof sent from the host facility 100 would be printed out by the printer 40 or transmitted to the player's facsimile machine, as a certificate.

It will be now explained how the communication system of the present invention is adopted to karaoke. The procedure to communicate the karaoke data is basically similar to the above described procedure to communicate the game data. Therefore, the explanation of the similar portion of the procedure are omitted for simplification. When using the system for karaoke, the microphone 33 is connected to the microphone connector 23 of the personal communicator 1.

When "karaoke" is selected on the category selection page at step S1000, an operation selection page similar to that of FIG. 4 is displayed on the screen. Specifically, an item A of a desired karaoke number, item B of the karaoke number list, and item C of charge are displayed. If the operator wishes to start karaoke, the operator inputs the desired karaoke number in the corresponding box at item A or B.

Karaoke request data is then generated at the personal communicator 1 and sent out to the host facility 100. The host facility 100, receiving the request, controls the karaoke data transmitter 113 to retrieve corresponding karaoke data from the karaoke data base 103, and sends out the retrieved karaoke data to the personal communicator 1.

The karaoke data received at the personal communicator 1 is stored, as song data, in the memory 8 via the modulator/ demodulator 3a. At the same time, the CPU 5 sends song selection data, which is predetermined according to the type 65 of each song, to the video tuner 3b in order to select visual data suitable to the selected song. Further, the CPU 5 synchronously outputs to the video image circuit 9 and the sound source 10, respectively, words data and accompaniment data included in the song data stored in the memory 8. The video image circuit 9 converts the information concerning the words and other elements of the song into word/ image data and outputs the word/image data to the monitor 5 16.

The sound source 10 converts the accompaniment data into audio signals, and outputs the audio signals to the audio amplifier 11. Subsequently, the audio amplifier 11 synthesizes the audio signals and the voice signals sent from the 10 microphone 12, amplifies these synthesized signals and outputs them to the speaker 13 as sound signals. The video tuner 3b reads out background visual data selected according to the song selection data, and outputs to the image composite circuit 15. Then, the image composite circuit 15 15 synthesizes the background visual data and the words/image data and outputs the video signals to the monitor 16.

The procedure for playing karaoke music will be further explained in detail.

The song data sent out from the host facility 100 via the 20co-axial cables as transmission paths 200 includes multiplied RF signals of video information and RF signals converted from the song data. The CPU 5 of the personal communicator 1 sends the song selection data to the video tuner **3***b* of the terminal modern **3** in order to select the video  $^{25}$ channel according to the received song data. The song selection data is predetermined according to the genre of songs. Consequently, the song data is sent to the sound source 10 and the karaoke music is played.

When the karaoke music is ended, data indicative of the end of the play is sent to the host facility 100. In response, the host facility 100 performs the charging process. In contrast to the pay-per-play system of the game data service, the cost for providing the karaoke music may be charged, for 35 example per hour, since a single piece of karaoke music is only several minutes long.

In the case of karaoke data, as in the case of game data, a predetermined time is counted after the karaoke data is received from the host facility, and when the predetermined  $_{40}$ time has elapsed, the karaoke data is deleted.

By utilizing the communication system, the karaoke singer need not purchase a video disk or other karaoke software, since the karaoke data is provided by the host facility 100, which received the karaoke data request sent by 45 the karaoke singer from his personal communicator 1. Further, the karaoke data provided to the karaoke singer is temporarily stored in the memory 8 serving as temporary storage means for the personal communicator 1, thereby releasing the host facility 100 to serve other personal com- 50 process steps shown in FIG. 9 may be taken. As will be municators 1 requesting karaoke data. The host facility 100 is thus able to respond to a greater number of callers having personal communicators 1. This invention has been described above with reference to the preferred embodiment as shown in the drawings. Modifications and alterations may 55 become apparent to one who skilled in the art upon reading and understanding the specification. Despite the use of the embodiment for illustration purposes, it is intended to include all such modifications and alterations within the scope and spirit of the appended claims. 60

In this spirit, it should also be noted that in the embodiment, the personal communicator 1 is integrally provided with the monitor 16 and the speaker 13. However, any other external monitor or speaker may be connected to the personal communicator 1 and utilized. For example, a 65 television receiver may be connected to the personal communicator 1, thereby outputting the video information and

the audio information on the television receiver. In this case, the personal communicator 1 may be provided with a small display, on which the selection pages as those shown in FIGS. 4 and 5 would be displayed.

Furthermore, the transmission paths 200 may be existing co-axial cables for cable television system, thereby structuring the communication system of the present invention as a multimedia interactive communication system. In this way, the video and audio information of satellite television services, video disks, radio programs, and other various forms of available software are equated to the other data base shown in FIG. 2. Such personal communicators 1 of the present invention can be provided in each individual's home or hotel room and in other various situations and places.

As mentioned, the stored data is deleted in a predetermined time period after it was received. This arrangement is beneficial to the data distributors since repeated game or karaoke play using the same game data or karaoke data is prevented.

In the above described embodiment, the game data stored in the memory 8 is deleted in order to interfere with the progress of game. Alternative arrangements to this are provided by the present invention, as shown in FIGS. 8A through 8D. In the arrangement of FIG. 8A, the view on a screen 161 of the monitor 16 is blocked with patterns of stripes 162 displayed thereon. Instead, the view displayed on the screen may be partly deleted. In the arrangement shown in FIG. 8B, only an opponent of a boxing game, who is to be displayed on an area 163 of the screen 161, is deleted. Still another alternative is provision of a switch 131 shown in FIG. 8C for a speaker circuit, which, when turned off, withholds the sound that would otherwise be issued from the speaker 13 during the game. Further alternative is provision of a switch 61 shown in FIG. 8D which invalidates the operation on the input device 6 or the controller 31. The switches 131 and 61 may be mechanical components or may be software operations. For instance, actuation of the sound source 10 may be halted by the CPU 5, or the CPU 5 may reject signals from the input device 6 or the controller 31. As still another alternative, the power of the personal communicator may be turned off when the CPU 5 determines that a predetermined time has elapsed after the game data was received.

In the described embodiment, when a predetermined time has passed after the game data was received from the host facility 100, the game data stored in the memory 8 is deleted. However, it may be arranged so that the player can resume playing the game by paying a surcharge. Specifically, the noted, the process steps S1200 through S1250 in FIG. 9 are identical to those in FIG. 7, whereas at step S1260' the deletion of the game data is effected only after it is stored in a temporary storage device, different from the process at step S1260. At next step S1270, it is determined whether or not a surcharge has been paid. If the answer to the step S1270 is negative, it is next determined, at step S1280, whether or not a predetermined time has elapsed after the game data in the memory 8 was deleted. If the answer to the step S1280 is negative, the flow returns to step S1270. If the answer to the step S1280 is affirmative, the process step ends.

If "YES" is determined at the step S1270, the game data stored in the temporary storage device is restored into the memory 8 to permit resumption of game play, at step S1290. The flow then goes back to step S1210. In the process after the resumption of game play, the elapsed time after the time of paying the surcharge is calculated at step 1210.

The arrangement shown in FIG. 9 allows a player to continue playing a game as long as the player pays a surcharge. An instruction to pay the surcharge can be given through the keys on the input device 6. In response, the host facility 100 effects the charging process against the player. 5

In the embodiment shown in FIGS. 1 and 2, game data and karaoke data are transmitted via communication lines, which may be public telephone lines, dedicated communication lines, cables for community antenna television system. Instead of such communication lines, as shown in FIG. <sup>10</sup> 10, the data may be sent via wireless transmission from a host facility 100' to a personal communicator 1'. In this case, the host facility 100' is provided with a not-shown wireless transmission circuit including a transmitting/receiving antenna 150, and the personal communicator 1' is provided <sup>15</sup> with a not-shown transmitter/receiver circuit including a transmitting/receiving antenna 2.

Turning to FIG. 11, a further modification is proposed in which the game data is sent from a ground broadcasting station 100" or a satellite broadcasting station. The game <sup>20</sup> data, as it is received, is stored in the memory 8 of the personal communicator 1". In this case, the personal communicator 1" is connected with a tuner 300 so that the game is displayed on a screen of a home TV set 400. Alternatively, the broadcasting may be performed preferably via two-way communication through cables, or via Internet. In the communication system disclosed in this specification, the data to be transmitted may be either analog or digital.

In both modifications shown in FIGS. 10 and 11, the game <sup>30</sup> play is interrupted when a predetermined time has elapsed after the game data was received at the personal communicators 1', 1". Of course, the arrangement shown in FIG. 9 may be incorporated into these arrangements of FIGS. 10 and 11 to allow the player to continue playing a game by <sup>35</sup> paying a surcharge.

FIG. 12 is a flowchart showing another embodiment. In this embodiment, a predetermined time period to prevent further use of the image data is counted from the starting time of use of the data, not from the receiving time of the  $_{40}$  data from the host facility.

This embodiment is explained in detail hereinafter referring to FIG. 12. When the use of the image data sent from the host facility starts, the starting time is read out at step S1300. The current time is also read out, and the elapsed  $_{45}$ time after the starting time is calculated at step S1310. Then it is determined, at step S1320, whether or not a first predetermined time period has elapsed. If "NO" is determined at step S1320, the flow returns to step S1310. If "YES" is determined, a warning is given at step S1330, and 50 the elapsed time continues to be calculated at step S1340 until the end of a second predetermined time period. When it is determined, at step S1350, that the second predetermined time period has elapsed, a process to prevent further use of the above image data is performed at step S1360. 55 There may be various means to prevent further use of the image data, such as deleting the image data stored in the memory 8, blocking, as shown in FIG. 8A or 8B, the view on the screen of the monitor 16 in accordance with the progress of the image data processing, stopping, as shown in  $_{60}$ FIG. 8C, the sound generated in accordance with the progress of the image data processing and invalidating, as shown in FIG. 8D, any operation of the input device 6 or the controller 31 for instruction.

At next step S1370, it is determined whether or not a 65 surcharge is paid. If the answer to step S1370 is negative, it is next determined, at step S1380, whether or not a third

predetermined time has elapsed after the process to prevent further use of the image data is performed. If the answer to step S1380 is negative, the flow returns to step S1370. If the answer to step S1380 is affirmative, the process step ends.

If "YES" is determined at step S1370, the image data is permitted to be continuously used at step S1390, then the flow returns to step S1310. In the process after the resumption of use, the elapsed time after the payment of the surcharge is calculated at step S1310. In the case where deletion of the image data stored in the memory is used as a means of preventing further use of the image data, it is preferable to preserve the image data in a not-shown temporary storage device before deleting it from the memory, and to restore it from the temporary storage device into the memory after the surcharge is paid.

As in the above embodiment, instructions to pay the surcharge can be given by operating the keyboard of the communicator 1, and in response to the key operation, the host facility 100 performs the charging process.

FIG. 13 is a flowchart of a further embodiment. In this embodiment, when the program sent from the host facility is continuously unused for a predetermined time period, a process to prevent further use of the program is performed.

The procedure of this embodiment is explained in detail, hereinafter referring to FIG. 13. When the program sent from the host facility is used for some time and then the use ends, the ending time is read out at step S1400. Next, the current time is also read out and the elapsed time after the ending time is calculated at step S1410. Then it is determined, at step S1420, whether or not a first predetermined time period has elapsed. If "NO" is determined at step S1420, the flow returns to step S1410. If "YES" is determined, a warning is given at step S1430, and the elapsed time continues to be calculated at step S1440 until the end of a second predetermined time period. When it is determined, at step S1450, that the second predetermined time period has elapsed, a process to prevent further use of the above program is performed at step S1460. There may be various means to prevent further use of the program, such as deleting the program stored in the memory 8, blocking, as shown in FIG. 8A or 8B, the view on the screen of the monitor 16 in accordance with the progress of the program, stopping, as shown in FIG. 8C, the sound generated in accordance with the progress of the program, and invalidating, as shown in FIG. 8D, any operation of the input device 6 or the controller 31 for instructions.

At next step S1470, it is determined whether or not a surcharge is paid. If the answer to step S1470 is negative, it is next determined, at step S1480, whether or not a third predetermined time has elapsed after the process to prevent further use of the program is performed. If the answer to step S1480 is negative, the flow returns to step S1470. If the answer to step S1480 is affirmative, the process step ends.

If "YES" is determined at step S1470, the program is permitted to be continuously used at step S1490, then the flow returns to step S1410. In the process after the resumption of use, the elapsed time after the payment of the surcharge is calculated at step S1410. In the case where deletion of the program stored in the memory is used as a means of preventing further use of the program, it is preferable to preserve the program in a not-shown temporary storage device before deleting it from the memory, and to restore it from the temporary storage device into the memory after the surcharge is paid.

As in the above embodiment, instructions to pay the surcharge can be given by operating the keyboard of the

communicator 1, and in response to the key operation, the host facility 100 performs the charging process.

If the program is used while a process shown in FIG. 13 is in progress, the above process is ended by a not-shown interrupt handling, and at the next cycle time the process at <sup>5</sup> step S1400 starts again.

In the embodiments shown in FIG.13, the elapsed time period, during which a program is continuously unused, is preferably counted in the background by a backup power source even when the power of the personal communicator <sup>10</sup> 1 is off. The processes to give a warning and to prevent further use may be performed when the power switch of the personal communicator 1 is turned on next time.

In addition to the above described case, it may be con-15 sidered that the elapsed time is calculated each time the power switch of the personal communicator 1 is turned on. Such an embodiment is shown in FIG. 14. In this embodiment, concerning each program or data stored in the memory 8, the ending time of use of the program or the data 20 is stored in a specific storage region of the memory 8. When the program or the data is used, the ending time data is renewed at the time of end of use. The procedure is explained hereinafter with respect to the case where a program is received by a personal communicator. In the case 25 where image data, game data, or karaoke data is received, the same procedure is also taken.

In FIG. 14, when the power switch of the personal communicator 1 is turned on, the ending time data concerning every stored program is read out, at step S1500, from the  $_{30}$ above specific storage region of the memory 8. Next, at step S1510, the elapsed time after the ending time is calculated. It is next determined, at step S1520, whether or not the elapsed time has exceeded a predetermined time period to prevent further use of the program, and at step S1530, 35 whether or not the elapsed time has exceeded another predetermined time period to give a warning. If the elapsed time has exceeded the predetermined time period (a first time period) to give a warning (the answer to step S1530: "YES"), a warning is given at step S1540. If the elapsed time 40 has exceeded the predetermined time period (a second time period) to prevent further use of the program (the answer to step S1520: YES), the process to prevent further use of the program is performed at step S1550. If the elapsed time has not exceeded either of the above predetermined time 45 periods, the process step shown in FIG. 14 ends.

When the process to prevent further use is performed, it is determined, at step S1560, whether or not a surcharge has been paid within a predetermined time period (a third time period). If the answer to step S1560 is negative, the process step ends. If the answer to step S1560 is affirmative, the process to allow resumption of use of the program is performed at step S1570. Next, the process to renew the ending time data with the current time concerning the program is performed at step S1580, and then the process  $_{55}$  step ends.

As in the above embodiment, instructions to pay the surcharge can be given by operating the keyboard of the communicator 1, and in response to the key operation, the host facility 100 performs the charging process.

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In order to enable the choice between two modes, one of which is to calculate the elapsed time when the power switch of the personal communicator 1 is turned on as shown in FIG. 14, and the other of which is to calculate the elapsed time in the background as shown in FIG. 13, the input device 65 or the controller 25 of the personal communicator 1 may be used by the user for choosing.

Wherefore, having described the present invention, what is claimed is:

1. A communication system for transmitting at least one of the program, the data, and a combination of the program and data from a host facility to a communication terminal device, said communication terminal device comprising:

- an input device for inputting instructions to execute the program or to process the data,
- receiving means for receiving one of the program, the data, and a combination of the program and data as sent out from said host facility,
- storage means for storing the program, the data, or a combination of the program and data received by said receiving means,
- executing means for executing the program stored in said storage means or executing data processing by using the data stored in said storage means, in accordance with instructions from said input device,
- clock means for keeping a predetermined time period after said receiving means receives the transmission, and interference means for interfering with execution of said executing means when said clock means counts said predetermined time period; and

said host facility comprising:

- storage means for storing at least one of the program, the data, and a combination of the program and data together with the duration data indicative of the predetermined time period to be counted by said clock means, and
- sending out means for sending out at least one of the program, the data, and a combination of the program and data together with the duration data stored in said storage means to said communication terminal device.

2. The communication system according to claim 1, said communication terminal device further comprising:

- second clock means for keeping a second predetermined time period shorter than said predetermined time period counted by said clock means, and
- alarm means for issuing an alarm when said second clock means counts said second predetermined time period, and thereby informing that interference by said interference means with execution of said executing means will soon be performed.
- 3. The communication terminal device according to claim 2, further comprising:
  - third clock means for keeping a third predetermined time period after said interference means interferes with execution of said executing means,
  - interference stop instruction means for instructing to stop the interference performed by said interference means, and
  - means for stopping the interference performed by said interference means and thereby allowing resumption of execution of the program or data processing performed by said executing means when said interference stop instruction means receives the instruction before said third clock means counts said third predetermined time period.

4. The communication system according to claim 1, wherein said interference means comprises means for deleting at least one of the program, the data, and a combination of the program and data stored in said storage means.

5. The communication system according to claim 1, wherein said communication terminal device comprises

display means having a screen on which the progress of execution of the program or data processing is displayed, and

said interference means comprises means for blocking the view of what is displayed on said screen.

6. The communication system according to claim 1, wherein said interference means comprises means for invalidating the operation of said input device.

7. The communication system according to claim 1, further comprising sound generating means for generating a <sup>10</sup> predetermined sound in accordance with the progress of execution of the program or data processing, wherein said interference means comprises means for preventing said sound generating means from generating the sound.

8. A communication system for transmitting at least one <sup>15</sup> of the program, the data, and a combination of the program and data from a host facility to a communication terminal device, said communication terminal device comprising:

- an input device for inputting instructions to execute the program or to process the data, 20
- receiving means for receiving one of the program, the data, and a combination of the program and data as sent out from said host facility,
- storage means for storing the program, the data, or a 25 combination of the program and data received by said receiving means,
- executing means for executing the program stored in said storage means or executing data processing by using the data stored in said storage means, in accordance 30 with instructions from said input device,
- clock means for keeping a predetermined time period after said executing means starts execution of the program or data processing, and
- interference means for interfering with execution of said <sup>35</sup> executing means when said clock means counts said predetermined time period; and
- said host facility comprising:
  - storage means for storing at least one of the program, the data, and a combination of the program and data <sup>40</sup> together with the duration data indicative of the predetermined time period to be counted by said clock means, and
  - sending out means for sending out at least one of the program, the data, and a combination of the program and data together with the duration data stored in said storage means to said communication terminal device.

9. The communication system according to claim 8, said communication terminal device further comprising: <sup>50</sup>

- second clock means for keeping a second predetermined time period shorter than said predetermined time period counted by said clock means, and
- alarm means for issuing an alarm when said second clock means counts said second predetermined time period, and thereby informing that interference by said interference means with execution of said executing means will soon be performed.

10. The communication terminal device according to  $_{60}$  claim 9, further comprising:

- third clock means for keeping a third predetermined time period after said interference means interferes with execution of said executing means,
- interference stop instruction means for instructing to stop 65 the interference performed by said interference means, and

means for stopping the interference performed by said interference means and thereby allowing resumption of execution of the program or data processing performed by said executing means when said interference stop instruction means receives the instruction before said third clock means counts said third predetermined time period.

11. The communication system according to claim 8, wherein said interference means comprises means for deleting at least one of the program, the data, and a combination of the program and data stored in said storage means.

12. The communication system according to claim 8, wherein said communication terminal device comprises display means having a screen on which the progress of execution of program or data processing is displayed,

said interference means comprises means for blocking the view of what is displayed on said screen.

13. The communication system according to claim  $\mathbf{8}$ , wherein said interference means comprises means for invalidating the operation of said input device.

14. The communication system according to claim 8, further comprising sound generating means for generating a predetermined sound in accordance with the progress of execution of the program or data processing, wherein said interference means comprises means for preventing said sound generating means from generating the sound.

15. A communication system for transmitting at least one of the program, the data, and a combination of the program and data from a host facility to a communication terminal device, said communication terminal device comprising:

- an input device for inputting instructions to execute the program or to process the data,
- receiving means for receiving one of the program, the data, and a combination of the program and data as sent out from said host facility,
- storage means for storing the program, the data, or a combination of the program and data received by said receiving means,
- executing means for executing the program stored in said storage means or executing data processing by using the data stored in said storage means, in accordance with instructions from said input device,
- clock means for keeping a predetermined time period after said execution means ends the execution of the program or data processing to count a time period during which at least one of the program, the data, and a combination of the program and data is continuously unused, and
- interference means for interfering with execution of said executing means when said clock means counts a predetermined time period; and

said host facility comprising:

- storage means for storing at least one of the program, the data, and a combination of the program and data together with duration data indicative of the predetermined time period to be counted by said clock means, and
- sending out means for sending out at least one of the program, the data, and a combination of the program and data together with the duration data stored in said storage means to said communication terminal device.

16. The communication system according to claim 15, said communication terminal device further comprising:

second clock means for keeping a second predetermined time period shorter than said predetermined time period counted by said clock means, and 5

alarm means for issuing an alarm when said second clock means counts said second predetermined time period, and thereby informing that interference by said interference means with execution of said executing means will soon be performed.

17. The communication terminal device according to claim 16, further comprising:

- third clock means for keeping a third predetermined time period after said interference means interferes with execution of said executing means, 10
- interference stop instruction means for instructing to stop the interference performed by said interference means, and
- means for stopping the interference performed by said interference means and thereby allowing resumption of execution of the program or data processing performed by said executing means when said interference stop instruction means receives the instruction before said third clock means counts said third predetermined time period.

18. The communication system according to claim 15, wherein said interference means comprises means for deleting at least one of the program, the data, and a combination of the program and data stored in said storage means.

19. The communication system according to claim 15, wherein said communication terminal device comprises display means having a screen on which the progress of execution of program or data processing is displayed,

said interference means comprises means for blocking the view of what is displayed on said screen.

20. The communication system according to claim 15, wherein said interference means comprises means for invalidating the operation of said input device.

21. The communication system according to claim 15, further comprising sound generating means for generating a predetermined sound in accordance with the progress of execution of the program or data processing, wherein said interference means comprises means for preventing said sound generating means from generating the sound.

\* \* \* \*

# UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO.: 6,193,520 B1APPLICATION NO.: 09/109784DATED: February 21, 2001INVENTOR(S): Takeya Okamoto

Page 1 of 1

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

#### Title Page (63)

On Front Page under Related U.S. Application Data delete "Continuation-in-part of application No. 08/642,560, filed on May 3, 1996, now Pat. No. 5,775,995." and insert --This application is a continuation-in-part of U.S. Application No. 08/642,560 filed on May 3, 1996, now U.S. Patent No. 5,775,995, which is a divisional of U.S. Application No. 08/555,400 filed on November 9, 1995, now U.S. Patent No. 5,735,744, which is a continuation-in-part of U.S. Application No. 08/232,862 filed on April 25, 1994, now U.S. Patent No. 5,489,103.--

Column 1, Lines 5 and 6, delete "This is a Continuation-in-Part of Application Ser. No. 08/642,560 filed May 3, 1996, now U.S. Pat. No. 5,775,995." and insert --This application is a continuation-in-part of U.S. Application No. 08/642,560 filed on May 3, 1996, now U.S. Patent No. 5,775,995, which is a divisional of U.S. Application No. 08/555,400 filed on November 9, 1995, now U.S. Patent No. 5,735,744, which is a continuation-in-part of U.S. Application No. 08/232,862 filed on April 25, 1994, now U.S. Patent No. 5,489,103.--

Signed and Sealed this

Twenty-fifth Day of March, 2008

JON W. DUDAS Director of the United States Patent and Trademark Office

# UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

Page 1 of 1

PATENT NO.: 6,193,520 B1APPLICATION NO.: 09/109784DATED: February 27, 2001INVENTOR(S): Takeya Okamoto

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This certificate supersedes the Certificate of Correction issued March 25, 2008.

Signed and Sealed this

Fifteenth Day of April, 2008

JON W. DUDAS Director of the United States Patent and Trademark Office

# **EXHIBIT C**

Japanese Laid Open Patent Application No. H01-166218

## PAID SOFTWARE ADMINISTRATION AND MAINTENANCE SYSTEM

## SUZUKI Katsuyoshi and MATSUURA Yasuhiko

Translated from Japanese by Allen Hunter, J-E Technical Translator PO Box 12645, Portland, OR 97212-0645 USA

# (19) JAPANESE PATENT OFFICE (JP)(12) LAID-OPEN PATENT APPLICATION JOURNAL (A)(11) LAID-OPEN PATENT APPLICATION NO. H01-166218

(51)	Int. Cl. <sup>4</sup> :	G06F 9/06, 12/14
(21)	Filing No.:	\$62-323933
(22)	Filing Date:	December 23, 1987
(43)	Laid-open Date:	June 30, 1989
	No. of Claims:	1 (Total of 3 pages)
	Examination Request:	Not filed
	(54) PAID SOFTWARE ADMINISTRATION AND M (Yuushou sofutuea hoshu kanri hou	
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(74) Agent: OGAWA Katsuo, Patent Atty. et al.

# Specification

# 1. Title of the invention

Paid software administration and maintenance system

#### 2. Scope of the patent claim

1. A paid software administration and maintenance system that is characterized by

comprising a means that encodes the contract term for paid software to be delivered and writes it to a directory, a means that, when a request is generated in the operation system that handles this paid software for processing of the paid software, reads the computer usage date from the computer, reads the contract date from the directory, and after converting both of these to comparison variables, runs a comparison and, depending on the difference in the comparison result, outputs an alert, extension, or interruption message to the processing requestor, a means that writes and accumulates the aforementioned messages and computer usage dates in a paid software administration and maintenance file, a means that periodically forwards the aforementioned accumulated information to the paid software provider, and a means for the supplier to forward information, such as requests for additional payment for use of the paid software after the contract term has ended, notifications of end of contract term, new paid software sales, etc., based on the aforementioned forwarded information.

3. Detailed description of the invention

(Field of industrial use)

This invention pertains to a paid software administration and maintenance system with use and performance expirations, and specifically relates to an administration and maintenance system that is equipped with means to discover the usage status for software whose contract term has expired, prevent contract violations, and perform new system sales.

#### (Prior art)

Past administration systems consisted of control means that permitted processing using paid software only when the contract expiration and the date of use have been compared to confirm that the expiration has not been reached, as described in Japanese Laid Open Patent Application Publication No. **\$**58-87631.

(Problems solved by the invention)

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The aforementioned prior art had problems in that it gave no consideration to alert the user or to grant leeway regarding the prevention of illegal use after expiration of the paid software had been reached, making its spontaneous use impossible. It also had the problem that no consideration was given to making it possible for the maker to automatically determine contract expiration information and information regarding the use of paid software past the contract expiration, making maintainability of the paid software poor.

The purpose of this invention is to improve the ease-of-use of paid software, and to easily realize improved loss prevention and maintainability, by dividing illegal use of paid software after expiration of the contract into multiple levels, and automatically forwarding contract expiration related information to the maker.

(Means of solving problems)

The above purpose is achieved by outputting messages divided into alert, extension, and interruption according to ranges of the difference between comparison variables when comparing the contract expiration and the date of computer use, and providing alerts and extensions to users, accumulating information on the results of comparisons in a paid software administration and maintenance file, and periodically forwarding it to the maker.

(Action)

For paid software that has reached its contract expiration, an alert message is output before the expiration is reached and an interruption message is periodically output even after the expiration has been reached. Thus, work will not be spontaneously interrupted and the like since the user is granted an extension.

In addition, the aforementioned information is also forwarded to the maker. Thus, use after expiration of the contract can be periodically determined without loss. Thus, the period of use after expiration of the contract term can be determined and losses not accrued because additional charges can be made. Software on which the contract is going to expire can be found out before the fact, facilitating maintenance, such as sales, etc.

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#### (Example embodiment)

An example embodiment of this invention is described below, using Figures 1 through 3. When a paid software delivery request is generated (100), the contract term is loaded to a directory writer. (101) The loaded contract term is encrypted and converted, and then (102) written to the directory of the paid software being delivered. (103) Additional information, such as an interruption grace period, etc., can also be written as information to the directory in addition to the contract term. Since the contract term is encrypted, the user is unable to manipulate it in anyway. In addition, no matter how the paid software might be copied, it cannot be illegally used since it will be copied together with the directory as a unit. Furthermore, since the contract term is loaded to part of the directory as several bytes of encrypted information, there is virtually no change in the volume of the paid software. Next, when a paid software processing request is generated by the user (201), the contract term is loaded from the directory of the paid software in the operation system (201). The encrypted contract term information that has been loaded is converted to term comparison variable A (202). Next, the date of computer use is read from the computer (203) and converted to comparison variable B (204).

Next, A and B are compared, and processing is permitted (212) if it is within the contract term (205). Within an alert period (206), an alert message is output, or an extension message is output within an interruption grace period (207), and then the aforementioned message and the date of use are written to the paid software administration and maintenance file (211) and processing is allowed. (212) If the interruption extension term has lapsed, processing is rejected (213).

Next, as shown in Figure 3, the contents of the paid software administration and maintenance file on the user side are collected and automatically compiled on the maker side by means of public lines, floppy disks, or MT, etc. Administration and maintenance, such as requests for additional charges for use after contract expiration, new software sales, contract expiration instructions, etc., are performed on the basis of this complied information. Security encryption of the paid software

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administration and maintenance file makes it so that it cannot be illegally updated by the user. The maker does not incur losses in this way.

Furthermore, in addition to the messages and date of use information written to the paid software administration and maintenance file, the number of uses, computer usage time, and performance evaluation information, etc., can also be accumulated, and analyzing this information can also play a role in evaluation, etc.

Since the expiration of the contract term can be known before the fact on the user side, and contract expiration information can also be determined on the maker side according to this invention, it has the effect of making it possible to automatically perform maintenance, without experiencing loss due to illegal use.

(Effect of the invention)

With this invention, on the user side, it is possible to know about expiration of the contract term before the fact, and use is possible for a set period even after expiration of the contract term. On the maker side, it is possible to automatically administer the contract for paid software, having the effect of making automation possible on even the maintenance aspect.

4. Brief explanation of the figures

Figure 1 is a flowchart that shows the means by which the contract term is written to the paid software directory in an example embodiment of this invention, Figure 2 is a flowchart that shows the means by which paid software processing is approved in the operation system, and Figure 3 is an explanatory drawing that shows the means of administration and maintenance on the side of the paid software provider.

1 ... paid software provision destination (user)

- 2 ... paid software provider (maker)
- 3 ... public lines
- 4 ... acquisition
- 5 ... MT

6 ... floppy disk

7 ... mail

Agent: OGAWA Katsuo, Patent Atty.




7



Fig. 3

# ⑲ 日本国特許庁(JP) ⑪ 特許出願公開

◎ 公開特許公報(A) 平1-166218

⑤]Int_Cl.⁴ G 06 F 9/ 12/	識別記号 /06 330 /14 320	庁内整理番号 B-7361-5B F-7737-5B	④公開 平成1年(1989)6月30日
	14 520		未請求 発明の数 1 (全3頁)
	有償ソフトウエア保守	管理方式	
		昭62-323933 昭62(1987)12月23日	
⑫発 明 者	鈴木 勝喜	神奈川県秦野市堀山下1 工場内	番地 株式会社日立製作所神奈川
⑬発 明 者	松浦泰彦	神奈川県秦野市堀山下1 工場内	<b>番地</b> 株式会社日立製作所神奈川
⑪出 願 人 ⑫代 理 人	株式会社日立製作所 弁理士 小川 勝男		台4丁目6番地

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特開平1-166218 (2)

了後の使用情報などを自動で把握するという点に ついての配慮がされておらず、有償ソフトウェア の保守性が悪いという問題があった。

本発明の目的は、有償ソフトウェアの契約期限 満了後の不当使用防止を数段回に分けて行い、ま た契約期限満了情報についても、自動でメーカに 伝達することによって、有償ソフトウェアの使い 勝手を向上させ、契約違反防止による損害防止。 保守性の向上を容易に実現することにある。

〔問題点を解決するための手段〕

上記目的は、契約期限と計算機使用日付の比較 を比較変数の差の範囲で行うことにより、メッセ ージを警告,停止独予,停止と分割して出力し、 ユーザに響告,猶予を与えることと、比較結果の 情報を有償ンフトウェア保守管理ファイルに蓄積 して定期的にメーカ側へ伝達することにより、達 成される。

〔作用〕

契約期間満了となる有償ソフトウェアは、期限 満了前に警告メッセージを出力し、期限満了後も

ることはできない。また、有債ソフトウェアがど のようにコピーされても、ディレクトリも一体と なってコピーされるため、コピー先でも不法な便 用は行えない。さらに契約期限は数パイトの暗号 情報で、ディレクトリの一部に読込むため、有償 ソフトウェアの容量はほとんど変らない。次にユ ーザより有償ソフトウェア処理要求が発生(201) した場合、オペレーションシステムにおいて、契 約期限を有償ソフトウェアのディレクトリ部より 読込む(201)。読込んだ契約期限暗号化情報を 期限比較変数Aに変換する(202)。次に、計算 機より計算機使用日付を読込んで(203)、比較 変数Bに変換する(204)。

次にAとBを比較し契約期間内であれば(205) 処理を許可する(212)。 警告期間内については (206) 警告メッセージを(209) 停止有余期間 内については(207) 停止猶予メッセージを出力 (210) して、有償ソフトウェア保守管理ファイ ルに前記メッセージと使用日付を書込み(211) 処理を許可する。(212) 停止猶予期限を過ぎているも ー定期 間は停止メッセージを出力し動作する。そ れによってユーザ側に猶予が与えられるので、作 薬が突然停止したりすることがない。

また、前記情報はメーカ側にも伝達される。 それによって契約期限満了後使用された期間も把 握でき、これに対し追欲も行えるため損害は受け ない。また、事前に契約期限満了ソフトウェアも 把握でき、セールス等の保守を容易に行うことか てきる。

〔実施例〕

以下、本発明の一実施例を第1図~第3図によ り説明する。

有徴ソフトウェア出荷要求が発生(100)した 場合、ディレクトリライターに契約期限を競込ま せる。(101) 観込んだ契約期限を暗号変換して (102) 出荷有償ソフトウェアのディレクトリに 替込む。(103) ディレクトリに 普込む情報に突 約期限の他に、停止有余期間等の 竹加情報も普込 むことが可能である。 契約期限は暗号化されてい るためユーザはこれに対して何らかの操作を加え

のについては処理を却下する(213)。

次に、図るに示すように、メーカ側はユーザ側 にある有債ソフトウェア保守管理ファイルの内容 を定期的に公衆回縁、フロッピーディスク、MT 等により回収を行い自動楽計する。この集計した 情報に基づいて契約期限満了後の使用に対する追 徴金の請求、新ソフトウェアのセールス、契約期 限満了案内等の保守管理を行う。有債ソフトウェ ア保守管理ファイルは機密保護することによって、 ユーザが不法に更新できないようにする。これに よってメーカは損害を受けることはない。

さらに有償ソフトウェア保守管理ファイルへ響 込む情報としてメッセージ、使用日付の他にも、 使用回数、計算機使用時間、性能評価情報等を蓄 積して、この情報を解析することにより、評価等 に役立てることも可能である。

本発明によれば、ユーザ側では契約期限満了を 事前に知ることができ、メーカ側も契約期限満了 情報を把握できるため、不法使用による損害を受 けることもなく、保守を自動で行える効果がある。

### 特開平1-166218 (3)

(発明の効果)

本発明によればユーザ側は契約期版 滅了を事前 に知ることが可能となり、 契約期限 満了後も一定 期間使用可能となる。メーカ側は有償ソフトウェ アの自動的な契約 官理が可能となり、保守面にお いても自動的に行える効果がある。

4. 凶面の簡単な説明

第1図は本発明の一奥施例の有値ソフトウェア のディレクトリに契約期限を資込む手順を示すフ ローチャート、第2図はオベレーションシステム ドおける有値ソフトウェアの処理認可手順を示す フローチャート、第3図は有値ソフトウェア提供 者側の保守曾理手順を示す説明図である。 1…有値ソフトウェア提供先(ユーザ). 2…有償ソフトウェア提供者(メーカ), 3…公衆回線, 4…人手, 5…MT, 6…フロッピーディスク, 7…郵便物。

代理人弁理士 小 川 勝



第 3 図



# **EXHIBIT E**

#### (19) Japan Patent Office (JP)

(11) Japanese Unexamined Patent Application Publication

H4-32898

# (12) Japanese Unexamined Patent Application Publication (A)

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(54) Title o	f the inventio	on KARAOKE SYS	ТЕМ	
		(21) Japanese Pate	ent Application	H2-138332
		(22) Date of Appli	cation	May 30, 1990
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Continued of	on last page			

#### **SPECIFICATION**

- 1. TITLE OF THE INVENTION Karaoke system
- 2. SCOPE OF PATENT CLAIMS

1) A karaoke system characterized in that it comprises a karaoke data transmission device and a plurality of karaoke reproduction devices connected thereto through digital communication lines,

wherein said karaoke data transmission device comprises the constitutive elements described under items (a) through (g) below, namely:

(a) a large hard disk storage device on which is recorded multiple song data, subtitle data and image data used for karaoke, as well as request information, the usage conditions of said karaoke reproduction devices, etc.;

(b) a host computer that controls the input and output of various types of data to and from said large hard disk storage device;

(c) interfaces that are provided for each of the aforementioned digital communication lines and which control the transmission and reception to and from the digital communication line;

(d) CPUs that are provided for each of the

aforementioned interfaces and which control the interface to perform automatic answering, and extract the necessary data from the large hard disk storage device via said host computer according to the request number;

(e) buffer RAMs that are provided for each of the aforementioned interfaces and which store data extracted from said large hard disk storage device and output said data to said digital communication line via said interface as instructed by said CPU;

(f) a common data bus that manages the exchange of data between said plurality of CPUs provided for each of the aforementioned interfaces and said host computer; and

(g) a printer that is connected to said host computer and print outs request information and the usage conditions of said karaoke reproduction devices and the like,

and said plurality of karaoke reproduction devices each comprises the constitutive elements described under items (h) through (q) below, namely:

(h) a CPU that controls the operation of the karaoke reproduction device as a whole;

(i) an interface that controls transmission and reception to and from said digital communication line;

(j) a buffer RAM that temporarily stores input data from said digital communication line and transfers it to said CPU when the data has reached a set quantity;

(k) a song selection device into which the user inputs karaoke request numbers;

(l) an image reproduction circuit that decodes image data contained in said input data transferred via said CPU;

(m) a music reproduction circuit that decodes the music data contained in said input data transferred via said CPU;

(n) a subtitle control circuit that decodes subtitle information contained in said input data transferred via said CPU and controls the change in subtitle color as the song progresses;

(o) a combining circuit that combines the video signal from said image reproduction circuit and the video signal from said subtitle control circuit;

(p) a display device that displays the image and subtitle video signals combined by said combining circuit; and

(q) a speaker that reproduces the music signal from said music reproduction circuit.

3. DETAILED DESCRIPTION OF THE INVENTION (FIELD OF INDUSTRIAL APPLICATION)

The present invention relates to a karaoke system.

(PRIOR ART)

So-called karaoke, wherein only the accompaniment of a popular song is reproduced and a person sings along to it, has become widespread, and karaoke devices have been installed in many restaurants, bars, taverns, inns, hotels, and the like.

Conventional karaoke devices have been provided in various formats, such as devices that utilize an 8-track music tape and reproduce only music, devices that reproduce simple still images and lyrics subtitles as well as high quality music using a CD, CDG, etc., as well as devices that display a moving picture and simultaneously display lyrics subtitles that change as the song progresses and also reproduce high quality music, using an LD, VHD, etc. However, these conventional karaoke devices have had various problems, such as that ① as the quantity of music software increases, the installation footprint becomes larger, ② when a new song is released, since there are many songs recorded on a single medium (CD, etc.), the operation of adding a new songs thereto is complicated and so accommodation of new songs is delayed, ③ as the quantity of music software increase, the software preparation costs become greater, ④ it is not possible to accurately know the usage conditions of devices at businesses where the karaoke devices are installed, which may cause problems in charging rental lease fees.

### (PROBLEM TO BE SOLVED BY THE INVENTION)

The present invention was made to resolve the aforementioned problems, its object being to provide a karaoke system that has many advantages, such as being able to support multiple accesses with a single piece of software, allowing new songs to be accommodated immediately, making it possible to accurately know the karaoke usage conditions, having a small installation footprint and low initial cost, and having no limitations on the number of songs made available.

(MEANS FOR SOLVING THE PROBLEM)

The aforementioned object can be achieved by means of a karaoke system characterized in that it comprises a karaoke data transmission device and a plurality of karaoke reproduction devices connected thereto through digital communication lines,

wherein said karaoke data transmission device comprises the constitutive elements described under items (a) through (g) below, namely:

(a) a large hard disk storage device on which is recorded multiple song data, subtitle data and image data used for karaoke, as well as request information, the usage conditions of said karaoke reproduction devices, etc.;

(b) a host computer that controls the input and output of various types of data to and from said large hard disk storage device;

(c) interfaces that are provided for each of the aforementioned digital communication lines and which control the transmission and reception to and from the digital communication line;

(d) CPUs that are provided for each of the aforementioned interfaces and which control the interface to perform automatic answering, and extract the necessary data from the large hard disk storage device via said host computer according to the request number;

(e) buffer RAMs that are provided for each of the aforementioned interfaces and which store data extracted from said large hard disk storage device and output said data to said digital communication line via said interface as instructed by said CPU;

(f) a common data bus that manages the exchange of data between said plurality of CPUs provided for each of the aforementioned interfaces and said host computer; and

(g) a printer that is connected to said host computer and print outs request information and the usage conditions of said karaoke reproduction devices and the like,

and said plurality of karaoke reproduction devices each comprises the constitutive elements described under items (h) through (q) below, namely:

(h) a CPU that controls the operation of the karaoke reproduction device as a whole;

(i) an interface that controls transmission and reception to and from said digital communication line;

(j) a buffer RAM that temporarily stores input data from said digital communication line and transfers it to said CPU when the data has reached a set quantity;

(k) a song selection device into which the user inputs karaoke request numbers;

(l) an image reproduction circuit that decodes image data contained in said input data transferred via said CPU;

(m) a music reproduction circuit that decodes the music data contained in said input data transferred via said CPU;

(n) a subtitle control circuit that decodes subtitle information contained in said input data transferred via said CPU and controls the change in subtitle color as the song progresses;

(o) a combining circuit that combines the video signal from said image reproduction circuit and the video signal from said subtitle control circuit;

(p) a display device that displays the image and subtitle video signals combined by said combining circuit; and (q) a speaker that reproduces the music signal from said music reproduction circuit.

(OPERATION)

A configuration as described above makes it possible to connect karaoke reproduction devices installed at many businesses where karaoke is used and installed through digital communication lines to a single karaoke data transmission device provided at a center, thus making it possible to accommodate multiple accesses with a single piece of software recorded on the large hard disk storage device of the center's karaoke reproduction device and allowing new songs to be reproduced on all karaoke reproduction devices simply by recording them on the aforementioned large hard disk storage device when new songs are released, thus making it possible to provide a karaoke system with many advantages, such as being able to immediately accommodate new songs, having no restriction on the number of songs made available, requiring only a small installation footprint and having low initial cost, as well as allowing one to accurately know the karaoke usage conditions by recording the number of requests and the song numbers from each karaoke reproduction device on the center's large hard disk storage device. (EMBODIMENTS)

The configuration of the present invention will be described specifically below while referring to the drawings.

Figure 1 is an illustration showing the installed state of the karaoke system of the present invention; Figure 2 is a block diagram showing the circuit configuration of the karaoke data transmission device in the karaoke system of the present invention; and Figure 3 is a block diagram showing the circuit configuration of the karaoke reproduction device in the karaoke system of the present invention.

As shown in Figure 1, the karaoke system of the present invention comprises one karaoke data transmission device A provided at a center, and multiple karaoke reproduction devices  $B_1$ ,  $B_2$ ,  $B_3$ ,  $B_4$ , etc., installed at businesses where karaoke is used and installed at different locations and connected to the karaoke data transmission device A through digital communication lines  $C_1$ ,  $C_2$ ,  $C_3$ ,  $C_4$ , for instance ISDN. The karaoke data transmission device A comprises a large hard disk storage device, host computer, buffer RAM, digital circuit interface, etc., and the karaoke reproduction device  $B_1$ ,  $B_2$ , etc. each comprises a digital circuit interface, buffer RAM, CPU, image reproduction device, music reproduction device, subtitle control circuit, song selection device, display device, speaker, etc.

In the present specification, "digital communication line" refers to an integrated network that performs, in integrated fashion, various services such as computer-to-computer communication, facsimile and videotex by transmission of digital signals, for example, ISDN (Integrated Service Digital Network), INS (Information Network System), DDX (Digital Data Exchange), etc.

In response to a call signal sent from karaoke reproduction device  $B_1$ ,  $B_2$ , etc. through digital communication lines  $C_1$ ,  $C_2$ , etc., the karaoke data transmission device A detects the number of the requested song and on that basis calls up the required data from the large hard disk storage device 2a and transfers it to the karaoke reproduction device  $B_1$ ,  $B_2$ ,  $B_3$ , etc.

The karaoke reproduction devices  $B_1$ ,  $B_2$ , etc. have the function of automatically calling the center and transmitting the request number to the karaoke data transmission device A through digital communication lines  $C_1$ ,  $C_2$ ,  $C_3$ , etc. when the request number of the desired song has been selected by manipulating the song selection device, and then receiving the karaoke data extracted based on the request number, and reproducing the song and images.

First, the karaoke data transmission device A provided in the center will be described while referring to Figure 2.

The karaoke data transmission device comprises a large hard disk storage device 2a, host computer 2b, interface 2c, CPU 2d, buffer RAM 2e, common data bus 2f and printer 2g. An interface 2c, CPU 2d and buffer RAM 2e are provided for each of the digital communication lines  $C_1$ ,  $C_2$ ,  $C_3$  and  $C_4$ .

The large hard disk storage device 2a is used to record multiple song data, subtitle data and image data used for karaoke, and also to record request information and usage conditions of the karaoke reproduction devices. The host computer 2b controls the input and output of various types of data to and from the large hard disk storage device 2a, and has the function of extracting the necessary data from the large hard disk storage device 2a and transferring it to CPU 2d in response to requests from CPU 2d, and recording data such as request information, dates and times from the karaoke reproduction devices  $B_1$ ,  $B_2$ , etc. on the large hard disk storage device 2a.

The interface 2c is provided for each of the digital communication lines  $C_1$ ,  $C_2$ ,  $C_3$ , etc., and is designed to control automatic answering of calls from the digital communication line, such as ISDN, and to control automatic transfer of data.

The CPU 2d controls the interface 2c to perform automatic answer, extracts the necessary data from the large hard disk storage device 2a via the host computer 2b according to the request number sent from the karaoke reproduction devices  $B_1$ ,  $B_2$ , etc. and stores this data in buffer RAM 2e.

The buffer RAM 2e temporarily stores data such as song data and subtitle data extracted from the large hard disk storage device 2a as described above, and outputs the data via interface 2c to the digital communication line  $C_1$  as instructed by the CPU 2d.

The common data bus 2f manages the exchange of data between a plurality of CPUs 2d, provided for each digital communication line, and a single host computer 2b, so as to allow the host computer 2b to be shared for multiple digital communication lines (20 to 100 lines).

The printer 2g is connected to the host computer and is used for printing out request information and the usage conditions of the karaoke reproduction devices and the like as necessary.

Next, the karaoke reproduction devices  $B_1$ ,  $B_2$ ,  $B_3$ , etc. installed at the businesses where karaoke is used and installed will be described while referring to Figure 3. The karaoke reproduction devices  $B_1$ ,  $B_2$ ,  $B_3$ , etc. all have the same configuration, so only one will be described here.

The karaoke reproduction device comprises a CPU 3h, interface 3i, buffer RAM 3j, song selection device 3k, image reproduction circuit 3l, music reproduction circuit 3m, subtitle control circuit 3n, combining circuit 3o, display device 3p and speaker 3q; the CPU 3h comprises a CPU main body 3h-1, program ROM 3h-2, program RAM 3h-3 and work RAM 3h-4, and the song selection device 3k and CPU 3h are connected via I/O circuit 3k'.

The CPU 3h plays the role of controlling the operation of the karaoke reproduction device as a whole, its principal functions being communications related control, music reproduction control, subtitle display and control, image reproduction control, request acceptance and display control.

The interface 3i controls transmission and reception to and from the digital communication line, and performs call placement to the telephone number for calling the karaoke transmission device and reception of data sent from the karaoke transmission device.

The buffer RAM 3j temporarily stores input data from the digital communication line and transfers the data to the CPU 3h once it has reached a set quantity.

The song selection device 3k is a device used by the user for inputting the desired karaoke request number; the request number inputted via I/O circuit 3k' to the CPU 3h is sent through interface 3i over the digital communication line to the karaoke transmission device.

The song selection device 3k and CPU 3h may be connected with a cable, or the song selection device 3k can be made into a remote control device and the song selection signals can be sent in wireless format.

The image reproduction circuit 31 decodes the image data contained in the input data from the karaoke transmission device transferred via CPU 3h after being stored temporarily in buffer RAM 3j, and converts it to a signal that can be displayed by the display device 3p.

The music reproduction circuit 3m decodes the music data contained in the input data transferred in a similar manner via CPU 3h, and converts it to an audio signal that can be reproduced by the speaker 3q.

The subtitle control circuit 3n decodes the lyrics subtitle information contained in the input data transferred in a similar manner via CPU 3h, converts it to a signal that can be displayed by the display device 3p, and controls the change in color of the subtitles so as to indicate the position in the lyrics to be sung as the song progresses by means of the color change.

The combining circuit 30 combines the video signal from the image reproduction circuit 31 and the video signal from the subtitle control circuit 3n and sends them to the display device 3p.

Next, the operation of the karaoke system of the present invention, configured as above, will be described.

When the user inputs the desired karaoke request number using the song selection device 3k of the karaoke reproduction device installed at a business where karaoke is used and installed, the corresponding signal is inputted via I/O circuit 3k' into CPU 3h. At this time, the interface 3i dials the telephone number for calling the center's karaoke transmission device based on instructions from the CPU 3h and, once the other party is ready to receive, transmits the request number through the digital communication line to the center's karaoke transmission device.

The aforementioned request number is brought to the CPU 2d through interface 2c on the karaoke transmission device side. At that time, CPU 2d extracts the required data, i.e. the image data, music data and subtitle data of the requested song, from the large hard disk storage device 2a via the host computer 2b according to the request number, and stores this data in the buffer RAM 2e.

The buffer RAM 2e transmits the data extracted from the large hard disk storage device 2a as above through interface 2c over the digital communication line to the karaoke reproduction device side, as instructed by the CPU 2d.

Here, since the host computer 2b is connected to multiple CPUs 2d via the common data bus 2f and can be shared for the digital communication lines of multiple karaoke reproduction devices, even when multiple requested songs from a plurality of karaoke reproduction devices are contending at the same time, each karaoke reproduction device can be accommodated very quickly.

When the desired requested song data is delivered through the digital communication line to the karaoke reproduction device side as described above, the input data is temporarily stored in buffer RAM 3j, and once the data reaches a set quantity, that data is sent through the CPU 3h to the image reproduction circuit 31, music reproduction circuit 3m and subtitle control circuit 3n.

At this time, the image reproduction circuit 31 decodes the image data contained in the input data and converts it to a signal that can be displayed by the display device 3p, the music reproduction circuit 3m similarly decodes the music data and converts it to an audio signal that can be reproduced by the speaker 3q, and the subtitle control circuit 3n similarly decodes the lyrics subtitle information and converts it to a signal that can be displayed by the display device 3p, and controls the change in subtitle color so as to indicate the position of the lyrics to be sung as the song progresses by means of the color change.

The video signals from the image reproduction circuit 31 and the subtitle control circuit 3n are combined in the combining circuit 3o and sent to the display device 3p, and the output of the music reproduction circuit 3m is inputted into the speaker 3q, the accompaniment of the desired requested song is reproduced along with images appropriate to that song, and at the same time the lyrics to be sung are displayed as subtitles on the screen of the display device while changing their color as the song progresses.

For the subtitle display, an arrangement whereby the subtitles are recorded together within the image data is also possible, in which case the subtitle control circuit 3h of the karaoke reproduction device may be omitted.

When a new song is to be employed in the karaoke system described above, by just recording the corresponding data on the large hard disk storage device 2a provided at the center, requests from the karaoke reproduction devices of all the businesses where karaoke is used and installed can be accommodated.

Furthermore, by recording the song number and frequency of requests on the large hard disk storage device whenever a request is made from a karaoke reproduction device to the karaoke data transmission device and printing out this information as necessary on the printer 2g, it becomes possible to determine the number of times each karaoke reproduction device is used, which not only makes the calculation of usage fees clear and easy, but also makes it easy to discriminate between songs for which there are many and few requests, which can be made use of as reference information when changing software or the like.

Furthermore, since only the karaoke reproduction device needs to be placed at the business where karaoke is used and installed, without the need to prepare large amounts of software, storage devices, etc., the installation footprint and initial cost can be reduced.

Various modifications can also be made, as appropriate, to the design of the karaoke data transmission device installed at the center, making the data sent out from it into ① song data, ② song data and subtitle data, ③ song data, subtitle data and subtitle color change data, ④ color change data, subtitles and image data, and the like.

Moreover, various modifications can be made, as appropriate, to the design of the karaoke reproduction device installed at each business where karaoke is used and installed, whereby for instance ① song data and subtitle data are combined in the data sent from the center, and the device has a function that allows the subtitles and song to be reproduced simultaneously, 2 song data, subtitle data and subtitle color change data are combined in the data sent from the center, and the device has a function that allows subtitles, song and subtitle color change to be reproduced simultaneously, 3 image data is also sent simultaneously, and the device has a function that allows the song, subtitles, subtitle color change and background image to be reproduced simultaneously, (4) the device can acquire image data from an external input terminal, and the like. (EFFECT OF THE INVENTION)

Since the present invention is configured as discussed above, using the present invention makes it possible to provide a karaoke system having many advantages, such as being able to handle multiple accesses with a single piece of software, allowing new songs to be incorporated and requests for them to be accommodated immediately, making it possible to accurate know the karaoke usage conditions, having a small installation footprint and low initial cost, having no limitation on the number of songs made available, and the like.

The present invention is not limited to the embodiment discussed above, and encompasses all modified embodiments within the scope of the object of this invention that could be easily conceived of by a person skilled in the art based on the above description.

4. BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 is an illustration showing the installed state of the karaoke system of the present invention; Figure 2 is a block diagram showing the circuit configuration of the karaoke data transmission device in the karaoke system of the present invention; and Figure 3 is a block diagram showing the circuit configuration of the karaoke reproduction device in the karaoke system of the present invention.

A ......Karaoke data transmission device

- B1 through B4 .... Karaoke reproduction device
- $C_1$  through  $C_4$  .... Digital communication line 2a .....Large hard disk storage device
- 2b-----Host computer
- 2c ·····Interface
- 2d------CPU
- 2e-----Buffer RAM
- 2f ·····Common data bus

#### **Figure 1**

3hCPU
3h-1 ······CPU main body
3h-2 ······Program ROM
3h-3 ······Program RAM
3h-4 ····· Work RAM
3i ······Interface
3j ······Buffer RAM
3k ······Song selection device
3k'·····I/O circuit
31 ······Image reproduction circuit
3m ······ Music reproduction circuit
3n ······Subtitle control circuit
30 ······Combining circuit
3p ······Display device
3q ·····Speaker

Patent applicant: Tatio Corporation Agent: (7524) Shotaro MOGAMI



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Continuation of page 1 (51) Int.Cl. <sup>5</sup> H 04 M 11/08	Identification codes	JPO file numbers 71175K
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⑩白本國特許庁(JP) ⑪特許出願公開

# ◎ 公開特許公報(A) 平4-32898

₿Int. Cl. *	識別記号	庁内整理番号	◎公開	平成4年(1992)2月4日
G 10 K 15/04 G 11 B 27/10 H 04 M 11/00	302 D Z	8842—5H 8224—5D 7117—5K ※		

審査請求 未請求 請求項の数 1 (金9頁)

> ②特 願 平2−138332 ②出 願 平2(1990)5月30日

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最終頁に続く

#### 6月 永田 書

1. 発明の名称

カラオケシステム

2. 特許請求の範囲

() カラオケデータ送出装置と、デジタル邀信 回線を通じてこれに接続される複数のカラオケ群 出設置とから成り。

上現カラオケデータ送出装置は、下記回面ない し順項記載の構成要素、即ち、

(a)カラオケに使用される多数の数のデータ、デ ロップデータ、画像データが記録され、更にリク エスト情報及び上記カラオケ再患装置の利用状況 等が記録される大型ハードディスク認識装置と、

◎と記大型ハードディスク記憶装置への各様デ ータの送し入れを制顔するホストコンピュータと、 (4)と記デジタル通信回線のそれぞれに対応して 設けられ、デジタル通信回線への送受信を削録す るインターフェイスと、

幼上記インターフェイスのそれぞれに対応して

設けられ、インターフェイスを制御して自動者信 を行ない、リクエストナンバーに従い上記サスト コンピュータを介して大型ハードディスク記憶装 置から必要なデータを取り出すCPUと、

(e)上記インターフェイスのそれぞれに対応して 設けられ、上記大型ハードディスク記憶装置から 取り出されたデータをスキアし、上記CPUの係 令により当該データを上記インターフェイスを介 して上記デジタル通信回線へ送出するバッファド AMと、

(自上記インターフェイスのそれそれに対応して 設けられた上記複数のCPUと、上記ホストコン ビュータとの間のデータの器気を統御する処慮デ ータバスと、

(個点記ホストコンピュータに接後され、リクエスト情報及び上記カラオケ等空装置の利用状況等 をプリントアウトするブリンタとを備え、

上記模数のカラオケ再邀該敵のそれぞれは、下 記伽頃ないしGI項記載の構成要素、即ち、

(h) カラオケ褥生装置全体の作動を制御するCP

ひと、

(9)上記デジタル通信回線への送受信を削留する インターフェイスと、

(i)上記デジタル通信回線からの入力データを一 時的にストアし、データが一定量に適したときこ れを上記CPUに転送するバッファRAMと、

|例科術者がカラオケのリクエストナンパーを入 力する選曲装置と、

(I)上記CPUを介して転送された上記入力デー タに含まれる画像データをデコードする画像再生 回路と、

総上記じPUを介して転送された上記入力デー タに含まれる音楽データをデコードする音楽再生 個路と、

(1)上記CPUを介して転送された上記入力デー クに含まれるテロップ情報をデコードすると共に、 割の進行に応じてその色の変化を制御するチロッ プ報酬回路と、

(の)上記画像料畫圖路からの映像信号と上記テロ ップ制御回路からの映像信号とを含成する合成図

高音質の普楽が再現されるもの等々、様々な形態 のものが提供されている。

然しながら、これらの従来のカラオケ装置にお いては、①音楽ソフトの増大に浮い、その設置面 後が大きくなる、②新曲が出ても1つのメディア (CDなど)には多くの曲が記録してあるため、 これに新想を追加する作業は損難で、新強への効 席が遅れる、③音楽リフトの増大に停い、ソフト の準備コストが大きい、④カラオケ設置店におけ る装置の利用状況が正確に氾擾できず、シンクル リースの課金に問題の発生することがある、等々 の問題点があった。

(発明が解決しようとする課題)

半発明は、上記の問題点を解決するためなきれ たものであり、その目的とするところは、1つの ソフトで多くのアクセスに応じることができる。 新曲に選ちに対応できる、カラオケの利用状況を 定確に提倡できる、設置商機が小さく、初期コス トが低い、準備曲数に制限がない等々、多くの利 点を有するカラオケンステムを提供することにあ 勝と、

御上記合成道路により合成された画像及びテロ ップの映像信号を映し出すディスプレイ装置と、 個上記音楽再生回路からの音楽信号を再進する スピーカとを備えたこと、

を特徴とするカラオケシステム。

8、発明の詳細な説明

〔産糞上の利用分野〕

本発明は、カラオケシステムに関する。

〔従来の技術〕

歌謡曲岑の律奏のみが写生され、これに合わせ て歌をうたう所謂カラオケは広く普及し、その数 置は多くの飲食店、スナック、蕭編、旅館、ホチ ル等に設置されている。

間して、従来のカラオケ装置としては、8トラ ックの音楽テーブを利用して音楽だけか再現され るもの、CD、CDCなどによる単純な静止回と 歌謡チロップ及び高音質の音楽が再現されるもの。 しD、VHDなどによる動画を映し出し、歌につ れて変化する歌調チロップも同時に映し出され。

ð,

(課題を解決するための手段)

上記の目的は、

カラオケデータ送出装置と、デジタル通信回線 を通じてこれに機続される複数のカラオケ英生殺 蓋とから成り、

上記カラオケデータ送出搬置は、下記40項ない し)の取記載の構成要素、即ち、

(4) カラオケに使用される多数の曲のデータ、デ ロップデータ、幽楽データが記録され、更にりり エスト情報及び上記カラオケ募生装璧の利帯状況 等が記録される大型ハードディスク記憶装置と、

(時上記大型ハードディスク記憶装置への各種デ ータの出し入れを誤削するホストコンピュータと、 (○上記デジタル通信回線のそれぞれに対応して 設けられ、デジタル通信回線への送受信を制御す るインターフェイスと、

(d)上記インターフェイスのそれぞれに対応して 設けられ、インターフェイスを制飾して自動着信 を行ない、リクエストナンバーに従い上記ホスト コンピュータを介して大型ハードディスク記憶装。 置から必要なデータを取り出すCPUと、

(e)上記インクーフェイスのそれぞれに対応して 設けられ、上記大型ハードディスク記憶装置から 取り出されたデータをストアし、上記CPUの指 会により当該データを上記インターフェイスを介 して上記デジタル通信回線へ送出するバッファR AMと、

(1)上記インターフェイスのそれぞれに対応して 設けられた上記複数のCPUと、上記ホストコン ビュータとの間のデータの投資を統論する共通デ ータバスと、

個上記ホストロンビュータに接続され、リクエ スト情報及び上記カラオケ再生装置の利用状況等 をプリントアウトするプリンタとを備え、

上記録数のカラオケ再生装蔵のそれぞれは、下 記動項ないし(4)項記載の構成要素、開ち、

いカラオケ再生装置全体の作動を耐塑するCP ひと、

印上記デジタル遺信値線への送受信を削額する

ップの映像値号を映し出すディスプレイ装置と、 (4)上記音楽再生間路からの音楽は号を夢生する スピーカをを備えたこと、

を稼厳とするカラオケシステムによって達成し 得る。

(作 周)

上記の如き構成であると、多数のカラオケ利用 設置店にそれぞれ設置されたカラオケ関歩製置を、 デジタル通信回線を通じて、センターに催えた! つのカラオケデータ送出設置に接続することによ り、センクーのカラオケ馬集製置の大型ハードデ イスク記録装置に記録した!つのソフトで多くの アクセスに応じることができ、新曲が出たときに はこれを上記大型ハードディスク記像装置に記録 するだけですべてのカラオケ再集製置で再生でき もから、新曲に置ちに対応することができ、準備 崩数に創設がなく、設備面積が小さくて済み、初 期コストも低く、質には、各カラオケ再生装置か らのリクエスト回数や曲目をセンターの大型ハー ドディスク記憶装備に記録することによりカラオ インターフェイスと、

U)上記デジタル通信回線からの入力データを一時的にストアし、データが一定量に達したときこれを上記じやUに転送するバッファRAMと、

90利用者が☆ラオケのサクエストナンバーを入 力する道曲装置と、

①上記CPUを介して輸送された上記入方デー タに含まれる画像データをデコードする画像海空 園路と、

■抑止記CPUを介して転送された上記入力デー クに含まれる普楽データをデコードする音楽再生 回路と、

(1)上記CPUを介して転送された上記入力デー タに含まれるチロップ課報をデコードすると共に、 曲の進行に応じてその色の変化を制御するチロッ プ劇師回路と、

(9)上記画像群集団路からの映像信号とた記テロ ップ制器圏路からの映像信号とを含成する合成回 路と、

「殿上記會設團路により會成された簡像及びテロ

#### .

ケの利用状況を正確に把握できる、等々、多くの 利点を育するカラオケシステムを提供し得るものであ る。

〔窦 疏 阏〕

以下、図面を参照しつい木発明の構成を具体的 に説明する。

第1図は本発明に係るカラオケシステムの設置 状態を示す説明図、第2図は本発明に係るカラオ ケシステムにおけるカラオケデーク送出選番の回 路標成を示すブロック図、第3図は本発明に係る カラオケシステムにおけるカラオケ再生装置の画 路構成を示すブロック図である。

而して、本発明に係るカラオケシステムは、第 ) 図に示すように、センターに備えた!つのカラ オケデータ送出装置Aと、あちこちのカラオケ利 用設置席に設置され、!SDN等のデジタル通信 回線CLCヵCヵC。を進じて上記カラオケデー タ迷出装置Aに接続された多数のカラオケ務生装 置日、B2、B4、B、等とから成り、カラオケデー タ送出装置Aは失型ハードディスク記憶装置、ホ ストコンピューダ、バッファRAM、デジタル選 ドインターフェイス等々により構成され、カラオ ケ発生装置B」B。等はそれぞれ、デジタル図路 インターフェイス、パッファRAM、CPU、測 像再生装置、音楽再生装置、テロップ誘発閉路、 建築装置、ディスプレイ装置、スピーカ専々によ り様成されている。

なお、本明編書中において『デジタル通信回線』 とは、デジタル信号の伝達によりコンピュータ間 の通信、ファクシミリ、ビデオテックス等の各種 サービスを総合的に行なう統合ネットワークのこ とを指し、ISDN(Integrated Service Digi tal Network)、INS(Information Network System)、DDX(Digital Data Bachange) 毎々を指すものである。

カラオケデュタ送出装置入は、カラオケ再出装 置B.,B. 等からデジタル通信回線C.,C. 等を 通して送られてくる呼出信号に応じて、リクエス ト館のテンパーを検知し、これに基づき所要のデ ータを大型ハードディスク範疇戦置?aから呼出し

上記カラオケ再集装置の利用状況等が語録される ようになっている。

ホストコンビュータ20は、上記大型ハードディ スク記憶装置20への各種データの出し入れを制御 するものであり、CPU2dからの要求に応じて穴 型ハードディスク記憶装置2aから必要なデータを 取り出してCPU2dに転送したり、各カラオケ再 生装置 BILBI 等からのリクエスト情報、日時等 々のデータを大型ハードディスク記憶装置2aに記 録する機能を有している。

インターフェイス20は、上記デジタル通信団線 C」C 20 C 20 ・・塔のそれぞれに対応して設けら れ、)S D N 等のデジタル通信回線からの自動者 信の制御やデータの自動転送を制御するようにな っている。

CPU2dは、インターフェイス20を制御して自動著信を行ない、カラオケ売生装置BioB。等から送られてくるリクエストナンバーに従い上記ホ ストコンピュータ2bを介して大型ハードディスク 記憶装置2aから必要なデータを取り出し、このデ てカラオケ再生装置 B., B., B, 等へ戦略する。 カラオケ再生装置 B., B, 等は、その緩縮装置 を操作して所望の前のリクエストナンバーを進定 すると、音動的にセンターに電話をかけ、デジク ル適信回線 C., C., C. 等を通じてカラオケデー 夕送出鉄 配A ヘリクエストサンバーを送信し、こ れに基づき取り出されたカラオケデータを受信し て能や画像を再生する機能を有する。

まず、センターに痛えられるカラオクデータ増 出装置人について第2図を参照しつ、説明する。 カラオケデータ送出装置は、大型ハードディス

ク記憶装置22、ホストコンピュータ2b、インター フェイス2c、CPU2d、バッファRAM2c、共通 データバス2f、プリンタ2gとから成り、インター フェイス2c、CPU2d、バッファRAM2cについ ては各デジタル運信回線C.,C.,C.,C、毎に設 けられている。

大型ハードディスク記録遊園28には、カラオケ に使用される多数の曲のデータ、テロップデータ、 画像データが記録され、葉にリクエスト情報及び

ークをバッファRAM2eにストアする。

パッファRAM20は、上記の如くして大類ハー ドディスク記憶装置2aから取り出きれた曲データ、 テロップデータ等のデータを一時的にストアし、 上記CPU2dからの指令により当該データを上記 インターフェイス2cを介してデジタル通信回線C。 へ送出する。

共過データバス21は、ホストコンピュータ20を 多数のデジタル通信回線(20~100回線)に共用 するため、各デジタル通信回線ごとに設けられた 複数のCPU2dと、1つのホストコンピュータ2h との間のデータの授受を施設するようになってい る。

プリンタ2gは、上記ホストコンビュークに接続 され、リクエスト情報及び上記かうオケ再生装置 の利用状況等を必要に応じてプリントアウトする ために吊いる。

次に、各カラオケ利用設置店に設置されるカラ オケ再生装置 B 」, B 。, B 。等について第3回を参 厳しつく説明する。カラオケ再生装置 B 」 B 。B

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券のそれぞれはいずれも同一の構成を育するので、 ことではその主つについてのみ脱病する。

カラオケ票定装置は、CPU3h、インターフェ イス3i、パッファRAM3)、透出装置3k、脚像再 生簡略3l、変楽再変簡略3m、テロップ制調ြ調路3s、 合成回路3o、ディスプレイ装置3p、スピーカ3gか ら成り、CPU3hは、CPU本体3h-1、プログラ ムROM3b-2、プログラムRAM3b-3、ワークR AM3h-4から成り、遅度装置3kとCPU3hとは! /O回路3k」を介して接続されている。

CPU3nは、カラオケ喜生装置全体の作動を制 御する役割を果たし、その主な機能は、通信関係 の新御、音楽の感動制御、デロップの表示と制刻、 皆像の再生制御、リクエストの愛付と表示前額で ある。

インターフェイス31は、デジタル通信面綿への 送受信を制御するものであり、カラオケデータ送 出装篋を呼び出すための電話番号の発信並びにカ ラオケデータ送出装篋から送られてくるデータの 受信を行なう。

デコードし、スピーカ3gにより再生し得る音声伝 琴に変換する。

テロップ制御園路3aは、間様にCPU3bを介し て転送されてくる人力データに含まれる歌詞のテ ロップ情報をデコードし、ディスプシイ装置3pに より要示し得る協号に変換すると共に、曲の進行 に応じて歌うべき歌詞の位置をテロップの色の変 化により表示するよう参該色の変化を制御する。

合成回路30は、上記簡像再集回陸8!からの映像 信号とテロップ制御回路3nからの映像信号とを含 変してディスプレイ装置39に送る。

次に、上記の如く構成された本発明に係るカラ オケンステムの作用について説明する。

カラオケ利用設置店に設置されているカラオケ 再生装置の還曲設置3%を用いて利用者が所望のカ ラオケのリクエストナンバーを入力すると、当該 信号はJ/O回路3%。を介してCPU3%に入力さ れる。このときインターフェイス3%はCPU3hか らの潜会に掲づき、センターのカラオケデータ透 出装置を呼び出すための電話番号を発信すると共 バッファRAMSjは、デジタル通信回線からの 入力データを一時的にストアし、データが一定量 に適したときこれをCPUShに転送する。

叢曲装置3kは、利用者が新望のカラオケのリク エストナンバーを入力するための装置であり、 『 ノ〇回路3k』を介してCPU3hに入力されたリク エストナンバーはインターフェイス3iを続てデジ タル通信額線によりカラオケデータ送出装置に送 られる。

なお、増曲装置3%とCPU3hはケーブルで接続 してもよいが、激曲装置3%をリモコン装置として ワイヤレス形式で激曲信号を送るようにしてもよ い。

■像褥生回路3)は、バッファRAM3)に一時的 にストアされた後CPU3hを介して転送されてく るカラオケデーク送出装置からの入力デークに含 変れる回復データをデコードし、ディスプレイ装 置3picより表示し得る信号に変換する。

音楽舞生回路3⊯は、同様にCPU3hを介して転 送されてくる入力データに含まれる音楽データを

に、 柿野側の受信感勢が整った段階で上記リクエ ストナンバーをデジタル通信回線を通じてセンタ ーのカラオケデータ送出感査に送出する。

上記リクエストナンバーは、カラオケデータ送 出鉄置側のインターフェイス20を経てCPU2dに もたらすれる。然るときは、CPU2dは上記リク エストナンバーに従い上記ホストロンピュータ2b を介して大型ハードディスク記憶装置2sから必要 なデータ、知ち、リクエスト曲の画像データ、告 樂データ、テロップデータ等を取り出し、このデ ータをバッファRAM2eにストアする。

パッファRAM2eは、東記の如くして大駅ハー ドディスク記憶装置2aから取り出されたデータを、 CPU2dからの指令によりインターフェイス2cを 経てデジタル通信副線を退じてカラオケ再生装置 例へ送出する。

その場合、ホストコンピュータ2bは発過データ バス2fを介して多数のCPU2dに接続され、多数 のカラオヤ再生数層のデジタル通信回線に共用で きるようになっているため、複数のカラオケ再生

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装置から間時に多数のリクエスト曲が競合しても 振めて短時間で各カラオケ再生装置に対応できる ものである。

上記の如くして、デジタル選信回線を選じてカ うオテ再生報置側へ所望のリクエスト曲のデータ かもたらされると、当該入力データはバッファ系 A M3)に一時的にストアされ、データが一定量に 建すると、これらのデータはC P U 3hを級で、画 像再生回路31、音楽再生回路3m及びテロップ制御 聞路8nに送られる。

然るときは、醫療種類関路31は、人力データに 含まれる醫療データをデコードしてディスプレイ 装置3pにより表示し得る保守に変換し、資薬再生 間路3mは、関様に背楽データをデコードしてスピ ーカ80により発生し得る音声信号に変換し、更に、 テロップ制飾團路3mは、関様に取詞のテロップ情 報をデコードし、ディスプレイ装置3pにより表示 し得る信号に変換すると共に、曲の進行に応じて 歌うべき取認の位置をデロップの色の変化により 表示するよう当該色の変化を制調する。

# しておき、必要に応じてプリンタ2gでこれをプリ ントアウトすることにより、各カラオケ病生装置

の利用函数を知ることかでき、使用料会の算出が 明確かつ容易になるばかりでなく、リクエストの 多い菌と少ない曲を判別することも容易となり、 ソフトの交換等の場合にも参考資料として利用で きる。

また、カラオケ利用設置店には、カラオケ再生 装蔵を置くだけでよく、多数のソフトや記憶装置 等を常意する必要がないので、設置面積や初期コ ストは少なくて済むものである。

而して、センターに設置されるカラオケデータ 遊出装置は、これから送り出すデータが、①曲の チータであるもの、②曲のデータとチロップデー タであるもの、③曲のデータとチロップデータと テロップの包変わりデータであるもの、③色変わ りデータであるものとテロップと画像データであ るもの、等々に進宜設計変更できる。

また、多カラオケ利帛設置店に設置されるカラ オテ再生装置は、①センターから巡られてくるデ 画像再生回路31及びチロップ制類回路30からの 映像信号は合戦回路30において合成されてディス プレイ装置30に送られると共に、音楽再生回路30 の困力はスピーカ30に入力され、所設のリクエス ト曲の体奏とその動にふさわしい映像が再まされ、 またこれと同時にディスプレイ装置の感聞上に取 うべ音歌詞が曲の進行に応じて色変わりしながら テロップ表示されるものである。

なお、上記チロップ表示は、画像データ中に一 緒に記録しておくように構成することも可能であ り、その場合にはカラオケ再生装置のテロップ制 御屋路3hは省階しても差支えない。

耐して、上記のカラオケシステムで新曲を採用 する場合には、そのデータをセンターに設けた大 整ハードディスク記憶装置2aに記録するだけで、 すべてのカラオケ利用設置店のカラオケ構成装置 からのサクエストに対応できる。

また、各カラオケ再生装置からカラオケデータ 送出装置ヘリクエストかもたらされる範疇、大型 ハードディスク記憶装置にその曲目や顕数を記録

ータに、動のデータとテロップのデータが合成さ れて送られ、テロップと曲を同時に再生すること ができる機能を持つもの、②センターから送られ てくるデータに、動のデータとテロップのデータ とテロップの色変わりのデータか合成されて送ら れ、テロップと曲とテロップの色変わりを同時に 構生することができる機能を持つもの、③言像の データも間解に送られ、曲、チロップ、テロップ の急変わり、智景簡像を簡時に再生することがで きる機能を持つもの、④面像データを外部入力端 子から得るようにしたもの、等々に適宜設計変更 できる。

#### (発明の効果)

本発明は叙上の如く構成されるから、本発明に によるときは、1 つのソフトで多くのアクセスに 応じることができ、新臣も道ちに採用してリクエ ストに対応でき、カラオサの利用状況を正確に揺 握でき、設置面積が小さく、初期コストも低く、 準備曲数に誤蹤がない等々、多くの利点を有する カラオケンステムを提供し得るものである。

なお、本発明は叙上の実施例に限定されるもの	3hCPU
でなく、その言約の範囲内において上記の説明か	3h~[・・・ヘ・・・・・・C P U本体
ら当葉者が容易に想到し得るすべての変更実施例	3h-2プログラムROM
を担張するものである。	3h-3プログラムRAM
4、図鈕の簡単な説明	3h-4ワークRAM
第1回は本発明に係るカラオケシスチムの設置	3iインターフェイス
試態を示す説明図、第2回は本発明に係るカラオ	3jパッファ R A M
ケシステムにおけるカラオケデータ送出装蔵の回	3k
臨機成を示すブロック國、第3回は本発明に係る	316、1、〇回峡
カラオケシステムにおけるカラオケ海生鎌倉の国	31
路構筑を示すブロック図である。	38
A	30
B」 ~ B₄	30
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26イズ	
2dCPU	特許出願人 株式会社 ターイートー
2eバッファ R A M	代 遷 人 (7524)最 上 近犬郎
2f	

第1図







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# **EXHIBIT K**

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(54)【発明の名称】 コミュニケータ及び該コミュニケータを用いたソフト紀信システム

(57)【要約】

【目的】 通信回線を用いて送信されるゲーム情報ある いはカラオケ情報を受信し、ゲームカセット無しにゲー ムを行えるゲーム機兼用のコミュニケータやビデオディ スク等無しにカラオケを行えるカラオケ装置兼用のコミ ュニケータ、及びそのコミュニケータを用いたゲーム用 あるいはカラオケ用のソフト配信システムを提供するこ と。

【構成】 パーソナルコミュニケータ1より配信センタ 100に対して所望のゲームリクエストを送出すれば、 配信センタ100より対応するゲーム情報が返信されて くるため、使用者はゲームカセット等を有することなく 所望のゲームを行うことができる。



【特許諸家の籲冊】

【請求項1】 通信回線に接続され、該通信回線を経由 して発信、または受信を行う通信手段と、

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該通信手段に対する制御指令の出力、上記通信手段を経 由して上記通信回線からデータを入力または上記通信 手段を経由して上記通信回線へデータを送出するコンピ ユータと、

を備えるコミュニケータであって、

少なくとも、上記通信回線から入力したデータが画像あ るいは画像及び音声で構成されるゲーム情報の場合、該 10 ゲーム情報を一時記憶しておく入力データ一時記憶手段 を備えると共に、

上記コンピュータは、該入力データー時記憶手段に記憶 されたデータがゲーム情報の場合、そのゲーム情報を内 部あるいは外部の画像表示手段に出力し、音声データも ある場合には内部あるいは外部の音声出力手段に出力す るゲーム情報出力手段を備えることを特徴とするコミュ ニケータ。

【請求項2】 上記コンピュータは、内部あるいは外部 の印刷手段に印刷データを出力する印刷データ出力手段 20 -を備えることを特徴とする請求項1記載のコミュニケー 夕。

【請求項3】 請求項1または2記載のコミュニケータ と送受信可能に接続される配信センタを備え、上記コミ ユニケータより上記通信回線を介して上記配信センタに ゲームリクエストがあった場合には、配信センタからそ のリクエストに対応したゲーム情報を、上記通信回線を 介して該当するコミュニケータに送信すると共に、送信 されて上記入力データー時記憶手段に一時記憶されたゲ たことを特徴とするコミュニケータを用いたゲーム用の ソフト配信システム。

【請求項4】 通信回線に接続され、該通信回線を経由 して発信、または受信を行う通信手段と、

該通信手段に対する制御指令の出力。上記通信手段を経 由して上記通信回線からデータを入力、または上記通信 手段を経由して上記通信回線へデータを送出するコンピ ユータと.

を備えるコミュニケータであって、

少なくとも、上記通信回線から入力したデータが音声あ るいは音声及び画像で構成されるカラオケ情報の場合、 該カラオケ情報を一時記憶しておく入力データー時記憶 手段を備えると共に、

上記コンピュータは、該入力データー時記憶手段に記憶 されたデータがカラオケ情報の場合、そのカラオケ情報 を内部あるいは外部の音声出力手段に出力し、画像デー タもある場合には内部あるいは外部の画像表示手段に出 力するカラオケ情報出力手段を備えることを特徴とする コミュニケータ。

可能に接続される配信センタを値え、上記コミュニケー タより上記通信回線を介して上記配信をンタにカラオケ リクエストがあった場合には、配信センタからそのリク エストに対応したカラオケ情報を、上記通信回線を介し て該当するコミュニケータに送信するように構成したこ とを特徴とするコミュニケータを用いたカラオケ用のソ フト配信システム。

【発明の詳細な説明】

[0001]

【産業上の利用分野】本発明は、双方向通信システムに 用いられるゲーム機やカラオケ装置を兼用する情報通信 端末装置(コミュニケータ)及びそのコミュニケータを 用いたゲーム用あるいはカラオケ用のソフト配信システ ムに関する。

[0002]

【従来の技術及び発明が解決しようとする課題】近年、 いわゆるテレビゲームが非常に普及している。とのテレ ビゲームのシステムは、画像あるいは画像及び音声で構 成されるゲーム情報(いわゆるゲームソフト)を記憶し たゲームカセットをゲーム機率体にセットして読み出

し、テレビ受像機に出力する等してゲームを行うもので ある。テレビ受像機は家庭にある一般放送受信用のテレ ビ受像機を利用すれば良いため、使用者はゲーム機本体 とゲームカセットを購入することとなる。このようにブ レイしたいソフトの記憶されたゲームカセットを購入す れば、使用者の希望する時間に、繰り返してゲームを行 うことができる。

【0003】しかしながら、従来のテレビゲームでは、 プレイしたいゲーム毎にゲームカセットを購入する必要 ーム情報を送信後所定時間後に消去させるように構成し、30 があり、このゲームカセットは高価なものである。何度 も繰り返してプレイできるという利点はあるが、ゲーム 内容によって、あるいは使用者の好み等によっては、緑 り返してプレイする内にすぐに飽きてしまうものもあ る。このように倒えば1回だけプレイしたい場合でも、 ゲームカセットがないとできないため、不便である。 【0004】また、カラオケ装置は現在いわゆるカラオ ケボックス等の店ばかりでなく、家庭用のカラオケ装置 としても普及している。しかしながら、カラオケにはカ ラオケ装置といったハード面だけでなく、ソフト面での

40 充実が不可欠である。そして現在、ソフト面に関して は、例えば音声・画像情報の記憶されたビデオディスク あるいはビデオテーブ、または音声だけでよければミュ ージックテープといったように、カラオケ情報記憶媒体 を曲に応じて有していなければならない。そのため個人 で備えることのできる数量はあまり多くはできず、例え 購入費用の面で問題が無くとも、収納スペースの点で大 きな問題がある。そして、新しい曲が出るとその都度ビ デオディスク等を買い揃えなければならず面倒である。 【0005】そとで本発明は、このような問題点を鑑 【請求項5】 請求項4記載のコミュニケータと送受信 50 み、通信回線を用いて送信されるゲーム情報あるいはカ

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ラオケ情報を受信し、ゲーム力セット無しにゲームを行 えるゲーム機兼用のコミュニケータやビデオディスク等 無しにカラオケを行えるカラオケ装置兼用のコミュニケ ータ、及びそのコミュニケータを用いたゲーム用あるい はカラオケ用のソフト配信システムを提供するととを目 的とする。

[0006]

【課題を解決するための手段及び作用】上記目的を達成 するために成された諸家項!記載のコミュニケータは、 通信回線に接続され、該通信回線を経由して発信、また。19 は受信を行う通信手段と、該通信手段に対する制御指令 の出力、上記通信手段を経由して上記通信回線からデー タを入力、または上記通信手段を経由して上記通信回線 ヘデータを送出するコンピュータと、を備えるコミュニ ケータであって、少なくとも、上記通信回線から入力し たデータが画像あるいは画像及び音声で構成されるゲー ム情報の場合. 該ゲーム情報を一時記憶しておく入力デ ーター時記憶手段を備えると共に、上記コンピュータ は、該記憶手段に記憶されたデータがゲーム情報の場 台、そのゲーム情報を内部あるいは外部の画像表示手段 20 エストにも対応でき、コミュニケータを持つ大勢の端末 に出力し、音声データもある場合には内部あるいは外部 の音声出力手段に出力するゲーム情報出力手段を備える ことを特徴とする。

【0007】本コミュニケータによれば、コンピュータ が通信手段に対する制御指令を出力して、通信手段に、 通信回線を経由しての発信、または受信を行わせる。ま たは、コンピュータが通信手段と、通信回線とを経由し てデータを送出する。あるいは、コンビュータが通信回 線と、通信手段とを経由してデータを入力する。

【0008】入力データー時記憶手段は、少なくとも通 36 信回線から入力したデータが画像あるいは画像及び音声 で構成されるゲーム情報の場合、ゲーム情報を一時記憶 しておき、コンピュータ内のゲーム情報出力手段は、入 力データー時記憶手段に記憶されたデータがゲーム情報 の場合、そのゲーム情報を内部あるいは外部の画像表示 手段に出力し、音声データもある場合には内部あるいは 外部の音声出力手段に出力する。

【0009】なお、諸家項2記載のように、コンピュー タが、内部あるいは外部の印刷手段に印刷データを留力 する印刷データ出力手段を備えるようにすれば、コンピー40 ユータ内のデータを印刷手段によって印刷することがで きる。例えば、ゲームを中断するとき等に、現在の状況 (例えば複数のキャラクタが出てくるときに、誰がどの) キャラクタを対応していたか、あるいはその時点での最 高得点者等の情報)を出力しておけるので、再開すると きに便利である。

【0010】また、請求項3に示すコミュニケータを用 いたゲーム用のソフト配信システムは、上記コミュニケ ータと送受信可能に接続される配信センタを備え、コミ

クエストがあった場合には、配信センタからそのリクエ ストに対応したゲーム情報を、通信回線を介して該当す るコミュニケータに送信すると共に、送信されて入力デ ーター時記憶手段に一時記憶されたゲーム情報を送信後 所定時間後に消去させるように構成したことを特徴とす

る。この消去に関しては、コミュニケータ側において、 ゲーム情報を受信した場合には所定時間後に消去させる 制御手段を持つ方式や、その所定時間に関する情報だけ は、配信センタからゲーム情報と共に送信させる方式が 考えられる。このようにすれば、ゲームの内容等に応じ て、所定時間を変更できる。

【0011】本ソフト配信システムによれば、使用者が コミュニケータより配信センタに対して所望のゲームリ クエストを送出すれば、配信センタより対応するゲーム 情報が返信されてくるため、使用者はゲームカセット等 を有することなく所望のゲームを行うことができる。ま た。その送出されたゲーム情報はコミュニケータの入力 データー時記憶手段に一時記憶されるため、一度送って しまえば、別のコミュニケータからの同じゲームのリク 使用者に対応できる。

【0012】そして、入力データー時記憶手段に一時記 憶されたゲーム情報を送信後所定時間後に消去させるよ うに構成してあるので、有料で配信するシステムを構築 した場合に送信側としても、一度送信したゲーム情報が 配信センタからの送信無しに勝手に使用されることなく 安心である。使用者は、再度そのゲームを行いたい場合 には再度リクエストすることとなる。一度送信したゲー **ふ情報が使用者側でダウンロードでき」その後は勝手に** 使用できるとなると、単に従来のゲームカセットのかわ りにソフトを通信回線で送出したにすぎず、ゲームカセ ットの値段を大幅に下回ることは採算面でも現実的に不 可能である。

【0013】しかし、本システムのように所定時間で一 旦消去させるようにしておけば、一回のゲームの斜金を ゲームカセットの値段より大幅に下回って設定すること も可能である。そのため、従来は1回しかやらないゲー ムであってもゲームカセットを購入していて、割高感を 抱いていた需要者も満足する。また、例えばゲームに熱

中してなかなかやめられないことが家庭内において問題 になることがあり、特にテレビゲームの利用者として小 学生等の若年層が多いことから上記問題はかなり根強い ものと思われる。この際、本システムでは所定時間で自 動的に止めざるを得ないので、例えば家庭内における子 僕のしつけに関連した保護者の要求にも応えるものとな り得る。

【0014】一方、諸家項4記載のコミュニケータは、 通信回線に接続され、該通信回線を経由して発信。また は受信を行う通信手段と、該通信手段に対する副御指令 ュニケータより通信回線を介して配信センタにゲームリー50 の出力、上記通信手段を経由して上記通信回線からデー

特闘平6−334780 .

タを入力、または上記通信手段を経由して上記通信回線 ヘデータを送出するコンビュータと、を備えるコミュニ ケータであって、少なくとも、上記通信回線から入力し たデータが音声あるいは音声及び画像で構成されるカラ オケ情報の場合、該カラオケ情報を一時記憶しておく入 力データー時記憶手段を備えると共に、上記コンビュー タは、該入力データー時記憶手段に記憶されたデータが カラオケ情報の場合、そのカラオケ情報を内部あるいは 外部の音声出力手段に出力し、画像データもある場合に は内部あるいは外部の画像表示手段に出力するカラオケ 10 情報出力手段を備えることを特徴とする。

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【0015】本コミュニケータによれば、入力データー 時記憶手段は、少なくとも通信回線から入力したデータ が画像あるいは画像及び音声で構成されるゲーム情報の 場合、ゲーム情報を一時記憶しておき、コンピュータ内 のゲーム情報出力手段は、入力データー時記憶手段に記 憶されたデータがゲーム情報の場合、そのゲーム情報を 内部あるいは外部の画像表示手段に出力し、音声データ もある場合には内部あるいは外部の音声出力手段に出力 する。

【0016】また、請求項5に示すコミュニケータを用 いたカラオケ用のソフト配信システムは、上記コミュニ ケータと送受信可能に接続される配信センタを備え、コ ミュニケータより上記通信回線を介して配信センタにカ ラオケリクエストがあった場合には、配信センタからそ のリクエストに対応したカラオケ情報を、通信回線を介 して該当するコミュニケータに送信するように構成した ことを特徴とする。

【0017】本ソフト配信システムによれば、使用者が コミュニケータより配信センタに対して所望のカラオケ 30 リクエストを送出すれば、配信センタより対応するカラ オケ情報が返信されてくるため、使用者はビデオディス ク等のカラオケデータ媒体を有することなく所望のカラ オケを行うことができる。また、その送出されたカラオ ケ情報はコミュニケータの入力データー時記憶手段に一 時記憶されるため、一度送ってしまえば、別のコミュニ ケータからの同じカラオケのリクエストにも対応でき、 コミュニケータを持つ大勢の端末使用者に対応できる。 【0018】

【実施例】以下、本発明の実施例について説明する。図 1 は本実施例のパーソナルコミュニケータ1のブロック 図、図2 は本パーソナルコミュニケータ1を用いたソフ ト配信システムのブロック図である。図1に示すよう に、本配信システムは、配信センタ100、パーソナル コミュニケータ1、及び配信センタとパーソナルコミュ ニケータ1とを接続する通信回線としての伝送路200 から構成されている。

【0019】配信センタ100は、ゲームソフトデータ ベース101、カラオケデータベース103、その他の データベース(群) 105と、各データベース101, 103,105から情報を検索して送出するためそれぞ れ対応して設けられたゲーム情報送出装置111.カラ オケ情報送出装置113.他情報送出装置115.及び それら各情報送出装置111,113、115の制御等 を行う制御装置120、外部との信号の入出力を行うへ ッドエンド130を増えている。

【0020】詞御装置120は、伝送路200を介して パーソナルコミュニケータ1より送信されてきたりクエ ストデータをヘッドエンド130を介して入力する。そ して、そのリクエストに対応した情報を、情報送出装置 111,113、115を詞御してデータベース10 1、103、105から取り出し、ヘッドエンド130

を介して伝送路200に送出させる。 【0021】本実施例では、伝送路200は同軸ケーブ ルで構成されており、この伝送路200は復数のパーソ ナルコミュニケータ1と接続されている。次にパーソナ ルコミュニケータ1側の構成について説明する。図1に 示すように、本パーソナルコミュニケータ1は、端末モ デム3と、タイマ4と、CPU5と、入力装置6と、R

20 OM7と、メモリ8と、ビデオ映像回路9と、音源10 と、オーディオアンプ11と、スピーカ13と、映像合 成回路15とモニタ16と、制御器コネクタ21と、マ イクコネクタ23と、データ入出力コントローラ25 と、データ入出力コネクタ27とを備えている。 【0022】端末モデム3は伝送路200と接続されて おり、復変調器3aと、画像のチャンネル選択をするビ デオチューナ3 bとから構成されている。入力装置6 は、例えばキーボードやマウス等からなり、パーソナル コミュニケータ1の使用者が所望のゲームソフトの香号 や演奏を希望するカラオケ曲の香号を入力したり、その 他の処理指令等を入力するのに用いられる。また、制御 器コネクタ21にゲーム専用の制御器31を接続するこ とにより、制御器31を用いたゲーム専用の操作もでき る。この制御器31には操作指令を与えるボタンやジョ イスティック等、いわゆるテレビゲーム等に広く用いら れている制御ボタンと同様のものが設けられている。 【0023】また、マイクコネクタ23にマイクロフォ ン33を接続することにより、カラオケを行うときに、 使用者が自分の歌声をスピーカ13から出力させること

【実施例】以下、本発明の実施例について説明する。図 40 ができる。一方、データ入出力コネクタ27にはデータ 1は本実施例のパーソナルコミュニケータ1のブロック 図、図2は本パーソナルコミュニケータ1を用いたソフ 37にはプリンタ40あるいはパーソナルコンピュータ ト配信システムのブロック図である。図1に示すよう 41等が接続される。

> 【0024】次に、CPU5において実行される制御に ついて説明する。電源(図示せず)がオンされるとまず メインメニューが表示される。そのメインメニューから 「配信センタ呼出」が選択され、配信センタ呼出処理が 起動した時点から図3を参照して説明を続ける。

【0025】まず、利用項目の表示が行われる(S10 5000)。利用項目の表示は、選択を求める表示(例えば 7

「希望の利用項目を選んで下さい」との表示)と利用項 目一覧(ゲーム、カラオケ、その他の項目)とからな る。この表示の後、判断が行われて(S1010)、選 択された利用項目名の個別処理画像を表示する(S10 20)。個別処理画像の表示は、入力あるいは遵釈を求 める表示と個別処理名一覧とからなる。この個別処理画 像の表示の後、入力あるいは選択がされると個別処理の 実行が行われる(S1030)。この個別処理の実行で は、まず配信センタに接続され、配信センタとバーソナ ルコミュニケータ1間とで双方向通信が行われて、各個 10 ュニケータ1の10番号、希望ゲーム番号等から構成さ 別処理内容に応じた処理がなされる。

【0026】最初に、ゲームを行う場合の制御につい。 て、その手順も含めながら説明する。上記S1000で の利用項目表示においてゲームを選択すると、図4のよ うな個別処理画像が表示される。説明すると、入力ある いは週択を求める表示301と個別処理名一覧303で ある。個別処理名一覧303は①~③まであり、「①: 希望ゲーム香号」は、この画面においてゲーム番号入力 鶴305に直接ゲーム香号を入力すれば、その後該当す るゲーム情報が送信されてくる処理である。また、

「②:ゲーム番号一覧」は、現在配信センタ100のゲ ームソフトデータベース101から配信可能なゲームの 香号の一覧表示がされる処理である。「③:料金表示」 は、例えば今月の累積料金を表示したり、過去の料金を 表示したりする処理である。

【0027】実際にゲームを開始したい場合には、上記 ①または②を遵訳する。例えば既に希望のゲーム番号が 判っている場合には、カーソルをゲーム香号入力覧30 5に移動させてテンキー等で香号を入力すればよいが、 判らない場合には②を選択する。

【0028】②のゲーム番号一覧処理について簡単に説 明しておく。②を選択すると、配信センタ100からゲ ームの香号の一覧表示に関するデータが送信されて表示 される。詳しくは、図5に示すように、入力領域311 と表示覧313とに分かれており、表示覧313をスク ロールさせれば未表示データも見ることができる。表示 覧313には、ゲーム香号とゲーム名に加えて、「参加 可能人数」と「料金」が表示される。従って、この表示 を参考にして希望のゲーム番号を探し、入力領域311 のゲーム番号入力額315に入力すればよい。

【0029】なお、例えば初めて新しいゲームを行う場 合等に、そのゲーム内容の概略等を知りたい場合があ

る。そういった場合は、入力領域311の「B:ゲーム 内容説明表示」のゲーム番号入力欄317にゲーム香号 を入力すると、そのゲーム内容の観略説明が表示覧31 3に表示される。従って、使用者はその表示を見てから ゲームを選択することができる。

【0030】また、ゲーム番号一覧表示を印刷しておけ ば、次回から希望するゲームをすぐに選択することがで きる。その場合は、入力領域311の「C.印刷」を選「59」えられる。また、S1220における第1の所定時間

択すれば、図1に示すデータ入出力コネクタ27、デー タ出方ケーブル37を介して接続されたプリンタ40よ り印刷できる。

【0031】上記個別処理のによる図4の香号入方綱3 05.あるいは個別処理のによる図5のゲーム番号入力 - 鶴315に希望ゲーム香号を入力した際に実行される処 理について図らを参照して説明する。まず、ゲームリク エストデータが作成される(S1100)。このゲーム リクエストデータは、データを送信するパーソナルコミ

れる。作成されたゲームリクエストデータは配信センタ 100に送信される(S1110)。

【0032】配信センタ100(図2)では、副御装置 120が送信されてきたリクエストデータをヘッドエン ド130を介して入力する。そして、そのリクエストに 対応したゲーム情報を、ゲーム情報送出装置111を制 御してゲームソフトデータベース101から取り出す。 取り出したゲーム情報はヘッドエンド130を介して伝 送路200に送出させ、該当するパーソナルコミュニケ 20 ータ1に転送する。なお、この際ゲーム情報と共に、後

述する第1及び第2の所定時間も送信される。 【0033】図6に戻り、パーソナルコミュニケータ】 (側では、そのゲーム情報を受信し(S1120)、メモ リ8に格納する(S1130)。そして、メモリ8への

格納が完了すると、モニタ16に受信完了表示を行い (S1140)、さらに配信センタ100に受信完了デ ータを送信して(S1150)、本処理ルーチンを一旦 終了し、次の処理を待つ。その後例えばゲーム開始の繰 作がされると、メモリ8内のゲーム情報に従うゲームが 30 開始される。

【0034】なお、S1150において、受信完了デー タが配信センタ100に送信されることにより、配信セ ンタ100では課金処理を実行する。との課金処理につ いては後述する。次に、ゲーム情報自動消去処理につい て図?を参照して説明する。図6に示すゲーム情報受信 に関する処理がなされると、その受信完了時刻を取り込 む(S1200)。そして、現在時刻を取り込んで、受 「信完了時刻からの経過時間を算出し(S1210)、第 1の所定時間経過したか否かを判断する (S122)

40 (0)。所定時間経過していない場合はS1210に戻 り、所定時間経過した場合には警告を出す(S123 ())。そして、更に経過時間を算出して(S124) (1)、第2の所定時間が経過するのを待ち(S125) ())。第2の所定時間が経過した場合にはメモリ8内の ゲームデータを消去させて(S1260)、本処理を終 了する。

【0035】S1230の響告としては、所定の表示。 (例えば「あと5分で終了です」等)をモニタ16上に 出したり、所定の警告音を発したり、その感縁は種々考 は、例えば第2の所定時間の5分前等に設定すればよ い。また、5分前だけの響告でなく、2分前や1分前 等、複数回警告してもよい。この警告があれば、ゲーム を中断するとき等に、現在の状況(例えば複数のキャラ クタが出てくるときに、誰がどのキャラクタを対応して いたか、あるいはその時点での最高得点者等の情報)を フリンタ40から出力しておけるので、同じゲームを後 日再開するときに便利である。

【0036】図6の81150の処理に関連して、配信 センタ100では課金処理を行う旨を上述した。その課 19 金処理に関して説明する。課金システムとしては、大別 すると、月決め等一定期間の利用に対して料金を課す る。いわゆる定額制の課金方式と、利用された時点でそ の情報に対応する料金を課する、いわゆる従置詞の課金 方式とがある。

【0037】この両方式は、配信システムの形態・状況 等によって採用の適否が変わってくるが、現実的には、 例えばゲーム内容(内容の複雑度合や規模の大小等)、 あるいは古いゲームか新しいゲームか等で料金を変える

ことが考えられる。本実施例では、従量制に対応するよ 20 う。S1150でパーソナルコミュニケータ1から送信 された受信完了データに基づいて、各端末毎に課金する システムを採用している。実際の料金は銀行の所定の日 座から自動引き落しにすればよい。

【0038】なお、従置制にすると、思わぬ高額出費を していても料金支払い時にしか判らず。特に自動引き落 しにしていると、気付かないこともある。そのため、図 4に示した「③:料金表示」を選択すると、現在までの 累積料金や、過去の料金(前回支払い時の料金や過去半 親が知らぬ内に子供が利用して、予想外の高額斜金が諸 求されることを未然に防止することも可能である。

【0039】 このように、本配信システムによれば、使 用者がパーソナルコミュニケータ1より配信センタ10 0に対して所望のゲームリクエストを送出すれば、配信 センタ100より対応するゲーム情報が返信されてくる ため、使用者はゲームカセット等を有することなく所望 のゲームを行うことができる。また、その送出されたゲ ーム情報はパーソナルコミュニケータ1のメモリ8(本 発明の入力データー時記憶手段に対応する。)に一時記 40 ()あるいはFAXを接続してデータを出力させれば認定 (塗されるため、一度送ってしまえば、別のパーソナルコ ミュニケータ1からの同じゲームのリクエストにも対応 でき、バーソナルコミュニケーターを持つ大勢の端末使 用者に対応できる。

【0040】そして、メモリ8に一時記憶されたゲーム 情報を送信後、所定時間後に消去させるように構成して あるので、有料で配信するシステムを構築した場合に送 信制としても、一度送信したゲーム情報が配信センタか らの送信無しに勝手に使用されることなく安心である。 使用者は、再度そのゲームを行いたい場合には再度リク 50 始したい場合には、①あるいは②において希望のカラオ

エストすることとなる。仮に一度送信したゲーム情報が 使用者側でダウンロードでき、その後は勝手に使用でき るとなると単に従来のゲームカセットのかわりにソフト を通信回線で送出したにすぎず、ゲームカセットの値段 を大幅に下回ることは採算面でも現実的に不可能であ る.

【0041】しかし、本システムのように所定時間で一 旦消去させるようにしておけば、一回のゲームの料金を ゲームカセットの値段より大幅に下回って設定すること も可能である。そのため、従来は1回しかやらないゲー ムであってもゲームカセットを購入していて、割高感を 抱いていた需要者も満足する。また、例えばゲームに熱 申してなかなかやめられないことが家庭内において問題 になることがあり、特にテレビゲームの利用者として小 学生等の若年層が多いことから上記問題はかなり很強い ものと思われる。この際、本システムでは所定時間で自 動的に止めざるを得ないので、例えば家庭内における子 供のしつけに関連する保護者の要求にも応えるものとな り得る。

【0042】上記実施例は各パーソナルコミュニケータ 1毎のみでゲームを行うことを前提として説明したが、 離れた人同士、すなわち複数のパーソナルコミュニケー タ1間でもゲームが行える。例えば上記伝送路200あ るいは電話回線等を用いてパーソナルコミュニケータ」 間を双方向通信可能に接続しておく。そして、呂バーソ ナルコミュニケーターに同じゲーム情報が配信された状 懲にすれば、両バーソナルコミュニケータ」において同 じキャラクタを持つことになり、通信用データはキャラ クタ番号と位置データだけでよくなる。従って、呂バー 年間あるいは1年間の料金等)を知ることができ、特に 30 ソナルコミュニケータ1のモニタ16上において、互い の操作する多くのキャラクタをコントロールすることが でき、リアルタイムにゲームを行える。

> 【0043】また、いわゆるロールプレイングゲームの。 場合、マップデータを分割して供給・販売してもよい。 つまり、次のマップデータに移るには、そのマップデー タのダウンロードを要することとなる。その場合、いわ ゆるゲーム上での「強さ」のレベルに応じてマップデー タも変更可能としておく。また、マップデータの購入毎 に認定データを送信するようにしてもよい。プリンタ4

証となる。

【0044】次に、カラオケを行う場合の制御について 説明する。基本的な流れは上記ゲームの場合と同様なの で、重複する部分は省略する。なお、カラオケなので、 マイクコネクタ23にマイクロフォン33を接続してお く。S1000での利用項目表示においてカラオケを選 択すると、図4と同様の個別処理画像が表示される。す なわち「①:希望カラオケ番号」、「②:カラオケ香号 一覧」。「③:斜金表示」である。実際にカラオケを開

ケ番号を入力する。

【0045】バーソナルコミュニケータ①においてカラ オケリクエストデータが作成されて配信センタ」()()に 送信される。配信センタ100はリクエストに対応した カラオケ情報を、カラオケ情報送出装置113を制御し でカラオケデータベース103から取り出し、該当する バーソナルコミュニケータlに転送する。

[0046] パーソナルコミュニケータ」においては、 復変調器3aを介して受信した曲データはメモリ8に― 旦裕納される。同時に、CPU5は遺曲された内容に合 10 る。 った画像データを選択するため、選曲された曲の趣向に 応じて予め設定された選曲データをビデオチューナ3ヵ に送る。また、CPU5は、メモリ8に格納された曲デ ータの中の歌詞データと演奏データをそれぞれ同期をと ってビデオ画像回路9及び音源10に出力する。ビデオ 画像回路9は、歌詞等の情報を歌詞画像データに変換し 出力する。

【0047】音源10は、演奏データを音響信号に変換 し、オーディオアンプ11に送る。オーディオアンプ1 1は演奏曲の音響信号とマイクロフォン12からの音声 20 信号を合成・増幅して音信号としてスピーカ13へ出力 する。ビデオチェーナ3bは、選曲データによって選曲 された背景画像データを読み出し、画像合成回路15へ 出力する。画像合成回路15は上記背景画像データと歌 詞画像データとを合成し、画像信号をモニタ16へ出力 する。

【0048】とのカラオケ演奏についてさらに詳しく述 べる。配信センタ100から曲データが送信されてきた 場合は、画像情報としてのRF信号と、曲データを変換 したRF信号とが多重化され、同軸ケーブルである伝送 30 に配置したり、種々の適用が可能である。 ||谿200を介してパーソナルコミュニケータ」に送信さ れている。そして、パーソナルコミュニケータ1のCP USは、受信した曲データに対応する画像チャンネルを 選曲すべく端末モデム3のビデオチェーナ3り(図1) に対して、所定の選曲データを送出する。この適曲デー タは例えば曲の趣向(ジャンル)に対応するよう予め設 定されたもの等である。その後、音源10に対して曲デ ータを送出して演奏を開始する。

【0049】そして、演奏が完了すると、演奏完了デー タを配信センタ100に送信する。この演奏完了データ 40 が配信センタ100に送信されることにより、配信セン タ100では課金処理を実行する。上記ゲームの場合の 課金処理は、ゲーム毎であったが、カラオケの場合1曲 が数分であるので、例えば1時間単位で課金したりする 等、実状に合わせて課金システムを設定すればよい。

【0050】なお、カラオケの場合は、上記ゲームの場 台のゲーム情報自動消去処理(図7)のような副御は不 要である。このように、本バーソナルコミュニケータ」 を用いたカラオケ配信システムによれば、使用者がパー ソナルコミュニケーターより配信センター00に対して 50 からの送信無しに勝手に使用されることなく安心であ

所望のカラオケリクエストを送出すれば、配信センタ」 00より対応するカラオケ情報が返信されてくるため、 使用者はビデオディスク等のカラオケデータ媒体を有す ることなく所望のカラオケを行うことができる。また、 その送出された曲データ及び歌詞データはパーソナルコ ミュニケータ1のメモリ8に一時記憶されるため、一度 送ってしまえば、別のパーソナルコミュニケータ1から の同じカラオケのリクエストにも対応でき、バーソナル コミュニケータ」を持つ大勢の端末使用者に対応でき

【0051】以上本発明はこの様な実施例に何等限定さ れるものではなく、本発明の要旨を逸脱しない範囲にお いて種々なる態様で実施し得る。例えば、上記実施例で は、図1に示すように、パーソナルコミュニケータ1自 体が内部にモニタ16及びスピーカ13を有するように 説明したが、これに限らず、外部のモニタやスピーカに 接続して用いるような構成でもよい。例えば、テレビ受 像器に接続して、テレビ受像器から画像及び音声を出力 させるようにしてもよい。なお、その場合、パーソナル コミュニケータ1には小さなディスプレイを設け、図

4.図5に示すような選択画面はそのディスプレイに表 示させるようにしてもよい。

【0052】また、伝送路200は既設のケーブルテレ ビシステムの同軸ケーブル等を援用しても良く、図2に 示す他のデータベースとして衛星テレビ香組やビデオデ ィスクによるビデオ香組、あるいはラジオ香組等も含め で、マルチメディア双方向通信システムとして構築でき る。との配信システムにおけるパーソナルコミュニケー ターは、各家庭に配置したり、あるいはホテルの各部屋

[0053]

【発明の効果】以上詳述したように本コミュニケータを 用いたソフト配信システムによれば、使用者がコミュニ ケータより配信センタに対して所望のゲームあるいはカ ラオケリクエストを送出すれば、配信センタより対応す るゲーム情報あるいはカラオケ情報が返信されてくるた め、使用者は、ゲームの場合はゲームカセット、カラオ ケの場合はビデオディスク等のデータ媒体を有すること なく所望のゲームあるいはカラオケを行うことができ

- る。また、その送出されたゲームあるいはカラオケ情報 はコミュニケータの入力データー時記憶手段に一時記憶 されるため、一度送ってしまえば、別のコミュニケータ からの同じゲームあるいぼカラオケのリクエストにも対 応でき、コミュニケータを持つ大勢の端末使用者に対応 できる。

【0054】また、ゲームの場合は、一時記憶されたゲ ーム情報を送信後所定時間後に消去させるように構成し てあるので、有料で配信するシステムを構築した場合に 送信側としても、一度送信したゲーム情報が配信センタ

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【図面の簡単な説明】

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【図1】本発明の一実施例のパーソナルコミュニケータのブロック図である。

13

【図2】本バーソナルコミュニケータ』を用いたソフト 配信システムのブロック図である。 【図3】配信センタ呼出にかかるフローチャートであ

1回51 BUB E フラザロにかかるフローナ アート C 約 る。

【図4】個別処理画像の表示を示す説明図である。

【図5】ゲーム番号一覧表示を示す説明図である。

【図6】ゲームリクエスト時におけるパーソナルコミュ

ニケータにおいて実行される処理を示すフローチャート\*

【図?】ゲーム情報自動消去処理を示すフローチャート である。

#### 【符号の説明】

\*である。

1…パーソナルコミュエケータ、 3…鐺末モデム、 4…タイマ、6…入力装置、 8…メモリ、 Ĩ 3…スピーカ、 16…モニタ、31…制御器。 3 3…マイクロフォン、 40…プリンタ、100… 配信センタ、 101…ゲームソフトデータベース、 10 103…カラオケデータベース、 111…ゲーム情 報送出装置、113…カラオケ情報送出装置、 12 ()…副御装置 

[図1]







[図3]



. . .

[図4]

301 新型ゲーム書号の入り(D) または朱型処理を選択(際、感)して下さい 303 ①:発型ゲーム第号 [ ]-----305 ②:ゲーム新号一覧 ③:料金表示

[25]

B	: 希達ゲーム番号 [ - ゲーム内容説明読示 [ - 印刷]	315 317 Ja 311 Ja 311
[書号]	[ゲーム名] 【参加両端人】	♥】 (郴金:円)
(3): (3): (4):	<ul> <li>ロロカート (1~2名)</li> <li>ロロペイント (1名)</li> <li>スーパー(100) (1~2名)</li> <li>ムムム伝説 (1~2名)</li> <li>ストリート〇〇 (1~2名)</li> </ul>	) (····) ) (····)

. . .

[図6]






# PATENT ABSTRACTS OF JAPAN

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# (54) COMMUNICATOR AND SOFTWARE DISTRIBUTION SYSTEM USING THE SAME

# (57)Abstract:

PURPOSE: To play the desired game or KARAOKE by returning correspondent information from a distribution center by sending the request of desired game or KARAOKE from a communicator to wiring data to have a game medium.

CONSTITUTION: An input device 6 is used for the user of personal communicator 1 to input the number of desired game software or KARAOKE music and to input the other processing command, etc. Then, these game request data are transmitted to the distribution center and at the distribution center, a controller inputs the transmitted request data through a head end. Then, game information corresponding to that request is extracted from a game software data base while controlling a game information sender. The game information extracted like this is sent through the head end to a transmission line 200 and transferred to the relevant personal communicator 1.



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## CLAIMS

[Claim(s)]

[Claim 1]A means of communication which is connected to a communication line and performs dispatch or reception via this communication line, A computer which sends out data for data to the above-mentioned communication line via an input or the above-mentioned means of communication from the above-mentioned communication line via an output of a control command to this means of communication, and the above-mentioned means of communication, Are a **\*\*\*\*\*\*\*** communicator, and, in the case of game information which comprises a picture or a picture, and a sound, data inputted from the above-mentioned communication line is provided with an input data temporary storage means which stores this game information temporarily at least, and. When data in which the above-mentioned computer was memorized by this input data temporary storage means is game information output means which outputs the game information to an image display means of an inside or the exterior, and also outputs voice data to a voice output means of an inside or the exterior in a certain case.

[Claim 2]The communicator according to claim 1, wherein the above-mentioned computer is provided with a print-data output means which outputs print data to a printing means of an inside or the exterior.

[Claim 3]It has a distribution center connected so that a communicator according to claim 1 or 2 and transmission and reception are possible, When the above-mentioned distribution center has a game request via the above-mentioned communication line from the above-mentioned communicator, Transmit game information corresponding to the request to a communicator applicable via the above-mentioned communication line from a distribution center, and. A software distribution system for games using a communicator constituting so that game information which was transmitted and was stored temporarily at the above-mentioned input data temporary storage means may be made to eliminate after after-transmission predetermined time.

[Claim 4]Are a communicator characterized by comprising the following and at least, In the case of karaoke information which comprises a sound or a sound, and a picture, data inputted from the above-mentioned communication line is provided with an input data temporary storage means which stores this karaoke information temporarily, and. When data in which the above-mentioned computer was memorized by this input data temporary storage means is karaoke information. A communicator having a karaoke information output means which outputs the karaoke information to a voice output means of an inside or the exterior, and also outputs image data to an image display means of an inside or the exterior in a certain case.

A means of communication which is connected to a communication line and performs dispatch or reception via this communication line.

A computer which sends out data for data to the above-mentioned communication line via an input or the above-mentioned means of communication from the above-mentioned communication line via an output of a control command to this means of communication, and the above-mentioned means of communication. [Claim 5]It has a distribution center connected so that a communicator according to claim 4 and transmission and reception are possible. When the above-mentioned distribution center has a karaoke request via the above-mentioned communication line from the above-mentioned communicator. A software distribution system for karaoke using a communicator constituting so that karaoke information corresponding to the request may be transmitted to a communicator applicable via the above-mentioned communication line from a distribution center.



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# DETAILED DESCRIPTION

[Detailed Description of the Invention] [0001]

[Industrial Application]This invention relates to the software distribution system for a game or for karaoke using the information-and-telecommunications terminal unit (communicator) which makes the game machine used for a two-way communication system, and a karaoke device serve a double purpose, and its communicator.

### [0002]

[Description of the Prior Art]In recent years, what is called a video game has spread dramatically. The system of this video game performs a game by setting to a game machine body the game cassette which memorized the game information (what is called game software) which comprises a picture or a picture, and a sound, reading it, and outputting to a television set. In order that the television set may just use the television set for general broadcast reception at a home, a user will purchase a game machine body and a game cassette. If the memorized soft game cassette to play in this way is purchased, a game can be performed at the time which a user wishes repeatedly. [0003]However, it is necessary to purchase a game cassette for every game to play, and this game cassette is expensive in the conventional video game. Although there is an advantage that it can play repeatedly, while playing by the game content or a user's liking repeatedly, some which get bored immediately are. Thus, for example, since it cannot do to play only once if there is no game cassette, it is inconvenient.

[0004]The karaoke device has spread now also not only as stores, such as what is called a karaoke box, but as a karaoke device for home use. However, fullness not only in the hardware side of a karaoke device but a soft side is indispensable to karaoke. And if the video disk or videotape in which a sound and picture information were memorized about the soft side, for example, or only a sound is required, as it was called the music tape, according to music, it must have a karaoke information storage now. therefore -- the quantity which it can have individually cannot do many, but is almost satisfactory in respect of metaphor purchase expense -- there is a big problem in respect of storage space. And if new music comes out, a video disk etc. must be bought and arranged each time and it is troublesome.

[0005]Then, this invention receives the game information or karaoke information transmitted using a communication line in view of such a problem, It aims at providing the software distribution system the communicator of karaoke device combination which can perform karaoke without the communicator of the game machine combination which can perform a game without a game cassette, a video disk, etc. and the object for games using the communicator, or for karaoke. [0006]

[Means for Solving the Problem and its Function]To achieve the above objects, the communicator according to claim 1 which accomplished, A means of communication which is connected to a communication line and performs dispatch or reception via this communication line, A computer which sends out data for data to the above-mentioned communication line via an input or the above-mentioned means of communication from the above-mentioned communication line via an output of a control command to this means of communication, and the above-mentioned means of communication, Are a **\*\*\*\*\*\*** communicator, and, in the case of game information which comprises a picture or a picture, and a sound, data inputted from the above-mentioned communication line is provided with an input data temporary storage means which stores this game information temporarily at least, and. The above-mentioned computer is provided with a game information output means which outputs the game information to an image display means of an inside or the exterior, and also outputs voice data to a voice output means of an inside or the exterior in a certain case when data memorized by this memory measure is game information. [0007]According to this communicator, a computer outputs a control command to a means of communication, and dispatch which goes via a communication line in a means of communication, or reception is made to perform. Or a computer sends out data via a means of communication and a communication line. Or a computer inputs data via a communication line and a means of communication.

[0008]In the case of game information by which data which inputted an input data temporary storage means from a communication line at least is constituted from a picture or a picture, and a sound. Store game information temporarily and a game information output means in a computer, When data memorized by input data temporary storage means is game information, the game information is outputted to an image display means of an inside or the exterior, and, in a certain case, voice data is also outputted at a voice output means of an inside or the exterior.

[0009]If it has the print-data output means according to claim 2 by which a computer outputs print data to a printing means of an inside or the exterior like, data in a computer can be printed by a printing means. For example, since the present situation (who corresponded which character when two or more characters came out, or it is the information of a top rating person in the time, etc.) can be outputted and set when interrupting a game, it is convenient when resuming.

[0010]A software distribution system for games using a communicator which shows Claim 3, When it has a distribution center connected with the above-mentioned communicator so that transmission and reception are possible and a distribution center has a game request via a communication line from a communicator, Game information corresponding to the request was transmitted to a communicator applicable via a communication line from a distribution center, and it constituted so that game information which was transmitted and was stored temporarily at an input data temporary storage means might be made to eliminate after after-transmission predetermined time. Only the information about a method which has a control means made to eliminate after predetermined time when it is related with this elimination and game information is received to the communicator side, and its predetermined time can consider a method to which it is made to transmit with game information from a distribution center. If it does in this way, predetermined time can be changed according to the contents of the game, etc.

[0011]Since according to this software distribution system game information corresponding from a distribution center will be replied if a user sends out a desired game request from a communicator to a distribution center, the user can perform a desired game, without having a game cassette etc. Since the sent-out game information is stored temporarily at a communicator's input data temporary storage means, once it sends it, it can respond also to a request of the same game from another communicator, and can respond to many terminal users with a communicator.

[0012]And since it constitutes so that game information stored temporarily at an input data temporary storage means may be made to eliminate after after-transmission predetermined time, It is safe, without using freely without transmission from a distribution center game information once transmitted also as the transmitting side, when a system distributed for pay is built. When a user wants to perform the game again, he will request again. If game information transmitted once can download by the user side and it can be used freely after that, it is actually impossible to only have sent out software by a communication line only instead of the conventional game cassette, and for it to be much less than a price of game cassettes also in respect of profit.

[0013]However, if it is made to make it once eliminate by predetermined time like this system, it is also possible for it to be much [ price / of game cassettes ] less than a fee of 1 time of a game, and to set it up. Therefore, even if it is a game played only once conventionally, a game cassette is purchased, and a consumer who has held a feeling of a comparatively high price is also satisfied. In a home, it may become a problem that it is absorbed, for example in a game and cannot stop easily, and since there is much younger age group, such as a schoolchild, especially as a user of a video game, the above-mentioned problem is considered to be a quite deep-rooted thing. Under the present circumstances, since it cannot but stop automatically by predetermined time in this system. the demand of a guardian relevant to upbringing of a child in a home can also be met, for example. [0014] A means of communication which the communicator according to claim 4 is connected to a communication line, and performs dispatch or reception via this communication line on the other hand, A computer which sends out data for data to the above-mentioned communication line via an input or the above-mentioned means of communication from the above-mentioned communication line via an output of a control command to this means of communication, and the above-mentioned means of communication, Are a \*\*\*\*\*\*\* communicator, and, in the case of karaoke information which comprises a sound or a sound, and a picture, data inputted from the above-mentioned communication line is provided with an input data temporary storage means which stores this karaoke information temporarily at least, and. When data in which the above-mentioned computer was memorized by this input data temporary storage means is karaoke information, The karaoke information is outputted to a voice output means of an inside or the exterior, and, in a certain case, image data is also provided with a karaoke information output means outputted to an image display means of an inside or the exterior.

[0015]According to this communicator, an input data temporary storage means, In the case of game information which comprises a picture or a picture, and a sound, data inputted from a communication line at least stores game information temporarily, and a game information output means in a computer, When data memorized by input data temporary storage means is game information, the game information is outputted to an image display means of an inside or the exterior, and, in a certain case, voice data is also outputted at a voice output means of an inside or the exterior.

[0016]A software distribution system for karaoke using a communicator which shows Claim 5, When it has a distribution center connected with the above-mentioned communicator so that transmission and reception are possible and a distribution center has a karaoke request via the above-mentioned communication line from a communicator, It constituted so that karaoke information corresponding to the request might be transmitted to a communicator applicable via a communication line from a distribution center.

[0017]Since according to this software distribution system karaoke information corresponding from a distribution center will be replied if a user sends out a desired karaoke request from a communicator to a distribution center, The user can perform desired karaoke, without having karaoke data medium, such as a video disk. Since the sent-out karaoke information is stored temporarily at a communicator's input data temporary storage means, once it sends it, it can respond also to a request of the same karaoke from another communicator, and can respond to many terminal users with a communicator.

## [0018]

[Example]Hereafter, working example of this invention is described. It is a block diagram of the software distribution system with which <u>drawing 1</u> used the block diagram of the personal communicator 1 of this example, and <u>drawing 2</u> used this personal communicator 1. As shown in <u>drawing 1</u>, this distribution system comprises the transmission line 200 as a communication line which connects the distribution center 100, the personal communicator 1, and a distribution center

and the personal communicator 1.

[0019] The distribution center 100 The game software database 101, the karaoke database 103, and the other databases (group) 105, Since information is retrieved and sent out from each database 101,103,105. It has the control device 120 which performs control etc. of the game information sending device 111 formed by corresponding, respectively, the karaoke information sending device 113, the other information-sending devices 115, and these each information-sending device 111,113,115, and the head end 130 which outputs and inputs a signal with the exterior. [0020] The control device 120 inputs the request data transmitted by the personal communicator 1 via the transmission line 200 via the head end 130. And the information-sending device 111,113,115 is controlled, and the information corresponding to the request is taken out from the database 101,103,105, and is sent out to the transmission line 200 via the head end 130.

[0021]In this example, the transmission line 200 comprises a coaxial cable and this transmission line 200 is connected with two or more personal communicators 1. Next, the composition by the side of the personal communicator 1 is explained. As shown in <u>drawing 1</u>, this personal communicator 1, The terminal modem 3, the timer 4, CPU5, the input device 6, and ROM7, It has the memory 8, the video picture circuit 9, the sound source 10, the audio amplifier 11, the loudspeaker 13, the image synthesis circuit 15 and the monitor 16, the controller connector 21, the microphone connector 23, the data input/output controller 25, and the data input/output connector 27.

[0022]It is connected with the transmission line 200 and the terminal modem 3 comprises the demodulation-and-modulation machine 3a and the video tuner 3b which makes channel selection of a picture. The input device 6 consists of a keyboard, a mouse, etc., for example, and is used for inputting the number of the karaoke music of which the personal communicator's 1 user expects the number of desired game software, and a performance, or inputting other processing instructions etc. Operation only for a game using the controller 31 can also be performed by connecting the controller 31 only for a game to the controller connector 21. The same thing as control buttons widely used for what is called a video game etc., such as a button, a joy stick, etc. which give operator command, is provided in this controller 31.

[0023]When performing karaoke by connecting the microphone 33 to the microphone connector 23, a user can make his singing voice output from the loudspeaker 13. On the other hand, the data output cable 37 is connected to the data input/output connector 27, and the printer 40 or personal computer 41 grade is connected to the data output cable 37.

[0024]Next, the control performed in CPU5 is explained. Are one [ a power supply (not shown) ], it is not rich, and a main menu is displayed. "A distribution center call" is chosen from the main menu, and explanation is continued with reference to <u>drawing 3</u> from the time of distribution center call processing starting.

[0025]First, the display of a use item is performed (S1000). The display of a use item consists of the display (for example, display "choose the use item of hope") and use item list (the game, the karaoke, other items) which ask for selection. A judgment is made after this display (S1010), and the individual-processing picture of the selected use subject name is displayed (S1020). The display of an individual-processing picture consists of the display and individual-processing name list which ask for an input or selection. After the display of this individual-processing picture, if input or selection is made, execution of individual processing will be performed (S1030). In execution of this individual processing, it is first connected to a distribution center, two-way communication is performed between a distribution center and the personal communicator 1, and the processing according to the contents classified by each of processing is made.

[0026]First, the control in the case of performing a game is explained, also including the procedure. If a game is chosen in the use item display in the above S1000, an individual-processing picture like <u>drawing 4</u> will be displayed. When it explains, it is the display 301 and the individual-processing name list 303 which ask for an input or selection. There will be the individual-processing name list 303 to \*\*-\*\*, and "the game number wishing \*\*:" will be processing to which game information applicable after that is transmitted, if a game number is directly inputted into the game number input column 305 in this screen. "\*\*:game number list" is processing which the list display of the number of the game which can be distributed from the game software database 101 of the present distribution center 100 is made. "\*\*: Fee indicator" is processing which displays an accumulation fee this month, for example, or displays the past fee.

[0027]The above-mentioned \*\* or \*\* is chosen to actually start a game. For example, although what is necessary is to move cursor to the game number input box 305, and just to input a number with a ten key etc., when the game number of hope is already known, in not understanding, it chooses \*\*. [0028]\*\* Explain game number list processing briefly. \*\* If it chooses, from the distribution center 100, the data about the list display of the number of a game will be transmitted, and it will be displayed. In detail, as shown in <u>drawing 5</u>, it is divided into the input area 311 and \*\*\*\*\*\* 313, and if \*\*\*\*\*\* 313 is scrolled, a non-indicative data can also be seen. In addition to a game number and a game name, "the number of participating good Yoshihito" and a "fee" are displayed on \*\*\*\*\*\* 313. Therefore, what is necessary is to refer to this display, to look for the game number of hope, and just to input into the game number input column 315 of the input area 311.

[0029]When performing a new game for example for the first time, there is a case where he would like to know the outline of the game content, etc. If a game number is inputted into the game number input column 317 of "B:game content informative label" of the input area 311 in such cases, the approximate account of the game content will be displayed on **\*\*\*\*\*** 313. Therefore, a user can choose a game, after looking at the display.

[0030] If the game number list display is printed, the game which he wishes from next time can be chosen immediately. In that case, if "C. printing" of the input area 311 is chosen, it can print from the data input/output connector 27 shown in <u>drawing 1</u>, and the printer 40 connected via the data output cable 37.

[0031]The processing performed when the game number of choice is inputted into the number input column 305 of <u>drawing 4</u> by the above-mentioned individual-processing **\*\*** or the game number input column 315 of <u>drawing 5</u> by individual-processing **\*\*** is explained with reference to <u>drawing 6</u>. First, game request data is created (S1100). This game request data comprises an ID number of the personal communicator 1 which transmits data, a game number of choice, etc. The created game request data is transmitted to the distribution center 100 (S1110).

[0032]In the distribution center 100 (<u>drawing 2</u>), the control device 120 inputs the transmitted request data via the head end 130. And the game information sending device 111 is controlled and the game information corresponding to the request is taken out from the game software database 101. The taken-out game information is sent out to the transmission line 200 via the head end 130, and is transmitted to the applicable personal communicator 1. In this case, the 1st and 2nd predetermined time later mentioned with game information is also transmitted.

[0033]It returns to <u>drawing 6</u>, and in the personal communicator 1 side, the game information is received (S1120) and it stores in the memory 8 (S1130). And if storing in the memory 8 is completed, a reception completion display will be performed on the monitor 16 (S1140), reception completion data will be further transmitted to the distribution center 100 (S1150), this manipulation routine will once be ended, and it will wait for the next processing. If operation of after that, for example, a game start, is carried out, the game according to the game information in the memory 8 will be started.

[0034]In S1150, accounting is performed by transmitting reception completion data to the distribution center 100 in the distribution center 100. This accounting is mentioned later. Next, game information automatic erasing processing is explained with reference to <u>drawing 7</u>. If the processing about the game information reception shown in <u>drawing 6</u> is made, the reception completion time will be incorporated (S1200). And the lapsed time from reception completion time is computed by incorporating current time (S1210), and it is judged whether the 1st carried out specified time elapse (S1220). When specified time elapse has not been carried out, it returns to S1210, and

warning is taken out when specified time elapse is carried out (S1230). And it is waiting (S1250) about computing lapsed time further (S1240) and the 2nd predetermined time passing. When the 2nd predetermined time passes, the game data in the memory 8 is made to eliminate (S1260), and this processing is ended.

[0035]As a warning of S1230, issue a predetermined display (for example, "it is an end in 5 more minutes" etc.) on the monitor 16, a predetermined beep sound is emitted, or various the mode is considered. What is necessary is just to set the 1st predetermined time in S1220, for example to five quotas of the 2nd predetermined time, etc. It is not the warning of only five quotas and two quotas, one quota, etc. may carry out multiple-times warning. If there is this warning, when interrupting a game, it is the present situation (for example, when two or more characters come out). Since who corresponded which character or the information of the top rating person in the time, etc. can be outputted and set from the printer 40, it is convenient when resuming the same game later.

[0036]In relation to processing of <u>drawing 6</u> of S1150, it mentioned performing accounting above in the distribution center 100. The accounting is explained. As an accounting system, when it divides roughly, there are a charging system of what is called a fixed amount system which imposes a fee to use of fixed time, such as a moon arrangement, and what is called a meter-rate based charging system that imposes the fee corresponding to the information when used.

[0037]Although both this method changes the propriety of adoption by the gestalt, situation, etc. of a distribution system, actually, it can consider changing a fee, for example in game contents (the complicated degree of the contents, the size of a scale, etc.) or an old game, a new game, etc. In this example, the system charged for every terminal based on the reception completion data transmitted by the personal communicator 1 by S1150 is adopted so that it may correspond to the meter-rate system. What is necessary is just to make a actual fee automatic drop [ lengthen ] from the predetermined account of a bank.

[0038]He may not notice, if it understands only at the time of fee payment even if it is incurring unexpected big-ticket expenses if the meter-rate system is used, but it is made especially to automatic drop [ lengthen ]. Therefore, if "\*\*:fee indicator" shown in <u>drawing 4</u> is chosen, before it can know the accumulation fee by the present, and the past fees (paying last time the fee at the time, the fee for past half a year or one year, etc.) and parents in particular will know, a child uses, An unexpected big-ticket fee is able to prevent from charging beforehand.

[0039]Thus, since according to this distribution system game information corresponding from the distribution center 100 will be replied if a user sends out a desired game request from the personal communicator 1 to the distribution center 100, The user can perform a desired game, without having a game cassette etc. Since the sent-out game information is stored temporarily in the personal communicator's 1 memory 8 (it corresponds to the input data temporary storage means of this invention.), Once it sends, it can respond also to the request of the same game from another personal communicator 1, and can respond to many terminal users with the personal communicator 1.

[0040]And since it constitutes so that it may be made to eliminate after [ after transmitting the game information stored temporarily in the memory 8 ] predetermined time, it is safe, without using freely without the transmission from a distribution center the game information once transmitted also as the transmitting side, when the system distributed for pay is built. When a user wants to perform the game again, he will request again. It is actually impossible for the game information transmitted once temporarily to have been able to download by the user side, to only have sent out software by the communication line only instead of the conventional game cassette, when it could be used freely after that, and for it to be much less than the price of game cassettes also in respect of profit.

[0041]However, if it is made to make it once eliminate by predetermined time like this system, it is also possible for it to be much [ price / of game cassettes ] less than the fee of 1 time of a game,

and to set it up. Therefore, even if it is a game played only once conventionally, the game cassette is purchased, and the consumer who has held a feeling of a comparatively high price is also satisfied. In a home, it may become a problem that it is absorbed, for example in a game and cannot stop easily, and since there is much younger age group, such as a schoolchild, especially as a user of a video game, the above-mentioned problem is considered to be a quite deep-rooted thing. Under the present circumstances, since it cannot but stop automatically by predetermined time in this system, the demand of the guardian relevant to upbringing of the child in a home can also be met, for example.

[0042]Although it explained as a premise that above-mentioned working example performed a game the whole personal communicator, a game can be performed also among the left persons 1, i.e., two or more personal communicators. For example, using the above-mentioned transmission line 200 or the telephone line, between the personal communicators 1 is connected so that two-way communication is possible. And if it changes into the state where the same game information as each personal communicator 1 was distributed, in both the personal communicator 1, it will have the same character, and the data for communication will come to require a character number and only position data. Therefore, on each personal communicator's 1 monitor 16, the character of mutual many to operate can be controlled and a game can be carried out to real time.

[0043]In the case of what is called a role playing game, map data may be divided and supply and sale of may be done. That is, in order to move to the following map data, download of the map data will be required. In that case, change also of map data is enabled according to the level of the

"strength" on what is called a game. It may be made to transmit authorization data for every purchase of map data. It will become a certificate, if the printer 40 or FAX is connected and data is made to output.

[0044]Next, the control in the case of performing karaoke is explained. Since a fundamental flow is the same as the case of the above-mentioned game, the overlapping portion is omitted. Since it is karaoke, the microphone 33 is connected to the microphone connector 23. If karaoke is chosen in the use item display of S1000, the same individual-processing picture as <u>drawing 4</u> will be displayed. Namely, "the karaoke number wishing \*\*:", "\*\*:karaoke number list." "\*\*: It is fee indicator." The karaoke number of hope is inputted in \*\* or \*\* to actually start karaoke.

[0045]Karaoke request data is created in personal communicator **\*\***, and it is transmitted to the distribution center 100. The distribution center 100 controls the karaoke information sending device 113, takes out the karaoke information corresponding to a request from the karaoke database 103, and transmits it to the applicable personal communicator 1.

[0046]In the personal communicator 1, the music data received via the demodulation-andmodulation machine 3a is once stored in the memory 8. Simultaneously, CPU5 sends the song selection data beforehand set up according to the idea of the music which selected the song to the video tuner 3b in order to choose the image data suitable for the contents which selected the song. CPU5 takes a synchronization, respectively and it outputs the lyrics data and playing data in the music data stored in the memory 8 to the video image circuit 9 and the sound source 10. Information, including words etc., is changed into text-images data, and the video image circuit 9 outputs it.

[0047]The sound source 10 changes playing data into an audible signal, and sends it to the audio amplifier 11. The audio amplifier 11 compounds and amplifies the audible signal of playing music, and the audio signal from the microphone 12, makes them a correspondence item, and is outputted to the loudspeaker 13. The video tuner 3b reads the background image data which selected the song with song selection data, and outputs it to the image compositing circuit 15. The image compositing circuit 15 compounds the above-mentioned background image data and text-images data, and outputs a picture signal to the monitor 16.

[0048]This karaoke playing is described in more detail. When music data has been transmitted from the distribution center 100, the RF signal as picture information and the RF signal which changed music data multiplex, and it is transmitted to the personal communicator 1 via the transmission line 200 which is a coaxial cable. And CPU5 of the personal communicator 1 sends out predetermined song selection data to the video tuner 3b (<u>drawing 1</u>) of the terminal modem 3 that a song should be selected in the picture channel corresponding to the received music data. This song selection data was set up beforehand correspond to the idea (genre) of music. Then, music data is sent out to the sound source 10, and a performance is started.

[0049]And completion of a performance will transmit playing completion data to the distribution center 100. By transmitting this playing completion data to the distribution center 100, accounting is performed in the distribution center 100. Although the accounting in the case of the abovementioned game was every game, since one music is several minutes in the case of karaoke, it should just set up an accounting system according to the actual condition, such as charging, for example by one time basis.

[0050]Control [ like the game information automatic erasing processing (drawing 7) in the case of the above-mentioned game ] whose case of karaoke is is unnecessary. Thus, according to the karaoke distribution system using this personal communicator 1. Since karaoke information corresponding from the distribution center 100 will be replied if a user sends out a desired karaoke request from the personal communicator 1 to the distribution center 100, The user can perform desired karaoke, without having karaoke data medium, such as a video disk. Since the music data and lyrics data which were sent out are stored temporarily in the personal communicator's 1 memory 8, Once it sends, it can respond also to the request of the same karaoke from another personal communicator 1, and can respond to many terminal users with the personal communicator 1.

[0051]Above, this invention is not limited to such working example at all, and can be carried out in the mode which becomes various in the range which does not deviate from the gist of this invention. For example, above-mentioned working example explained that personal communicator 1 the very thing had the monitor 16 and the loudspeaker 13 inside, as shown in <u>drawing 1</u>, but the composition that it connects and uses for a monitor and loudspeaker of not only this but the exterior may be used. For example, it connects with a television television machine and may be made to make a picture and a sound output from a television television machine. A small display is prepared for the personal communicator 1 in that case, and it may be made to display a selection picture as shown in <u>drawing 4</u> and <u>drawing 5</u> on the display.

[0052]The transmission line 200 may apply the coaxial cable of an established cable television system, etc., and can build them as a multimedia two-way communication system including a satellite TV program, the video program on a video disk, or a radio program as other databases shown in <u>drawing 2</u>. Station the personal communicator 1 in this distribution system at each home, he is stationed to each part store of a hotel, or various application is possible for him. [0053]

[Effect of the Invention]As explained in full detail above, according to the software distribution system using this communicator. Since game information or karaoke information corresponding from a distribution center will be replied if a user sends out a desired game or karaoke request from a communicator to a distribution center, In the case of a game, the user can perform a desired game or karaoke, without having data medium, such as a video disk, in the case of a game cassette and karaoke. Since the sent-out game or karaoke information is stored temporarily at a communicator's input data temporary storage means, Once it sends, it can respond also to the request of the same game from another communicator, or karaoke, and can respond to many terminal users with a communicator.

[0054]In the case of a game, since it constitutes so that the game information stored temporarily may be made to eliminate after after-transmission predetermined time, it is safe, without using freely without the transmission from a distribution center the game information once transmitted also as the transmitting side, when the system distributed for pay is built.

Page 9 of 9

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1. This document has been translated by computer. So the translation may not reflect the original precisely.

2.\*\*\*\* shows the word which can not be translated. 3.In the drawings, any words are not translated.

## DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1]It is a block diagram of the personal communicator of one working example of this invention.

[Drawing 2]It is a block diagram of the software distribution system using this personal communicator 1.

[Drawing 3]It is a flow chart concerning a distribution center call.

[Drawing 4] It is an explanatory view showing the display of an individual-processing picture.

[Drawing 5] It is an explanatory view showing a game number list display.

[Drawing 6]It is a flow chart which shows the processing performed in the personal communicator at the time of a game request.

[Drawing 7]It is a flow chart which shows game information automatic erasing processing. [Description of Notations]

1 -- A personal communicator and 3 -- A terminal modem and 4 -- Timer, 6 [-- Monitor, ] -- An input device and 8 -- A memory and 13 -- A loudspeaker and 16 31 [-- A distribution center and 101 / -- A game software database, 103 / -- A karaoke database and 111 / -- A game information sending device, 113 / -- A karaoke information sending device and 120 / -- A control device and 200 / -- Transmission line ] -- A controller and 33 -- A microphone and 40 -- A printer, 100

[Translation done.]

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DRAWINGS				-	
[Drawing 1]					











Japanese Laid Open Patent Application No. H01-166218

# PAID SOFTWARE ADMINISTRATION AND MAINTENANCE SYSTEM

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# Specification

# 1. Title of the invention

Paid software administration and maintenance system

## 2. Scope of the patent claim

1. A paid software administration and maintenance system that is characterized by

comprising a means that encodes the contract term for paid software to be delivered and writes it to a directory, a means that, when a request is generated in the operation system that handles this paid software for processing of the paid software, reads the computer usage date from the computer, reads the contract date from the directory, and after converting both of these to comparison variables, runs a comparison and, depending on the difference in the comparison result, outputs an alert, extension, or interruption message to the processing requestor, a means that writes and accumulates the aforementioned messages and computer usage dates in a paid software administration and maintenance file, a means that periodically forwards the aforementioned accumulated information to the paid software provider, and a means for the supplier to forward information, such as requests for additional payment for use of the paid software after the contract term has ended, notifications of end of contract term, new paid software sales, etc., based on the aforementioned forwarded information.

3. Detailed description of the invention

(Field of industrial use)

This invention pertains to a paid software administration and maintenance system with use and performance expirations, and specifically relates to an administration and maintenance system that is equipped with means to discover the usage status for software whose contract term has expired, prevent contract violations, and perform new system sales.

# (Prior art)

Past administration systems consisted of control means that permitted processing using paid software only when the contract expiration and the date of use have been compared to confirm that the expiration has not been reached, as described in Japanese Laid Open Patent Application Publication No. **\$**58-87631.

(Problems solved by the invention)

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The aforementioned prior art had problems in that it gave no consideration to alert the user or to grant leeway regarding the prevention of illegal use after expiration of the paid software had been reached, making its spontaneous use impossible. It also had the problem that no consideration was given to making it possible for the maker to automatically determine contract expiration information and information regarding the use of paid software past the contract expiration, making maintainability of the paid software poor.

The purpose of this invention is to improve the ease-of-use of paid software, and to easily realize improved loss prevention and maintainability, by dividing illegal use of paid software after expiration of the contract into multiple levels, and automatically forwarding contract expiration related information to the maker.

(Means of solving problems)

The above purpose is achieved by outputting messages divided into alert, extension, and interruption according to ranges of the difference between comparison variables when comparing the contract expiration and the date of computer use, and providing alerts and extensions to users, accumulating information on the results of comparisons in a paid software administration and maintenance file, and periodically forwarding it to the maker.

(Action)

For paid software that has reached its contract expiration, an alert message is output before the expiration is reached and an interruption message is periodically output even after the expiration has been reached. Thus, work will not be spontaneously interrupted and the like since the user is granted an extension.

In addition, the aforementioned information is also forwarded to the maker. Thus, use after expiration of the contract can be periodically determined without loss. Thus, the period of use after expiration of the contract term can be determined and losses not accrued because additional charges can be made. Software on which the contract is going to expire can be found out before the fact, facilitating maintenance, such as sales, etc.

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## (Example embodiment)

An example embodiment of this invention is described below, using Figures 1 through 3. When a paid software delivery request is generated (100), the contract term is loaded to a directory writer. (101) The loaded contract term is encrypted and converted, and then (102) written to the directory of the paid software being delivered. (103) Additional information, such as an interruption grace period, etc., can also be written as information to the directory in addition to the contract term. Since the contract term is encrypted, the user is unable to manipulate it in anyway. In addition, no matter how the paid software might be copied, it cannot be illegally used since it will be copied together with the directory as a unit. Furthermore, since the contract term is loaded to part of the directory as several bytes of encrypted information, there is virtually no change in the volume of the paid software. Next, when a paid software processing request is generated by the user (201), the contract term is loaded from the directory of the paid software in the operation system (201). The encrypted contract term information that has been loaded is converted to term comparison variable A (202). Next, the date of computer use is read from the computer (203) and converted to comparison variable B (204).

Next, A and B are compared, and processing is permitted (212) if it is within the contract term (205). Within an alert period (206), an alert message is output, or an extension message is output within an interruption grace period (207), and then the aforementioned message and the date of use are written to the paid software administration and maintenance file (211) and processing is allowed. (212) If the interruption extension term has lapsed, processing is rejected (213).

Next, as shown in Figure 3, the contents of the paid software administration and maintenance file on the user side are collected and automatically compiled on the maker side by means of public lines, floppy disks, or MT, etc. Administration and maintenance, such as requests for additional charges for use after contract expiration, new software sales, contract expiration instructions, etc., are performed on the basis of this complied information. Security encryption of the paid software

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administration and maintenance file makes it so that it cannot be illegally updated by the user. The maker does not incur losses in this way.

Furthermore, in addition to the messages and date of use information written to the paid software administration and maintenance file, the number of uses, computer usage time, and performance evaluation information, etc., can also be accumulated, and analyzing this information can also play a role in evaluation, etc.

Since the expiration of the contract term can be known before the fact on the user side, and contract expiration information can also be determined on the maker side according to this invention, it has the effect of making it possible to automatically perform maintenance, without experiencing loss due to illegal use.

(Effect of the invention)

With this invention, on the user side, it is possible to know about expiration of the contract term before the fact, and use is possible for a set period even after expiration of the contract term. On the maker side, it is possible to automatically administer the contract for paid software, having the effect of making automation possible on even the maintenance aspect.

4. Brief explanation of the figures

Figure 1 is a flowchart that shows the means by which the contract term is written to the paid software directory in an example embodiment of this invention, Figure 2 is a flowchart that shows the means by which paid software processing is approved in the operation system, and Figure 3 is an explanatory drawing that shows the means of administration and maintenance on the side of the paid software provider.

1 ... paid software provision destination (user)

- 2 ... paid software provider (maker)
- 3 ... public lines
- 4 ... acquisition
- 5 ... MT

6 ... floppy disk

7 ... mail

Agent: OGAWA Katsuo, Patent Atty.







Fig. 3

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◎ 公開特許公報(A) 平1-166218

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了後の使用情報などを自動で把握するという点に ついての配慮がされておらず、有償ソフトウェア の保守性が悪いという問題があった。

本発明の目的は、有償ソフトウェアの契約期限 満了後の不当使用防止を数段回に分けて行い、ま た契約期限満了情報についても、自動でメーカに 伝達することによって、有償ソフトウェアの使い 勝手を向上させ、契約違反防止による損害防止。 保守性の向上を容易に実現することにある。

〔問題点を解決するための手段〕

上記目的は、契約期限と計算機使用日付の比較 を比較変数の差の範囲で行うことにより、メッセ ージを警告,停止独予,停止と分割して出力し、 ユーザに響告,猶予を与えることと、比較結果の 情報を有償ンフトウェア保守管理ファイルに蓄積 して定期的にメーカ側へ伝達することにより、達 成される。

〔作用〕

契約期間満了となる有償ソフトウェアは、期限 満了前に警告メッセージを出力し、期限満了後も

ることはできない。また、有債ソフトウェアがど のようにコピーされても、ディレクトリも一体と なってコピーされるため、コピー先でも不法な便 用は行えない。さらに契約期限は数パイトの暗号 情報で、ディレクトリの一部に読込むため、有償 ソフトウェアの容量はほとんど変らない。次にユ ーザより有償ソフトウェア処理要求が発生(201) した場合、オペレーションシステムにおいて、契 約期限を有償ソフトウェアのディレクトリ部より 読込む(201)。読込んだ契約期限暗号化情報を 期限比較変数Aに変換する(202)。次に、計算 機より計算機使用日付を読込んで(203)、比較 変数Bに変換する(204)。

次にAとBを比較し契約期間内であれば(205) 処理を許可する(212)。 警告期間内については (206) 警告メッセージを(209) 停止有余期間 内については(207) 停止猶予メッセージを出力 (210) して、有償ソフトウェア保守管理ファイ ルに前記メッセージと使用日付を書込み(211) 処理を許可する。(212) 停止猶予期限を過ぎているも ー定期 間は停止メッセージを出力し動作する。そ れによってユーザ側に猶予が与えられるので、作 薬が突然停止したりすることがない。

また、前記情報はメーカ側にも伝達される。 それによって契約期限満了後使用された期間も把 握でき、これに対し追欲も行えるため損害は受け ない。また、事前に契約期限満了ソフトウェアも 把握でき、セールス等の保守を容易に行うことか てきる。

〔実施例〕

以下、本発明の一実施例を第1図~第3図によ り説明する。

有徴ソフトウェア出荷要求が発生(100)した 場合、ディレクトリライターに契約期限を競込ま せる。(101) 観込んだ契約期限を暗号変換して (102) 出荷有償ソフトウェアのディレクトリに 替込む。(103) ディレクトリに 普込む情報に突 約期限の他に、停止有余期間等の 竹加情報も普込 むことが可能である。 契約期限は暗号化されてい るためユーザはこれに対して何らかの操作を加え

のについては処理を却下する(213)。

次に、図るに示すように、メーカ側はユーザ側 にある有債ソフトウェア保守管理ファイルの内容 を定期的に公衆回縁、フロッピーディスク、MT 等により回収を行い自動楽計する。この集計した 情報に基づいて契約期酸満了後の使用に対する追 像金の請求、新ソフトウェアのセールス、契約期 限満了案内等の保守管理を行う。有債ソフトウェ ア保守管理ファイルは機密保護することによって、 ユーザが不法に更新できないようにする。これに よってメーカは損害を受けることはない。

さらに有償ソフトウェア保守管理ファイルへ書 込む情報としてメッセージ、使用日付の他にも、 使用回数、計算機使用時間、性能評価情報等を蓄 様して、この情報を解析することにより、評価等 に役立てることも可能である。

本発明によれば、ユーザ側では契約期限満了を 事前に知ることができ、メーカ側も契約期限満了 情報を把握できるため、不法使用による損害を受 けることもなく、保守を自動で行える効果がある。

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(発明の効果)

本発明によればユーザ側は契約期版 滅了を事前 に知ることが可能となり、契約期限 満了後も一定 期間使用可能となる。メーカ側は有償ソフトウェ アの自動的な契約 官理が可能となり、保守面にお いても自動的に行える効果がある。

4. 凶面の簡単な説明

第1図は本発明の一奥施例の有損ソフトウェア のディレクトリに契約期限を責込む手順を示すフ ローチャート、第2図はオベレーションシステム における有損ソフトウェアの処理認可手順を示す フローチャート、第3図は有債ソフトウェア提供 者側の保守曾理手順を示す説明図である。 1…有債ソフトウェア提供先(ユーザ). 2…有償ソフトウェア提供者(メーカ), 3…公衆回線, 4…人手, 5…MT, 6…フロッピーディスク, 7…郵便物。

代理人弁理士 小 川 勝



第 3 図



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## **SPECIFICATION**

- 1. TITLE OF THE INVENTION Karaoke system
- 2. SCOPE OF PATENT CLAIMS

1) A karaoke system characterized in that it comprises a karaoke data transmission device and a plurality of karaoke reproduction devices connected thereto through digital communication lines,

wherein said karaoke data transmission device comprises the constitutive elements described under items (a) through (g) below, namely:

(a) a large hard disk storage device on which is recorded multiple song data, subtitle data and image data used for karaoke, as well as request information, the usage conditions of said karaoke reproduction devices, etc.;

(b) a host computer that controls the input and output of various types of data to and from said large hard disk storage device;

(c) interfaces that are provided for each of the aforementioned digital communication lines and which control the transmission and reception to and from the digital communication line;

(d) CPUs that are provided for each of the

aforementioned interfaces and which control the interface to perform automatic answering, and extract the necessary data from the large hard disk storage device via said host computer according to the request number;

(e) buffer RAMs that are provided for each of the aforementioned interfaces and which store data extracted from said large hard disk storage device and output said data to said digital communication line via said interface as instructed by said CPU;

(f) a common data bus that manages the exchange of data between said plurality of CPUs provided for each of the aforementioned interfaces and said host computer; and

(g) a printer that is connected to said host computer and print outs request information and the usage conditions of said karaoke reproduction devices and the like,

and said plurality of karaoke reproduction devices each comprises the constitutive elements described under items (h) through (q) below, namely:

(h) a CPU that controls the operation of the karaoke reproduction device as a whole;

(i) an interface that controls transmission and reception to and from said digital communication line;

(j) a buffer RAM that temporarily stores input data from said digital communication line and transfers it to said CPU when the data has reached a set quantity;

(k) a song selection device into which the user inputs karaoke request numbers;

(l) an image reproduction circuit that decodes image data contained in said input data transferred via said CPU;

(m) a music reproduction circuit that decodes the music data contained in said input data transferred via said CPU;

(n) a subtitle control circuit that decodes subtitle information contained in said input data transferred via said CPU and controls the change in subtitle color as the song progresses;

(o) a combining circuit that combines the video signal from said image reproduction circuit and the video signal from said subtitle control circuit;

(p) a display device that displays the image and subtitle video signals combined by said combining circuit; and

(q) a speaker that reproduces the music signal from said music reproduction circuit.

3. DETAILED DESCRIPTION OF THE INVENTION (FIELD OF INDUSTRIAL APPLICATION)

The present invention relates to a karaoke system.

(PRIOR ART)

So-called karaoke, wherein only the accompaniment of a popular song is reproduced and a person sings along to it, has become widespread, and karaoke devices have been installed in many restaurants, bars, taverns, inns, hotels, and the like.

Conventional karaoke devices have been provided in various formats, such as devices that utilize an 8-track music tape and reproduce only music, devices that reproduce simple still images and lyrics subtitles as well as high quality music using a CD, CDG, etc., as well as devices that display a moving picture and simultaneously display lyrics subtitles that change as the song progresses and also reproduce high quality music, using an LD, VHD, etc. However, these conventional karaoke devices have had various problems, such as that ① as the quantity of music software increases, the installation footprint becomes larger, ② when a new song is released, since there are many songs recorded on a single medium (CD, etc.), the operation of adding a new songs thereto is complicated and so accommodation of new songs is delayed, ③ as the quantity of music software increase, the software preparation costs become greater, ④ it is not possible to accurately know the usage conditions of devices at businesses where the karaoke devices are installed, which may cause problems in charging rental lease fees.

# (PROBLEM TO BE SOLVED BY THE INVENTION)

The present invention was made to resolve the aforementioned problems, its object being to provide a karaoke system that has many advantages, such as being able to support multiple accesses with a single piece of software, allowing new songs to be accommodated immediately, making it possible to accurately know the karaoke usage conditions, having a small installation footprint and low initial cost, and having no limitations on the number of songs made available.

(MEANS FOR SOLVING THE PROBLEM)

The aforementioned object can be achieved by means of a karaoke system characterized in that it comprises a karaoke data transmission device and a plurality of karaoke reproduction devices connected thereto through digital communication lines,

wherein said karaoke data transmission device comprises the constitutive elements described under items (a) through (g) below, namely:

(a) a large hard disk storage device on which is recorded multiple song data, subtitle data and image data used for karaoke, as well as request information, the usage conditions of said karaoke reproduction devices, etc.;

(b) a host computer that controls the input and output of various types of data to and from said large hard disk storage device;

(c) interfaces that are provided for each of the aforementioned digital communication lines and which control the transmission and reception to and from the digital communication line;

(d) CPUs that are provided for each of the aforementioned interfaces and which control the interface to perform automatic answering, and extract the necessary data from the large hard disk storage device via said host computer according to the request number;

(e) buffer RAMs that are provided for each of the aforementioned interfaces and which store data extracted from said large hard disk storage device and output said data to said digital communication line via said interface as instructed by said CPU;

(f) a common data bus that manages the exchange of data between said plurality of CPUs provided for each of the aforementioned interfaces and said host computer; and

(g) a printer that is connected to said host computer and print outs request information and the usage conditions of said karaoke reproduction devices and the like,

and said plurality of karaoke reproduction devices each comprises the constitutive elements described under items (h) through (q) below, namely:

(h) a CPU that controls the operation of the karaoke reproduction device as a whole;

(i) an interface that controls transmission and reception to and from said digital communication line;

(j) a buffer RAM that temporarily stores input data from said digital communication line and transfers it to said CPU when the data has reached a set quantity;

(k) a song selection device into which the user inputs karaoke request numbers;

(l) an image reproduction circuit that decodes image data contained in said input data transferred via said CPU;

(m) a music reproduction circuit that decodes the music data contained in said input data transferred via said CPU;

(n) a subtitle control circuit that decodes subtitle information contained in said input data transferred via said CPU and controls the change in subtitle color as the song progresses;

(o) a combining circuit that combines the video signal from said image reproduction circuit and the video signal from said subtitle control circuit;

(p) a display device that displays the image and subtitle video signals combined by said combining circuit; and (q) a speaker that reproduces the music signal from said music reproduction circuit.

(OPERATION)

A configuration as described above makes it possible to connect karaoke reproduction devices installed at many businesses where karaoke is used and installed through digital communication lines to a single karaoke data transmission device provided at a center, thus making it possible to accommodate multiple accesses with a single piece of software recorded on the large hard disk storage device of the center's karaoke reproduction device and allowing new songs to be reproduced on all karaoke reproduction devices simply by recording them on the aforementioned large hard disk storage device when new songs are released, thus making it possible to provide a karaoke system with many advantages, such as being able to immediately accommodate new songs, having no restriction on the number of songs made available, requiring only a small installation footprint and having low initial cost, as well as allowing one to accurately know the karaoke usage conditions by recording the number of requests and the song numbers from each karaoke reproduction device on the center's large hard disk storage device. (EMBODIMENTS)

The configuration of the present invention will be described specifically below while referring to the drawings.

Figure 1 is an illustration showing the installed state of the karaoke system of the present invention; Figure 2 is a block diagram showing the circuit configuration of the karaoke data transmission device in the karaoke system of the present invention; and Figure 3 is a block diagram showing the circuit configuration of the karaoke reproduction device in the karaoke system of the present invention.

As shown in Figure 1, the karaoke system of the present invention comprises one karaoke data transmission device A provided at a center, and multiple karaoke reproduction devices  $B_1$ ,  $B_2$ ,  $B_3$ ,  $B_4$ , etc., installed at businesses where karaoke is used and installed at different locations and connected to the karaoke data transmission device A through digital communication lines  $C_1$ ,  $C_2$ ,  $C_3$ ,  $C_4$ , for instance ISDN. The karaoke data transmission device A comprises a large hard disk storage device, host computer, buffer RAM, digital circuit interface, etc., and the karaoke reproduction device  $B_1$ ,  $B_2$ , etc. each comprises a digital circuit interface, buffer RAM, CPU, image reproduction device, music reproduction device, subtitle control circuit, song selection device, display device, speaker, etc.

In the present specification, "digital communication line" refers to an integrated network that performs, in integrated fashion, various services such as computer-to-computer communication, facsimile and videotex by transmission of digital signals, for example, ISDN (Integrated Service Digital Network), INS (Information Network System), DDX (Digital Data Exchange), etc.

In response to a call signal sent from karaoke reproduction device  $B_1$ ,  $B_2$ , etc. through digital communication lines  $C_1$ ,  $C_2$ , etc., the karaoke data transmission device A detects the number of the requested song and on that basis calls up the required data from the large hard disk storage device 2a and transfers it to the karaoke reproduction device  $B_1$ ,  $B_2$ ,  $B_3$ , etc.

The karaoke reproduction devices  $B_1$ ,  $B_2$ , etc. have the function of automatically calling the center and transmitting the request number to the karaoke data transmission device A through digital communication lines  $C_1$ ,  $C_2$ ,  $C_3$ , etc. when the request number of the desired song has been selected by manipulating the song selection device, and then receiving the karaoke data extracted based on the request number, and reproducing the song and images.

First, the karaoke data transmission device A provided in the center will be described while referring to Figure 2.

The karaoke data transmission device comprises a large hard disk storage device 2a, host computer 2b, interface 2c, CPU 2d, buffer RAM 2e, common data bus 2f and printer 2g. An interface 2c, CPU 2d and buffer RAM 2e are provided for each of the digital communication lines  $C_1$ ,  $C_2$ ,  $C_3$  and  $C_4$ .

The large hard disk storage device 2a is used to record multiple song data, subtitle data and image data used for karaoke, and also to record request information and usage conditions of the karaoke reproduction devices. The host computer 2b controls the input and output of various types of data to and from the large hard disk storage device 2a, and has the function of extracting the necessary data from the large hard disk storage device 2a and transferring it to CPU 2d in response to requests from CPU 2d, and recording data such as request information, dates and times from the karaoke reproduction devices  $B_1$ ,  $B_2$ , etc. on the large hard disk storage device 2a.

The interface 2c is provided for each of the digital communication lines  $C_1$ ,  $C_2$ ,  $C_3$ , etc., and is designed to control automatic answering of calls from the digital communication line, such as ISDN, and to control automatic transfer of data.

The CPU 2d controls the interface 2c to perform automatic answer, extracts the necessary data from the large hard disk storage device 2a via the host computer 2b according to the request number sent from the karaoke reproduction devices  $B_1$ ,  $B_2$ , etc. and stores this data in buffer RAM 2e.

The buffer RAM 2e temporarily stores data such as song data and subtitle data extracted from the large hard disk storage device 2a as described above, and outputs the data via interface 2c to the digital communication line  $C_1$  as instructed by the CPU 2d.

The common data bus 2f manages the exchange of data between a plurality of CPUs 2d, provided for each digital communication line, and a single host computer 2b, so as to allow the host computer 2b to be shared for multiple digital communication lines (20 to 100 lines).

The printer 2g is connected to the host computer and is used for printing out request information and the usage conditions of the karaoke reproduction devices and the like as necessary.

Next, the karaoke reproduction devices  $B_1$ ,  $B_2$ ,  $B_3$ , etc. installed at the businesses where karaoke is used and installed will be described while referring to Figure 3. The karaoke reproduction devices  $B_1$ ,  $B_2$ ,  $B_3$ , etc. all have the same configuration, so only one will be described here.

The karaoke reproduction device comprises a CPU 3h, interface 3i, buffer RAM 3j, song selection device 3k, image reproduction circuit 3l, music reproduction circuit 3m, subtitle control circuit 3n, combining circuit 3o, display device 3p and speaker 3q; the CPU 3h comprises a CPU main body 3h-1, program ROM 3h-2, program RAM 3h-3 and work RAM 3h-4, and the song selection device 3k and CPU 3h are connected via I/O circuit 3k'.

The CPU 3h plays the role of controlling the operation of the karaoke reproduction device as a whole, its principal functions being communications related control, music reproduction control, subtitle display and control, image reproduction control, request acceptance and display control.

The interface 3i controls transmission and reception to and from the digital communication line, and performs call placement to the telephone number for calling the karaoke transmission device and reception of data sent from the karaoke transmission device.

The buffer RAM 3j temporarily stores input data from the digital communication line and transfers the data to the CPU 3h once it has reached a set quantity.

The song selection device 3k is a device used by the user for inputting the desired karaoke request number; the request number inputted via I/O circuit 3k' to the CPU 3h is sent through interface 3i over the digital communication line to the karaoke transmission device.

The song selection device 3k and CPU 3h may be connected with a cable, or the song selection device 3k can be made into a remote control device and the song selection signals can be sent in wireless format.

The image reproduction circuit 31 decodes the image data contained in the input data from the karaoke transmission device transferred via CPU 3h after being stored temporarily in buffer RAM 3j, and converts it to a signal that can be displayed by the display device 3p.

The music reproduction circuit 3m decodes the music data contained in the input data transferred in a similar manner via CPU 3h, and converts it to an audio signal that can be reproduced by the speaker 3q.

The subtitle control circuit 3n decodes the lyrics subtitle information contained in the input data transferred in a similar manner via CPU 3h, converts it to a signal that can be displayed by the display device 3p, and controls the change in color of the subtitles so as to indicate the position in the lyrics to be sung as the song progresses by means of the color change.

The combining circuit 30 combines the video signal from the image reproduction circuit 31 and the video signal from the subtitle control circuit 3n and sends them to the display device 3p.

Next, the operation of the karaoke system of the present invention, configured as above, will be described.

When the user inputs the desired karaoke request number using the song selection device 3k of the karaoke reproduction device installed at a business where karaoke is used and installed, the corresponding signal is inputted via I/O circuit 3k' into CPU 3h. At this time, the interface 3i dials the telephone number for calling the center's karaoke transmission device based on instructions from the CPU 3h and, once the other party is ready to receive, transmits the request number through the digital communication line to the center's karaoke transmission device.

The aforementioned request number is brought to the CPU 2d through interface 2c on the karaoke transmission device side. At that time, CPU 2d extracts the required data, i.e. the image data, music data and subtitle data of the requested song, from the large hard disk storage device 2a via the host computer 2b according to the request number, and stores this data in the buffer RAM 2e.

The buffer RAM 2e transmits the data extracted from the large hard disk storage device 2a as above through interface 2c over the digital communication line to the karaoke reproduction device side, as instructed by the CPU 2d.

Here, since the host computer 2b is connected to multiple CPUs 2d via the common data bus 2f and can be shared for the digital communication lines of multiple karaoke reproduction devices, even when multiple requested songs from a plurality of karaoke reproduction devices are contending at the same time, each karaoke reproduction device can be accommodated very quickly.

When the desired requested song data is delivered through the digital communication line to the karaoke reproduction device side as described above, the input data is temporarily stored in buffer RAM 3j, and once the data reaches a set quantity, that data is sent through the CPU 3h to the image reproduction circuit 31, music reproduction circuit 3m and subtitle control circuit 3n.

At this time, the image reproduction circuit 31 decodes the image data contained in the input data and converts it to a signal that can be displayed by the display device 3p, the music reproduction circuit 3m similarly decodes the music data and converts it to an audio signal that can be reproduced by the speaker 3q, and the subtitle control circuit 3n similarly decodes the lyrics subtitle information and converts it to a signal that can be displayed by the display device 3p, and controls the change in subtitle color so as to indicate the position of the lyrics to be sung as the song progresses by means of the color change.

The video signals from the image reproduction circuit 31 and the subtitle control circuit 3n are combined in the combining circuit 3o and sent to the display device 3p, and the output of the music reproduction circuit 3m is inputted into the speaker 3q, the accompaniment of the desired requested song is reproduced along with images appropriate to that song, and at the same time the lyrics to be sung are displayed as subtitles on the screen of the display device while changing their color as the song progresses.

For the subtitle display, an arrangement whereby the subtitles are recorded together within the image data is also possible, in which case the subtitle control circuit 3h of the karaoke reproduction device may be omitted.

When a new song is to be employed in the karaoke system described above, by just recording the corresponding data on the large hard disk storage device 2a provided at the center, requests from the karaoke reproduction devices of all the businesses where karaoke is used and installed can be accommodated.

Furthermore, by recording the song number and frequency of requests on the large hard disk storage device whenever a request is made from a karaoke reproduction device to the karaoke data transmission device and printing out this information as necessary on the printer 2g, it becomes possible to determine the number of times each karaoke reproduction device is used, which not only makes the calculation of usage fees clear and easy, but also makes it easy to discriminate between songs for which there are many and few requests, which can be made use of as reference information when changing software or the like.

Furthermore, since only the karaoke reproduction device needs to be placed at the business where karaoke is used and installed, without the need to prepare large amounts of software, storage devices, etc., the installation footprint and initial cost can be reduced.

Various modifications can also be made, as appropriate, to the design of the karaoke data transmission device installed at the center, making the data sent out from it into ① song data, ② song data and subtitle data, ③ song data, subtitle data and subtitle color change data, ④ color change data, subtitles and image data, and the like.

Moreover, various modifications can be made, as appropriate, to the design of the karaoke reproduction device installed at each business where karaoke is used and installed, whereby for instance ① song data and subtitle data are combined in the data sent from the center, and the device has a function that allows the subtitles and song to be reproduced simultaneously, 2 song data, subtitle data and subtitle color change data are combined in the data sent from the center, and the device has a function that allows subtitles, song and subtitle color change to be reproduced simultaneously, 3 image data is also sent simultaneously, and the device has a function that allows the song, subtitles, subtitle color change and background image to be reproduced simultaneously, (4) the device can acquire image data from an external input terminal, and the like. (EFFECT OF THE INVENTION)

Since the present invention is configured as discussed above, using the present invention makes it possible to provide a karaoke system having many advantages, such as being able to handle multiple accesses with a single piece of software, allowing new songs to be incorporated and requests for them to be accommodated immediately, making it possible to accurate know the karaoke usage conditions, having a small installation footprint and low initial cost, having no limitation on the number of songs made available, and the like.
The present invention is not limited to the embodiment discussed above, and encompasses all modified embodiments within the scope of the object of this invention that could be easily conceived of by a person skilled in the art based on the above description.

4. BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 is an illustration showing the installed state of the karaoke system of the present invention; Figure 2 is a block diagram showing the circuit configuration of the karaoke data transmission device in the karaoke system of the present invention; and Figure 3 is a block diagram showing the circuit configuration of the karaoke reproduction device in the karaoke system of the present invention.

A ......Karaoke data transmission device

- B1 through B4 .... Karaoke reproduction device
- $C_1$  through  $C_4$  .... Digital communication line 2a .....Large hard disk storage device
- 2b-----Host computer
- 2c ·····Interface
- 2d------CPU
- 2e-----Buffer RAM
- 2f ·····Common data bus

#### **Figure 1**

3hCPU	
3h-1 ······CPU main body	
3h-2 ·····Program ROM	
3h-3 ·····Program RAM	
3h-4 ····· Work RAM	
3i ······Interface	
3j ·····Buffer RAM	
3k ·····Song selection device	:
3k'·····I/O circuit	
31 ····· Image reproduction ci	rcuit
3m ·····Music reproduction ci	ircuit
3n ·····Subtitle control circui	t
30 ·····Combining circuit	
3p ······Display device	
3q ·····Speaker	

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Continuation of page 1 (51) Int.Cl. <sup>5</sup> H 04 M 11/08	Identification codes	JPO file numbers 71175K
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⑩白本國特許庁(JP) ⑪特許出願公開

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最終頁に続く

#### 6月 永田 書

1. 発明の名称

カラオケシステム

2. 特許請求の範囲

() カラオケデータ送出装置と、デジタル邀信 回線を通じてこれに接続される複数のカラオケ群 出設置とから成り。

上現カラオケデータ送出装置は、下記回面ない し順項記載の構成要素、即ち、

(a)カラオケに使用される多数の数のデータ、デ ロップデータ、画像データが記録され、更にリク エスト情報及び上記カラオケ再患装置の利用状況 等が記録される大型ハードディスク認識装置と、

Ⅰ2上記大型ハードディスク記憶装置への各様デ ータの送し入れを制御するホストコンピュータと、 60上記デジタル通信回線のそれぞれに対応して 設けられ、デジタル通信回線への送受信を制修す るインターフェイスと、

幼上記インターフェイスのそれぞれに対応して

設けられ、インターフェイスを制御して自動者信 を行ない、リクエストナンバーに従い上記サスト コンピュータを介して大型ハードディスク記憶装 置から必要なデータを取り出すCPUと、

(e)上記インターフェイスのそれぞれに対応して 設けられ、上記大型ハードディスク記憶装置から 取り出されたデータをスキアし、上記CPUの係 令により当該データを上記インターフェイスを介 して上記デジタル通信回線へ送出するバッファド AMと、

④上記インターフェイスのそれそれに対応して 設けられた上記複数のCPUと、上記ホストコン ビュータとの間のデータの殺受を統御する処慮デ ータバスと、

(個点記ホストコンピュータに接後され、リクエスト情報及び上記カラオケ等空装置の利用状況等 をプリントアウトするブリンタとを備え、

上記模数のカラオケ再邀該敵のそれぞれは、下 記伽頃ないしGI項記載の構成要素、即ち、

(h)カラオケ褥生装置全体の作動を制御するCP

ひと、

(9)上記デジタル通信回線への送受信を削留する インターフェイスと、

(i)上記デジタル通信回線からの入力データを一 時的にストアし、データが一定量に適したときこ れを上記CPUに転送するバッファRAMと、

|例科術者がカラオケのリクエストナンパーを入 力する選曲装置と、

(I)上記CPUを介して転送された上記入力デー タに含まれる画像データをデコードする画像再先 回路と、

総上記じPUを介して転送された上記入力デー タに含まれる音楽データをデコードする音楽再生 個路と、

(1)上記CPUを介して転送された上記入力デー クに含まれるテロップ情報をデコードすると共に、 割の進行に応じてその色の変化を制御するチロッ プ報酬回路と、

(の)上記画像料畫圖路からの映像信号と上記テロ ップ制御回路からの映像信号とを含成する合成図

高音質の普楽が再現されるもの等々、様々な形態 のものが提供されている。

然しながら、これらの従来のカラオケ装置にお いては、①音楽ソフトの増大に浮い、その設置面 後が大きくなる、②新曲が出ても1つのメディア (CDなど)には多くの曲が記録してあるため、 これに新想を追加する作業は損難で、新強への効 席が遅れる、②音楽リフトの増大に停い、ソフト の準備コストが大きい、③カラオケ設置店におけ る装置の利用状況が正確に氾擾できず、シンクル リースの課金に問題の発生することがある、等々 の問題点があった。

(発明が解決しようとする課題)

半発明は、上記の問題点を解決するためなきれ たものであり、その目的とするところは、1つの ソフトで多くのアクセスに応じることができる。 新曲に選ちに対応できる、カラオケの利用状況を 定確に提倡できる、設置商機が小さく、初期コス トが低い、準備曲数に制限がない等々、多くの利 点を有するカラオケンステムを提供することにあ 勝と、

例上記合成這路により合成された画像及びテロ ップの映像信号を映し出すディスプレイ装置と、 例上記音楽再生回路からの音楽信号を再進する スピーカとを備えたこと、

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を特徴とするカラオケシステム。

8、発明の詳細な説明

〔産糞上の利用分野〕

本発明は、カラオケシステムに関する。

〔従来の技術〕

歌謡曲岑の律奏のみが写生され、これに合わせ て歌をうたう所謂カラオケは広く普及し、その数 置は多くの飲食店、スナック、蕭編、旅館、ホチ ル等に設置されている。

間して、従来のカラオケ装置としては、8トラ ックの音楽テーブを利用して音楽だけか再現され るもの、CD、CDCなどによる単純な静止回と 歌謡チロップ及び高音質の音楽が再現されるもの。 しD、VHDなどによる動画を映し出し、歌につ れて変化する歌調チロップも同時に映し出され。

ð.

(課題を解決するための手殻)

上記の目的は、

カラオケデータ送出装置と、デジタル通信回線 を通じてこれに接続される複数のカラオケ英生殺 蓋とから成り、

上記カラオケデータ送出縦置は、下記回項ない し)の項記載の構成要素、即ち、

(4) カラオケに使用される多数の曲のデータ、デ ロップデータ、幽楽データが記録され、更にりり エスト情報及び上記カラオケ募生装璧の利帯状況 等が記録される大型ハードディスク記憶装置と、

(時上記大型ハードディスク記憶装置への各種デ ータの出し入れを誤削するホストコンピュータと、 (○上記デジタル通信回線のそれぞれに対応して 読けられ、デジタル通信回線への送受信を制御す るインターフェイスと、

(d)上記インターフェイスのそれぞれに対応して 設けられ、インターフェイスを制飾して自動着信 を行ない、リクエストナンバーに従い上記ホスト コンピュータを介して大型ハードディスク記憶装。 置から必要なデータを取り出すCPUと、

(e)上記インクーフェイスのそれぞれに対応して 設けられ、上記大型ハードディスク記憶装置から 取り出されたデータをストアし、上記CPUの指 会により当該データを上記インターフェイスを介 して上記デジタル通信回線へ送出するバッファR AMと、

(1)上記インターフェイスのそれぞれに対応して 設けられた上記複数のCPUと、上記ホストコン ビュータとの間のデータの投資を統論する共通デ ータバスと、

個上記ホストロンビュータに接続され、リクエ スト情報及び上記カラオケ再生装置の利用状況等 をプリントアウトするプリンタとを備え、

上記録数のカラオケ再生装蔵のそれぞれは、下 記動項ないし(4)項記載の構成要素、開ち、

いわうオケ再生装置全体の作動を耐塑するCP ひと、

前上記デジタル通信値線への送受信を削額する

ップの映像値号を映し出すディスプレイ装置と、 (4)上記音楽再生間路からの音楽は号を夢生する スピーカをを備えたこと、

を稼厳とするカラオケシステムによって達成し 得る。

(作 周)

上記の如き構成であると、多数のカラオケ利用 設置店にそれぞれ設置されたカラオケ関歩製置を、 デジタル逓信回線を通じて、センターに催えた! つのカラオケデータ送出設置に接続することによ り、センターのカラオケ吾集製置の大型ハードデ ィスク記憶装置に記録した!つのソフトで多くの アクセスに応じることができ、新曲が出たときに はこれを上記大型ハードディスク記像装置に記録 するだけですべてのカラオケ吾集製置で再生でき るから、新曲に置ちに対応することができ、準備 曲数に創設がなく、設備面積が小さくて済み、初 期コストも低く、質には、各カラオケ再生装置か らのリクエスト回数や曲目をセンターの大型ハー ドディスク記憶装置に記録することによりカラオ インターフェイスと、

U)上記デジタル通信回線からの入力データを一時的にストアし、データが一定量に達したときこれを上記じやUに転送するバッファRAMと、

90利用者がカラオケのサクエストナンバーを入 力する遺曲装置と、

①上記CPUを介して輸送された上記入方デー タに含まれる画像データをデコードする画像海空 園路と、

■約上記CPUを介して転送された上記入力デー クに含まれる普楽データをデコードする音楽再生 回路と、

(1)上記CPUを介して転送された上記入力デー タに含まれるチロップ課報をデコードすると共に、 曲の進行に応じてその色の変化を制御するチロッ プ劇師回路と、

(9)上記画像群集団路からの映像信号とた記テロ ップ制器圏路からの映像信号とを含成する合成回 路と、

「殿上記會爾圓路により會成された簡像及びテロ

#### .

ケの利用状況を正確に把握できる、等々、多くの 利点を育するカラオケシステムを提供し得るものであ る。

〔窦 疏 阏〕

以下、図面を参照しつい木発明の構成を具体的 に説明する。

第1図は本発明に係るカラオケシステムの設置 状態を示す説明図、第2図は本発明に係るカラオ ケシステムにおけるカラオケデーク送出選番の回 路標成を示すブロック図、第3図は本発明に係る カラオケシステムにおけるカラオケ再生装置の画 路構成を示すブロック図である。

而して、本発明に係るカラオケシステムは、第 ) 図に示すように、センターに備えた!つのカラ オケデータ送出装置Aと、あちこちのカラオケ利 用設置席に設置され、!SDN等のデジタル通信 回線CLCヵCヵC。を進じて上記カラオケデー タ迷出装置Aに接続された多数のカラオケ務生装 置日、B2、B4、B、等とから成り、カラオケデー タ送出装置Aは失型ハードディスク記憶装置、ホ ストコンピュータ、バッファRAM、デジタル懲 ドインターフェイス等々により構成され、カラオ ケ発生装置B」B。等はそれぞれ、デジタル図路 インターフェイス、パッファRAM、CPU、別 像再生装置、音楽再出装置、テロップ誘着閉路、 建築装置、ディスプレイ装置、スピーカ専々によ り様成されている。

なお、本明編書中において『デジタル通信回線』 とは、デジタル信号の伝達によりコンピュータ間 の通信、ファクシミリ、ビデオテックス等の各種 サービスを総合的に行なう統合ネットワークのこ とを指し、ISDN(Integrated Service Digi tal Network)、INS(Information Network System)、DDX(Digital Data Bachange) 毎々を指すものである。

カラオケデュタ送出装置Aは、カラオケ再出装 置Bi,Bi,等からデジタル通信回線Ci,Ci,等を 通して送られてくる呼出信号に応じて、リクエス ト館のテンパーを検知し、これに基づき所要のデ ータを大型ハードディスク範疇戦置?aから呼出し

上記カラオケ再集装置の利用状況等が語録される ようになっている。

ホストコンビュータ20は、上記大型ハードディ スク記憶装置2aへの各種データの出し入れを制御 するものであり、CPU2dからの要承に応じて穴 型ハードディスク記憶装置2aから必要なデータを 取り出してCPU2dに転送したり、各カラオケ再 生装置B1,B1、等からのリクエスト情報、回時等 々のデータを大型ハードディスク記憶装置2aに記 縁する機能を有している。

インターフェイス20は、上記デジタル通信団線 C」CACA・・専のそれぞれに対応して設けら れ、)SDN等のデジタル通信回線からの自動着 信の制御やデータの自動転送を制御するようにな っている。

CPU2dは、インターフェイス2cを制御して自動著信を行ない、カラオケ再集装置Bi+8。等から進られてくるリクエストナンバーに従い上記ホ ストコンピュータ2bを介して大型ハードディスク 記憶装置2aから必要なデータを取り出し、このデ てカラオケ再生装置 B., B., B, 等へ戦略する。 カラオケ再生装置 B., B, 等は、その緩縮装置 を操作して所望の前のリクエストナンバーを進定 すると、音動的にセンターに電話をかけ、デジク ル適信回線 C., C., C. 等を通じてカラオケデー 夕送出鉄 配A ヘリクエストサンバーを送信し、こ れに基づき取り出されたカラオケデータを受信し て能や画像を再生する機能を有する。

まず、センターに痛えられるカラオクデータ増 出装置人について第2図を参照しつ、説明する。 カラオケデータ送出装置は、大型ハードディス

ク記憶装置22、ホストコンピュータ2b、インター フェイス2c、CPU2d、バッファRAM2c、共通 データバス2f、プリンタ2gとから成り、インター フェイス2c、CPU2d、バッファRAM2cについ ては各デジタル運信回線C.,C.,C.,C、毎に設 けられている。

大型ハードディスク記録遊園28には、カラオケ に使用される多数の曲のデータ、テロップデータ、 画像データが記録され、葉にリクエスト情報及び

ークをバッファRAM2eにストアする。

パッファRAM20は、上記の如くして大類ハー ドディスク記憶装置2aから取り出きれた曲データ、 テロップデータ等のデータを一時的にストアし、 上記CPU2dからの指令により当該データを上記 インターフェイス2cを介してデジタル通信回線C。 へ送出する。

共過データバス21は、ホストコンピュータ20を 多数のデジタル通信回線(20~100回線)に共用 するため、各デジタル通信回線ごとに設けられた 複数のCPU2dと、1つのホストコンピュータ2h との間のデータの授受を施設するようになってい る。

プリンタ2gは、上記ホストコンビュークに接続 され、リクエスト情報及び上記かうオケ再生装置 の利用状況等を必要に応じてプリントアウトする ために吊いる。

次に、各カラオケ利用設置店に設置されるカラ オケ再生装置 B 」, B 。, B 。等について第3回を参 厳しつく説明する。カラオケ再生装置 B 」 B 。B

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券のそれぞれはいずれも同一の構成を育するので、 ことではその主つについてのみ脱病する。

カラオケ票定装置は、CPU3h、インターフェ イス3i、パッファRAM3)、透出装置3k、脚像再 生簡略31、変楽再装簡略3m、テロップ制調調路3s、 合成回路3o、ディスプレイ装置3p、スピーカ3gか ら成り、CPU3hは、CPU本体3h-1、プログラ ムROM3b-2、プログラムRAM3h-3、ワークR AM3h-4から成り、遅度装置3kとCPU3hとは! /O回路3k」を介して接続されている。

CPU3nは、カラオケ喜生装置全体の作動を制 御する役割を果たし、その主な機能は、通信関係 の新御、音楽の感動制御、デロップの表示と制刻、 皆像の再生制御、リクエストの愛付と表示前額で ある。

インターフェイス31は、デジタル通信面綿への 送受信を制御するものであり、カラオケデータ送 出装篋を呼び出すための電話番号の発信並びにカ ラオケデータ送出装篋から送られてくるデータの 受信を行なう。

デコードし、スピーカ3gにより再生し得る音声伝 琴に変換する。

テロップ制御園路3aは、間様にCPU3bを介し て転送されてくる人力データに含まれる歌詞のテ ロップ情報をデコードし、ディスプシイ装置3pに より要示し得る協号に変換すると共に、曲の進行 に応じて歌うべき歌詞の位置をテロップの色の変 化により表示するよう参該色の変化を制御する。

合成回路30は、上記簡像再集回陸8!からの映像 信号とテロップ制御回路3nからの映像信号とを含 変してディスプレイ装置39に送る。

次に、上記の如く構成された本発明に係るカラ オケンステムの作用について説明する。

カラオケ利用設置店に設置されているカラオケ 再生装置の還曲設置3%を用いて利用者が所望のカ ラオケのリクエストナンバーを入力すると、当該 信号はJ/O回路3%。を介してCPU3%に入力さ れる。このときインターフェイス3%はCPU3hか らの潜会に掲づき、センターのカラオケデータ透 出装置を呼び出すための電話番号を発信すると共 バッファRAMSjは、デジタル通信回線からの 入力データを一時的にストアし、データが一定量 に適したときこれをCPUShに転送する。

着曲装置3kは、利用者が新望のカラオケのリク エストナンバーを入力するための装置であり、『 /〇回路3k』を介してCPU3hに入力されたリク エストナンバーはインターフェイス3iを続てデジ クル通信額線によりカラオケデータ送出装置に送 られる。

なお、増曲装置3kとCPU3hはケーブルで接続 してもよいが、激曲装置3kをリモコン装置として ワイヤレス形式で激曲信号を送るようにしてもよ い。

■像褥生回路3)は、バッファRAM3)に一時的 にストアされた後CPU3hを介して転送されてく るカラオケデーク送出装置からの入力デークに含 変れる回復データをデコードし、ディスプレイ装 置3picより表示し得る信号に変換する。

音楽舞生回路3⊯は、同様にCPU3hを介して転 送されてくる入力データに含まれる音楽データを

に、 柿野側の受信感勢が整った段階で上記リクエ ストナンバーをデジタル通信回線を通じてセンタ ーのカラオケデータ送出感査に送出する。

上記リクエストナンバーは、カラオケデータ送 出鉄置側のインターフェイス20を経てCPU2dに もたらすれる。然るときは、CPU2dは上記リク エストナンバーに従い上記ホストロンピュータ2b を介して大型ハードディスク記憶装置2sから必要 なデータ、知ち、リクエスト曲の画像データ、告 樂データ、テロップデータ等を取り出し、このデ ータをバッファRAM2eにストアする。

パッファRAM2eは、ま記の如くして大数ハー ドディスク記憶装置2aから取り出されたデータを、 CPU2dからの指令によりインターフェイス2cを 経てデジタル通信副線を退じてカラオケ再生装置 例へ送出する。

その場合、ホストコンピュータ2bは発過データ バス2fを介して多数のCPU2dに接続され、多数 のカラオヤ再生数層のデジタル通信回線に共用で きるようになっているため、複数のカラオケ再生

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装置から間時に多数のリクエスト曲が競合しても 振めて短時間で各カラオケ再生装置に対応できる ものである。

上記の如くして、デジタル選信回線を選じてカ うオテ再生報置側へ所望のリクエスト曲のデータ かもたらされると、当該入力データはバッファ系 A M3)に一時的にストアされ、データが一定量に 建すると、これらのデータはC P U 3hを級て、画 像再生回路31、音楽再生回路3m及びテロップ制御 聞路8nに送られる。

然るときは、醫療種類関路31は、人力データに 含まれる醫療データをデコードしてディスプレイ 装置3pにより表示し得る保守に変換し、資薬再生 間路3mは、関様に背楽データをデコードしてスピ ーカ80により発生し得る音声信号に変換し、更に、 テロップ制飾團路3mは、関様に取詞のテロップ情 報をデコードし、ディスプレイ装置3pにより表示 し得る信号に変換すると共に、曲の進行に応じて 歌うべき取認の位置をデロップの色の変化により 表示するよう当該色の変化を制調する。

## しておき、必要に応じてプリンタ2gでこれをプリ

ントアウトすることにより、各カラオケ病生機構 の利用函数を知ることかでき、使用料金の算出が 明確かつ容易になるばかりでなく、リクエストの 多い値と少ない曲を判別することも容易となり、 ソフトの交換等の場合にも参考資料として利用で きる。

また、カラオケ利用設置店には、カラオケ再生 装健を置くだけでよく、多数のソフトや記憶装置 等を常意する必要がないので、設置面積や初期コ ストは少なくて済むものである。

而して、センターに設置されるカラオケデーク 逸出装置は、これから送り出すデータが、①曲の チータであるもの、②曲のデータとチロップデー タであるもの、③曲のデータとテロップデータと テロップの包変わりデータであるもの、③色変わ りデータであるものとテロップと画像データであ るもの、等々に進宜設計変更できる。

また、多カラオケ利帛設置店に設置されるカラ オテ再生装置は、①センターから巡られてくるデ 画像再生回路31及びチロップ制類回路30からの 映像信号は合戦回路30において合成されてディス プレイ装置30に送られると共に、音楽再生回路30 の困力はスピーカ30に入力され、所設のリクエス ト曲の体奏とその動にふさわしい映像が再まされ、 またこれと同時にディスプレイ装置の感聞上に取 うべ音歌詞が曲の進行に応じて色変わりしながら テロップ表示されるものである。

なお、上記チロップ表示は、画像データ中に一 緒に記録しておくように構成することも可能であ り、その場合にはカラオケ再生装置のテロップ制 御屋路3hは省階しても差支えない。

耐して、上記のカラオケシステムで新曲を採用 する場合には、そのデータをセンターに設けた大 整ハードディスク記憶装置2aに記録するだけで、 すべてのカラオケ利用設置店のカラオケ構成装置 からのサクエストに対応できる。

また、各カラオケ再生装置からカラオケデータ 送出装置ヘリクエストかもたらされる範疇、大型 ハードディスク記憶装置にその曲目や顕数を記録

ータに、動のデータとテロップのデータが合成さ れて送られ、テロップと曲を同時に再生すること ができる機能を持つもの、②センターから送られ てくるデータに、動のデータとテロップのデータ とテロップの色変わりのデータか合成されて送ら れ、テロップと曲とテロップの色変わりを同時に 構生することができる機能を持つもの、③言像の データも間野に送られ、曲、テロップ、テロップ の巻変わり、智景商像を簡時に再生することがで きる機能を持つもの、④面像データを外部入力端 子から得るようにしたもの、等々に適宜設計変更 できる。

#### (発明の効果)

本発明は叙上の如く構成されるから、本発明に によるときは、1 つのソフトで多くのアクセスに 応じることができ、新臣も道ちに採用してリクエ ストに対応でき、カラオサの利用状況を正確に揺 握でき、設置面積が小さく、初期コストも低く、 準備曲数に誤蹤がない等々、多くの利点を有する カラオケシステムを提供し得るものである。

なお、本発明は叙上の実施例に限定されるもの	3hCPU
でなく、その言約の範囲内において上記の説明か	3約[
ら当葉者が容易に想到し得るすべての変更実施例	3h-2ブログラムROM
を担張するものである。	3h-3プログラムRAM
4、図鈕の簡単な説明	3ね-4ワークRAM
第1回は本発明に係るカラオケシスチムの設置	3jインターフェイス
試態を示す説明図、第2回は本発明に係るカラオ	3j ····································
ケシステムにおけるカラオケデータ送出装蔵の回	3k
臨機成を示すブロック國、第3回は本発明に係る	3k´I/O回腾
カラオケシステムにおけるカラオケ海生鎌倉の国	31
路構筑を示すブロック図である。	38音 楽 再 ఓ 回 路
A	30チロップ部御国略
B」 ~ B↓	30 ······合 成 個 路
€ , ~ € ,	\$p・・・・・ディスプレイ装置
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26イズ	
2dCPU	特許出願人 株式会社 ターイートー
2eバッファ R A M	代 遷 人 (7524)最 上 近犬郎
2f	









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0£	明	者	酒	井	璙 t	t	東京都千代毘区平河町2了目5番3号 ング 株式会社タイトー内	タイトービルデイ
<b>@</b> ¥	明	者	須	藤	育生	ŧ.	ング 体式会社ライトー内 栗京都千代田区平河町2丁目5番3号 ング 株式会社タイトー内	タイトービルデイ

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PTO/SB/57 (02-09)

(Also	referred to as FORM PTO-1465) REQUEST FOR EX PARTE REEXAMINATION TRANSMITTAL FORM
	Address to: Mail Stop <i>Ex Parte</i> Reexam Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450 Date: July 16, 2010
1.	This is a request for <i>ex parte</i> reexamination pursuant to 37 CFR 1.510 of patent number 6,193,520 issued February 27, 2001 . The request is made by:
	patent owner. X third party requester.
2.	The name and address of the person requesting reexamination is: Eric A. Buresh
	Shook, Hardy & Bacon L.L.P.
	2555 Grand Blvd., Kansas City, Missouri 64108
3.	a. A check in the amount of $2,520.00$ is enclosed to cover the reexamination fee, 37 CFR 1.20(c)(1);
	<ul> <li>b. The Director is hereby authorized to charge the fee as set forth in 37 CFR 1.20(c)(1) to Deposit Account No. <u>19-2112</u>; or</li> </ul>
	c. Payment by credit card. Form PTO-2038 is attached.
4.	Any refund should be made by check or credit to Deposit Account No. <u>19-2112</u> 37 CFR 1.26(c). If payment is made by credit card, refund must be to credit card account.
5.	A copy of the patent to be reexamined having a double column format on one side of a separate paper is enclosed. 37 CFR 1.510(b)(4)
6.	CD-ROM or CD-R in duplicate, Computer Program (Appendix) or large table
7.	Nucleotide and/or Amino Acid Sequence Submission If applicable, items a. – c. are required.
	a. Computer Readable Form (CRF)
	b. Specification Sequence Listing on:
	i. CD-ROM (2 copies) or CD-R (2 copies); <b>or</b> ii. paper
	c. Statements verifying identity of above copies
8.	X A copy of any disclaimer, certificate of correction or reexamination certificate issued in the patent is included.
9.	<b>X</b> Reexamination of claim(s) 1, 3, 10, 15, 17 and 22-38 is requested.
10.	A copy of every patent or printed publication relied upon is submitted herewith including a listing thereof on Form PTO/SB/08, PTO-1449, or equivalent.
11.	An English language translation of all necessary and pertinent non-English language patents and/or printed publications is included.

<sup>[</sup>Page 1 of 2] This collection of information is required by 37 CFR 1.510. 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 2 hours 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: Mail Stop Ex Parte Reexam, 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.

PTO/SB/57 (02-09) Approved for use through 08/31/2010. OMB 0651-0033 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 displays a valid OMB control number.

12. 🗙	The attached detailed request includes at least the fe	ollowing items:								
	<ul> <li>a. A statement identifying each substantial new que publications.</li> <li>37 CFR 1.510(b)(1)</li> <li>b. An identification of every claim for which reexami and manner of applying the cited art to every claim for</li> </ul>	nation is requested, and a detailed	d explanation of the pertinency							
13. 🗌	A proposed amendment is included (only where the	patent owner is the requester). 37	CFR 1.510(e)							
14. 🗙	<ul> <li>a. It is certified that a copy of this request (if filed by other than the patent owner) has been served in its entirety on the patent owner as provided in 37 CFR 1.33(c). The name and address of the party served and the date of service are: ADC Technology, Inc., c/o Kinney &amp; Lange, P.A., The Kinney &amp; Lange Bldg.,</li> </ul>									
	312 S. Third St., Minneapolis, MN 55	415-1002 and ADC Tech	nology, Inc.,							
	c/o Whitaker Law Group, 1420 Fifth /	Ave., Su. 2200, Seattle, W	/A 98101							
	Date of Service: July	<sup>,</sup> 16, 2010	; or							
	b. A duplicate copy is enclosed because service on made to serve patent owner <b>is attached</b> . See M		n explanation of the efforts							
15. Co	prrespondence Address: Direct all communications abo	out the reexamination to:								
X		0525	51							
	Firm or Individual Name									
Address										
City		State	Zip							
Country	/									
Telepho	one	Email								
16. 🗙	The patent is currently the subject of the following c	oncurrent proceeding(s):								
	a. Copending reissue Application No.									
	<ul> <li>b. Copending reexamination Control No.</li> <li>c. Copending Interference No.</li> </ul>	0/010,666 and 90/009,524								
	d. Copending litigation styled:									
	ADC Technology, Inc. v. Microso	oft Corporation, et al.,								
	Case No. 2:08-CV-01579-RSM									
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	Authorized Signature	Date	For Potent Ourser Desusates							
	Eric A. Buresh		For Patent Owner Requester							
	Typed/Printed Name	Registration No.								

[Page 2 of 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 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.
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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 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.

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# INFORMATION DISCLOSURE Application Number 09109784 Filing Date 1998-07-02 First Named Inventor Takeya Okamoto Art Unit Examiner Name Attorney Docket Number SCEA.146736

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	4	5699370	A	1997-12	-16	Kaniwa			
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#### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

#### In re U. S. Patent No. 6,193,520 Reexam Control No.: TBD

Currently in Litigation Styled: *ADC Technologies, Inc. v. Microsoft Corporation, et al.,* Case No. 2:08-CV-01579-RSM (W.D. Wash.)

Issued: February 27, 2001

Filed: July 2, 1998

Applicant: Takeya Okamoto

Title: Interactive Communication System for Communicating Video Game and Karaoke Software REQUEST FOR *EX PARTE* RE-EXAMINATION PURSUANT TO 35 U.S.C. §§ 302–307 AND 37 C.F.R. § 1.510 ET SEQ.

#### Mail Stop Ex Parte Re-examination

ATTN: Central Re-examination Unit Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

#### **REQUEST FOR EX PARTE RE-EXAMINATION OF U.S. PATENT NO. 6,193,520**

Sony Computer Entertainment America LLC ("Requester") requests re-examination under 35 U.S.C. §§ 301-307 and 37 C.F.R. § 1.510 *et seq.* of claims 1, 3, 10 15, 17 and 22-38 of U.S. Patent No. 6,193,520 (the "520 Patent"), a copy of which is attached as **Exhibit A**. The '520 Patent issued on February 27, 2001, to Takeya Okamoto, and is believed to be currently assigned to ADC Technology, Inc ("ADC"). This is a new re-examination request (the "Request'). The '520 Patent is currently the subject of two merged *ex parte* re-examination requests, Control No. 90/009,524, filed by ADC on July 9, 2009 and Control No. 90/010,666 filed by Microsoft Corporation on September 4, 2009. This Request should be granted and merged with the pending re-examination proceeding. Request for *Ex Parte* Re-examination of U.S. Patent No. 6,193,520 Page 2 of 47

#### I. EXPARTE RE-EXAMINATION REQUIREMENTS UNDER 37 C.F.R. § 1.510

#### A. Payment of Fees

Requestor authorizes the Patent and Trademark Office ("PTO") to charge the requisite

fee payment of \$2,520 in accordance with 37 C.F.R. § 1.20(c)(1), and any additional amount as

required, to Deposit Account No. 192-112.

#### B. Identification of Claims for Re-examination (37 C.F.R. § 1.510(b)(2))

Requestor requests re-examination of claims 1, 3, 10, 15, 17 and 22-38 of the '520 Patent.

#### C. Citations and Copies of Prior Art Presented (37 C.F.R. § 1.510(b)(4))

Requestor submits a PTO Form PTO/SB/08A identifying the patents upon which this

Request is based. A complete copy of each patent is included as Exhibits B-G to this Request

and the same are discussed below:

- **EXHIBIT B:** U.S. Patent No. 5,547,202 to Tsumura entitled "Computer Game Device," filed December 30, 1994, and issued August 20, 1996, citable under at least 35 U.S.C. §§ 102(e) and 103 ("Tsumura").
- **EXHIBIT C:** Japanese Patent Application No. H01-166218 by Suzuki entitled "Paid Software Administration and Maintenance System" appears to have been filed on December 23, 1987, and appears to have been published on June 30, 1989, citable under at least 35 U.S.C. §§ 102(a) and (b) and 103 ("Suzuki").
- **EXHIBIT D:** U.S. Patent No. 5,699,370 to Kaniwa entitled "Information Recording And Reproduction Apparatus To Be Controlled By Temporal Information," filed on February 17, 1995, and issued on December 16, 1997, citable under at least 35 U.S.C. §§ 102(e) and 103 ("Kaniwa").
- **EXHIBIT E:** Japanese Patent Publication No. H04-32898 by Sanbe entitled "Karaoke System" appears to have been filed May 30, 1990, and appears to have published on Feb. 4, 1992, citable under at least 35 U.S.C. §§ 102(a) and (b) and 103 ("Sanbe").
- **EXHIBIT F:** U.S. Patent No. 5,083,271 to Thacher et al., entitled "Tournament Data System with Game Score Communication Between Remote Player Terminal and Central Computer," filed on August 3, 1988, and issued on January 21, 1992, citable under at least 35 U.S.C. § 102(b) and 103 ("Thacher").

**EXHIBIT G:** U.S. Patent No. 5,624,316 to Roskowski entitled "Video Game Enhancer with Integral Modem and Smart Card Interface," filed on June 6, 1994, and issued on April 29, 1997, citable under at least 35 U.S.C. §§ 102(a) and (e) and 103 ("Roskowski").

## D. Statement of Substantial New Questions of Patentability (37 C.F.R. § 1.510(b)(1))

Pursuant to 37 C.F.R. § 1.510(b)(1), a statement pointing out each substantial new question of patentability ("SNQ") is provided below.

#### 1. SNQs With Respect to Claims 3, 10, and 17

(1) Claims 3, 10 and 17 were not previously subject to the pending re-examination proceedings and Tsumura was not cited in the original prosecution of the '520 Patent. Tsumura was cited in the pending re-examination proceeding, but has not been cited or considered with respect to claims 3, 10, or 17. Each of these claims include limitations directed toward clock means for keeping a first, second, and third predetermined time period, interference means, and means for stopping the interference. No prior art references have been applied or discussed with respect to claims 3, 10, or 17.

Tsumura describes a receiving device utilized as a commercial game machine where the user pays a fee each time the machine is used. **Exhibit B**, *Tsumura* at 8:40-45. A requested game is downloaded to the receiving device. *Id.* at 9:29-31. The receiving device includes an internal clock for keeping a first predetermined length of time until use of a game is discontinued. *Id.* at 9:56-10:4. Tsumura discloses that after the first predetermined length of time has elapsed, the receiving device includes CPU that causes the game to be discontinued. *Id.* at 9:56-65. Tsumura also describes an additional charge facility that "would function automatically <u>at fixed intervals during the course of a game</u>." *Id.* at 9:58-60 (emphasis added). As such, the internal clock keeps a second predetermined length of time prior to discontinuation of a game, in which to call for an additional fee. *Id.* Additionally, Tsumura describes pausing a

program for a third predetermined length of time after the game is discontinued in order for the player to input more money. *Id.* at 9:56-10:4. Further, Tsumura discloses that the CPU allows a player to resume a paused game if the player inserted an additional fee prior to the expiration of the third time period. *Id.* at 9:65-10:4.

These new, non-cumulative technological teachings of Tsumura raise a SNQ with respect to claims 3, 10, and 17 of the '520 Patent, which has not been previously decided by the Office. As such, and in accordance with MPEP § 2242, Tsumura raises a SNQ which is different from that raised in the pending re-examination.

(2) Neither Tsumura nor Suzuki were cited in the original prosecution of the '520 Patent. Both references were cited in the pending re-examination proceedings, but have not been cited or considered with respect to claims 3, 10, or 17. For the reasons discussed above, Tsumura in view of Suzuki provide new, non-cumulative technological teachings that raise a SNQ with respect to claims 3, 10, and 17 of the '520 Patent, which has not been previously decided by the Office. As such, and in accordance with MPEP § 2242, Tsumura in view of Suzuki raises a SNQ which is different from that raised in the pending re-examination.

(3) Neither Tsumura nor Kaniwa were cited in the original prosecution of the '520 Patent. Both references were cited in the pending re-examination proceedings, but have not been cited or considered with respect to claims 3, 10, or 17. For the reasons discussed above, Tsumura in view of Kaniwa provide new, non-cumulative technological teachings that raise a SNQ with respect to claims 3, 10, and 17 of the '520 Patent, which has not been previously decided by the Office. As such, and in accordance with MPEP § 2242, Tsumura in view of Kaniwa raises a SNQ which is different from that raised in the pending re-examination.

#### 2. SNQs With Respect to Claims 1, 15, and 22-38

Pursuant to MPEP § 2242, this Request provides SNQs with respect to new 22-38 and amended claims 1 and 15, which have been proposed in the pending re-examination proceeding. Tsumura was cited in the pending re-examination proceedings of the '520 Patent, however, Tsumura has not been applied in any rejection of the claims or discussed on the record.

(4) During the re-exam, ADC made arguments for patentability, claim amendments and asserted several new claims, which in light of Tsumura's new, non-cumulative technological teachings raise a SNQ. Specifically, those claims include:

• ADC amended claims 1 and 15, adding the underlined phrase: "receiving means for receiving, <u>via wireless transmission</u>, one of the program, the data, and a combination of the program and data ...." ADC submitted new claim 22 (dependent of claim 8), which also includes this entire limitation.

ADC argued "[n]owhere do *Chernow* or *Kato* teach or suggest that the receiving device is capable of receiving data via wireless transmission." Tsumura discloses a receiving device that includes an antenna for receiving satellite signals. **Exhibit B**, *Tsumura* at 4:18-23; 4:41-42.

ADC amended claim 15 also includes: "wherein the communication terminal device is further configured to connect over telecommunication lines to at least another communication terminal device to facilitate interactive communication between the at least two communication terminal devices regarding the program, the data, or the combination of program and data." ADC submitted new claims 23 (dependent of claim 1) and 25 (dependent of claim 8), both of which also include this limitation.

ADC argued this limitation "is nowhere taught or suggested by any of the art of record." Claims 24 and 26 depend from claims 23 and 25 (respectively). To the contrary, Tsumura describes a

system "whereby a plurality of players using mutually remote machines are each able to participate in the same game...." **Exhibit B**, *Tsumura* at 3:34-35. Receiving devices are connected to a host computer via a communications network, where data is exchanged by way of telephone lines. *Id.* at 12:62-13:22. Tsumura discloses that a host computer registers players for multiplayer role playing games, where each player uses his or her own game terminal to play the game. *Id.* at 15:26-16:4; 13:43-14:14; 14:15-61; 14:62-15:25; FIGS. 11-13.

• ADC added new claims 27-34, which restrict the type of transmitted data to karaoke data, multimedia audio/video data, a movie, or a video game.

Tsumura discloses a communication system for distributing video games. Id. at 1:9-10; 4:18-26.

• ADC added new claims 35-38 further limit the predetermined time period to a rental period, where the interference stops in response to receipt of an additional charge.

Tsumura discloses that players are charged based on the use of downloaded games. *Id.* at 1:12-15; 8:42-50. Tsumura discloses a CPU for discontinuing a game when an internal clock calculates that a predetermined length of time has elapsed. *Id.* at 9:56-10:4. Tsumura discloses that the internal clock can keep a predetermined length of time after the game has been discontinued, during which a game is paused to allow for the player to insert more money. *Id.* at 9:65-10:4. Tsumura discloses a CPU that releases a paused game in order to allow a player to continue the game upon payment of an additional charge. *Id.* 

In light of ADC's arguments for patentability, these new, non-cumulative technological teachings of Tsumura raise a SNQ with respect to amended claims 1 and 15 and new claims 22-38 of the '520 Patent, which has not been previously decided by the Office.

(5) Tsumura was cited in the pending re-examination proceedings of the '520 Patent, however, Tsumura has not been applied to reject claims 27 and 31 or discussed on the record.

Sanbe has not been cited or considered with respect any claim of the '520 Patent. ADC added new claims 27 and 31, which restrict the type of transmitted data to karaoke data. In addition to the teachings of Tsumura discussed above, Sanbe discloses a karaoke system for transmitting karaoke information from a karaoke data transmission device to a karaoke reproduction device via digital communication lines. **Exhibit E**, *Sanbe* at 2; 5; FIG. 1. In light of ADC's arguments for patentability, and these new-noncumulative technological teachings of Tsumura and Sanbe, Tsumura in view of Sanbe raises a SNQ with respect to new claims 27 and 31 of the '520 Patent, which has not been previously decided by the Office.

(6) Tsumura was cited in the pending re-examination proceedings of the '520 Patent, however, Tsumura has not been applied to reject claims 24 and 26 or discussed on the record. Thacher has not been cited or considered with respect any claim of the '520 Patent. ADC added new claims 24 and 26, which require that the interactive communication comprise real-time communication. In addition to the teachings of Tsumura discussed above, Thacher discloses a game playing tournament system where remotely located people can interactively play the same game, where game data can be continuously transmitted. **Exhibit F**, *Thacher* at 1:50-57; 3:1-3; 3:41-55; 8:6-8; 18:64-68. In light of ADC's arguments for patentability, and these newnoncumulative technological teachings of Tsumura and Thacher, Tsumura in view of Thacher raises a SNQ with respect to new claims 24 and 26 of the '520 Patent, which has not been previously decided by the Office.

(7) Tsumura was cited in the pending re-examination proceedings of the '520 Patent, however, Tsumura has not been applied to reject claims 24 and 26 or discussed on the record. Roskowski has not been cited or considered with respect any claim of the '520 Patent. With respect to ADC's newly added claims 24 and 26, and in addition to the teachings of Tsumura

discussed above, Roskowski discloses that a video game enhancer can connect directly to another video game enhancer so that multiple players can participate in the same real-time game. **Exhibit G**, *Roskowski* at 6:19-29; 9:47-53. In light of ADC's arguments for patentability, and these new-noncumulative technological teachings of Tsumura and Roskowski, Tsumura in view of Roskowski raises a SNQ with respect to new claims 24 and 26 of the '520 Patent, which has not been previously decided by the Office.

#### E. Summary of Proposed Rejections

The following proposed rejections relate to the above-identified SNQs:

Subsection	Summary of Proposed Rejections Relating to the '520 Patent
VI.A.2	Claims 3, 10, and 17 are unpatentable under 35 U.S.C. § 102(e) based on Tsumura
VI.A.3	Claims 3 and 10 are unpatentable under 35 U.S.C. § 103 based on Tsumura
VI.B.2	Claims 3, 10, and 17 are unpatentable under 35 U.S.C. § 103 based on Tsumura in view of Suzuki
VI.C.2	Claims 3, 10, and 17 are unpatentable under 35 U.S.C. § 103 based on Tsumura in view of Kaniwa
VI.D.2	Claims 1, 15, 22-23, 25, 28-29, 32-33, and 35-38 are unpatentable under 35 U.S.C. § 102(e) based on Tsumura
VI.D.3	Claims 1, 23-24, 27-31, and 34-36 are unpatentable under 35 U.S.C. § 103 based on Tsumura
VI.E.2	Claims 27 and 31 are unpatentable under 35 U.S.C. § 103 based on Tsumura in view of Sanbe
VI.F.2	Claims 24 and 26 are unpatentable under 35 U.S.C. § 103 based on Tsumura in view of Thacher
VI.G.2	Claims 24 and 26 are unpatentable under 35 U.S.C. § 103 based on Tsumura in view of Roskowski

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#### F. Certification of Service on Patent Owner (37 C.F.R. § 1.510(b)(5))

The undersigned certifies that a complete and entire copy of this Request and all supporting documents have been provided to the patent owner by serving the attorneys of record at the PTO for the '520 Patent as set forth in 37 C.F.R. § 1.33(c):

ADC Technology, Inc. c/o Kinney & Lange P.A. The Kinney and Lange Building 312 South Third Street Minneapolis MN 55415-1002

#### G. Status of Related Re-examination Proceedings

The '520 Patent applicant, Mr. Okamoto, filed a number of patent applications and received a number of patents. ADC filed re-examination requests on each of the five patents identified below, and Requester or others filed re-examination requests on each.

U.S. Pat. No.	Application	Filed	Issued	ADC Reexam. No.	Reexam. No.
5,775,995	08/642,550	May 3, 1996	Jul. 7, 1998	90/009,523	90/010,663
6,193,520	09/109,784	Jul. 2, 1998	Feb. 27, 2001	90/009,524	90/010,666
6,488,508	09/733,541	Dec. 8, 2000	Dec. 3, 2002	90/009,521	95/001,234
6,702,585	10/307,886	Dec. 2, 2002	Mar. 9, 2004	90/009,522	95/001,236
6,875,021	10/713,713	Nov. 14, 2003	Apr. 5, 2005	90/009,520	95/001,237

In the re-examination proceedings for the '520 Patent and for U.S. Patent No. 5,775,995 ("the '995 Patent"), the PTO issued office actions and ADC filed amendments and responses to the same. In the remaining re-examination proceedings set forth above, the re-examinations for each patent have been merged, but no office actions have been issued.

#### II. CONCURRENT LITIGATION AND STATUS

The '520 Patent is the subject of the following pending litigation: ADC Technology, Inc.

v. Microsoft Corp., et al., Case No. 2:08-CV-01579-RSM filed October 27, 2008, in the United

States District Court for the Western District of Washington, Seattle Division ("Litigation"). Requestor is a Defendant in the Litigation. The Litigation has been stayed and no claim construction has occurred in the Litigation. Requestor emphasizes the interpretation of the '520 Patent claims reflected in this Request are offered to be consistent with the broadest reasonable interpretation standard appropriate in re-examination and do not necessarily reflect the construction that Requestor believes should be given to the claims in the Litigation, or in any other proceeding that does not apply the broadest reasonable interpretation standard.

#### III. THE APPLICABLE LAW

#### A. The Broadest Reasonable Meaning of the Claim Language

In the context of reexamining patent claims, "the PTO must apply the broadest reasonable meaning to the claim language, taking into account any definitions presented in the specification." *In re Bass*, 314 F.3d 575, 577 (Fed. Cir. 2002) (citing *In re Yamamoto*, 740 F.2d 1569, 1571 (Fed. Cir. 1984)). During re-examination proceedings, the patent owner is permitted to amend the claims. 35 U.S.C. § 305. The claims must be interpreted as broadly as their terms reasonably allow because the patent owner may "amend his claims to obtain protection commensurate with his actual contribution to the art." *In re Yamamoto*, 740 F.2d at 1571 (citation omitted). Thus, the identified claims are given their broadest reasonable interpretation consistent with the '520 Patent specification.

#### **B.** The Law on Anticipation

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." MPEP 2131 citing *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987). "When a claim covers several structures or compositions, either generically or as alternatives, the claim is deemed anticipated if any of the structures or compositions within the scope of the claim is known in the prior art." *Brown v. 3M*, 265 F.3d 1349, 1351 (Fed. Cir. 2001) (citation omitted). The elements must be arranged as required by the claim. *In re Gleave*, 560 F.3d 1331, 1334 (Fed. Cir. 2009) (citation omitted).

#### C. Law on Obviousness in View of KSR

A claimed invention is unpatentable if the differences between it and the prior art "are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art . . ." 35 U.S.C. § 103(a) (1994); *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 13 (1966). To determine whether an invention is obvious you must look at: "(1) the scope and content of the prior art; (2) the differences between the prior art and the claims at issue; (3) the level of ordinary skill in the art at the time when the invention was made; and (4) objective evidence of nonobviousness." *Specialty Composites v. Cabot Corp.*, 845 F.2d 981, 989 (Fed. Cir. 1988) (citations omitted).

The Supreme Court has stated that "it will be necessary for [the PTO] to look at interrelated teachings of multiple [prior art references]; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by [one of] ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the [patent application]." *KSR v. Teleflex*, 550 U.S. 398, 418 (2007). Further, "[t]he obviousness analysis cannot be confined by a formalistic conception of the words teaching, suggestion, and motivation, or by overemphasis on the importance of published articles and the explicit content of issued patents. . . . Granting patent protection to advances that would occur in the ordinary course without real innovation retards progress and may, in the case of patents combining previously known elements, deprive prior inventions of their value or utility." *Id.* at 1741. Moreover, "the common sense of those skilled in the art demonstrates why some combinations would have been obvious where others

would not." *Leapfrog Enterprises v. Fisher-Price, Inc.*, 485 F.3d 1157, 1161 (Fed. Cir. 2007) (citation omitted).

#### IV. PROSECUTION HISTORY OF THE '520 PATENT

The '520 Patent application was filed on July 2, 1998, including 21 claims. **Exhibit H,** '*520 Prosecution History*, Pgs. 7-50. On May 9, 2000, the Examiner mailed an Office Action rejecting claims 1-3, 5, 8-10, 12, 15-17, and 19 under the doctrine of double patenting over claims 1-3 of the '995 patent, and objecting to the remaining claims. *Id.* at 74-78. The Office Action stated that these various requirements could be met by submitting a terminal disclaimer. *Id.* at 77.

In response, on August 4, 2000, Applicant submitted an Amendment and Terminal Disclaimer, limiting the patent term of the '520 Patent to that of its parent, U.S. Patent No. 5,775,995. *Id.* at 80-83. A notice of Allowance followed on August 25, 2000 and the patent issued on February 27, 2001. *Id.* at 85-86. Post issuance, the Applicant submitted two certificates of correction, on February 26 and March 27, 2008, which certificates issued on March 25, 2008 and April 25, 2008, respectively. The later-issued certificate, which superseded the earlier, changed the earliest claim of priority from an application filed on November 9, 1995 to an earlier application that was filed on April 25, 1994.

On July 9, 2009, ADC filed an ex-parte re-examination, which is Control No. 90/009,524. Subsequently, Microsoft Corporation filed an ex-parte re-examination, which is Control No. 90/010,666. Both re-examinations were granted and merged into one proceeding. On March 29, 2010 the PTO issued an Office Action. **Exhibit I,** *Office Action.* On April 26, 2010, ADC submitted its Amendment and Response to the Office Action. **Exhibit J,** *Response to Office Action.* In its submittal, ADC amended claims 1 and 15, added new dependent claims 22-38, and presented arguments for patentability. In part, ADC amended claims 1 and 15,

adding the underlined phrase to the following limitation: "receiving means for receiving, <u>via</u> <u>wireless transmission</u>, one of the program, the data, and a combination of the program and data ....." ADC submitted new claim 22 (dependent of claim 8), which also includes this entire limitation. ADC also argued that "[n]owhere do *Chernow* or *Kato* teach or suggest that the receiving device is capable of receiving data via wireless transmission." *Id.* at 11.

ADC amended claim 15 to also include: "wherein the communication terminal device is further configured to connect over telecommunication lines to at least another communication terminal device to facilitate interactive communication between the at least two communication terminal devices regarding the program, the data, or the combination of program and data." *Id.* at 5. ADC submitted new claims 23 (dependent of claim 1) and 25 (dependent of claim 8), both of which also include this limitation. ADC argued that this limitation "is nowhere taught or suggested by any of the art of record." *Id.* at 13.

Claims 24 and 26 include: "wherein the interactive communication facilitated between the at least two communication terminal devices comprises real-time communication incident to the data processing of the program, the data, or the combination of program and data." *Id.* at 7. Dependent claims 27, 29, 31 and 33 include limitations that the data comprise karaoke data (claims 27 and 31) or multimedia audio/video data like a movie (claims 29 and 33). Dependent claims 30 and 34 limit the multimedia audio/video data to a movie. Dependent claims 28 and 32 include the limitation that the program comprises a video game.

Additionally, dependent claims 35 and 37 state: "[t]he communication system according to claim 5 [12], wherein the program, the data, or the combination of program and data comprises either a video game, karaoke data, or multimedia audio/video data like a movie, and further wherein the predetermined time period comprises a rental period for the software

program, and still further wherein the interference means is configured to cease blocking the view on the screen in response to a payment of an additional charge." *Id.* at 8. Finally, claims 36 and 38 claim "[t]he communication system according to claim 35 [37], wherein the communication terminal device is further configured to connect over telecommunication lines to at least another communication terminal device to facilitate interactive communication between the at least two communication terminal devices regarding the software program."

#### V. ORIGINAL CLAIMS 3, 5 AND 7-21, AMENDED CLAIM 1, AND NEW CLAIMS 22-38 OF THE '520 PATENT ARE NOT ENTITLED TO THE FOREIGN PARENT FILING DATE

MPEP § 2217 provides that a re-examination request "may, where appropriate, point out that claims in the patent for which re-examination is requested are entitled only to the filing date of the patent and are not supported by an earlier foreign or United States patent application whose filing date is claimed."

#### A. Prior Related Patents and Applications

On May 10, 1993, Japanese Patent Application No. 5-108303 ("the Japanese Application") was filed. **Exhibit K**, *Japanese Application (machine translation)*. On April 25, 1994, Mr. Okamoto filed a corresponding U.S. Patent Application, which issued on February 6, 1996, as U.S. Patent No. 5,489,103 ("the '103 Patent"). **Exhibit L**, '103 Patent.

On November 9, 1995, a continuation-in-part application of the '103 Patent was filed, which ultimately issued on April 7, 1998, as U.S. Patent No. 5,735,744 ("the '744 Patent"). **Exhibit M,** '744 CIP patent. The '744 Patent added new figures 8A-D and 9-11 and provided additional disclosure to support the new figures (*see, e.g., id.* at 4:32-45 and 10:59-12:2), which were not disclosed in the '103 Patent or the Japanese Application.

On May 3, 1996, a divisional application of the '774 Patent was filed, which ultimately issued on July 7, 1998, as the '995 Patent'. Exhibit N '995 Patent.

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#### **B.** ADC's '520 Continuation-in-Part Patent<sup>1</sup>

On July 2, 1998, the application that issued as the '520 Patent was filed. The '520 Patent was filed as a <u>continuation-in-part</u> application of the '995 Patent. The '520 Patent added new figures 12-14 and provided additional disclosure to support the new figures (*see, e.g.,* Exhibit A, '520 Patent at 3:65-67, 4:4-26, 11:40-13:67), which were not disclosed in any of the applications to which the '520 Patent claims priority.

#### C. Priority of the Claims of the '520 Patent

#### 1. Claims 1, 8, 15 and the Respective Dependent Claims

Many claims of the '520 Patent are supported only by the new disclosure that was first introduced when the '520 Patent was filed on July 2, 1998. The clock means limitation of claim 8 recites: "clock means for keeping a predetermined time period <u>after said executing means starts</u> <u>execution of the program or data processing</u>." '520 Patent at 15:32-34 (emphasis added). This claim limitation is only supported by Figure 12 (described at 11:36-12:19) of the '520 Patent, which recites:

FIG.12 is a flowchart showing another embodiment. In this embodiment, a predetermined time period to prevent further use of the image data is counted from the starting time of use of the data, not from the receiving time of the data from the host facility.

**Exhibit A**, '520 Patent at 11:36-41. ADC relies on the above portion to support its patentability arguments in the pending re-examination **Exhibit J**, *Response to Office Action* at 12. Yet, this portion of the specification was added on July 2, 1998, and there is no other disclosure in the '520 Patent regarding the same. Thus, claims 10, 22, 25-26, 31-34, and 37-38, which are subject to this Request and depend from claim 8, are not entitled to a priority date before July 2, 1998.

Similarly, the clock means limitation of claim 15 recites (emphasis added):

<sup>&</sup>lt;sup>1</sup> Requestor does not concede that any claims of the '520 patent are entitled to the May 10, 1993 priority date of the Japanese Application.

clock means for keeping a predetermined time period after <u>said</u> execution means ends the execution of the program or data processing to count a time period during which at least one of the program, the data, and a combination of the program and data is <u>continuously unused . . . [</u>'520 Patent at 15:43-48 (emphasis added).]

This claim limitation is only supported by Figure 13 (described at 11:36-12:19) and the same

was added on July 2, 1998. Thus, claim 15 and its dependent claims 16-21 are not entitled to a

priority date before July 2, 1998.

Further, claims 1 and 15 were amended to include transmission of data via wireless

transmission. Exhibit J, Response to Office Action at 11; 13. ADC supports this limitation with

Figures 10 and 11 (described at 11:6-35). Exhibit I, at 11 and 13. The disclosure recites:

In the embodiment shown in FIGS. 1 and 2, game data and karaoke data are transmitted via communication lines, which may be public telephone lines, dedicated communication lines, cables for communicy antenna television system. Instead of such communication lines, as shown in FIG. 10, the data may be sent via wireless transmission from a host facility 100' to a personal communication 1'. [...] the personal communicator 1' is provided with a not-shown transmitter/receiver circuit including a transmitting/receiving antenna 2.

**Exhibit A**, '520 Patent at 11:6-18. Yet, this is the only disclosure to support this amended limitation and it was added on July 2, 1998. Thus, claim 1 and its dependent claims 2, 4-5, 7, 23-24, 27-30 and 35-36, and claim 15 and its dependent claims 16, 18-19 and 21, are not entitled to a priority date before July 2, 1998.

#### 2. Claims 3, 5, 7, 35 and 36

Some claims of the '520 Patent are supported by the disclosure that was first introduced on November 9, 1995.<sup>2</sup> Claim 5 recites "means for blocking the view of what is displayed on

<sup>&</sup>lt;sup>2</sup> The date that the application? for the '774 Patent was filed.

said screen." ADC supports this limitation with only Figures 8A and 8B (described at 10:22-30)

and? Exhibit I, at 15-16. The disclosure for which recites:

Alternative arrangements to this are provided by the present invention, as shown in FIGS. 8A through 8D. In the arrangement of FIG. 8A, the view on a screen 161 of the monitor 16 is blocked with patterns of stripes 162 displayed thereon. Instead, the view displayed on the screen may be partly deleted. In the arrangement shown in FIG. 8B, only an opponent of a boxing game, who is to be displayed on an area 163 of the screen 161 is deleted.

**Exhibit A**, ' '520 Patent at 10:22-30. Thus, claim 5 and its dependent claims 35 and 36 are not entitled to a priority date before November 9, 1995.

Similarly, claim 7 is only supported by Figure 8C (described at 10:31-34), which was added on November 9, 1995. Claim 3 includes a third clock means, interference stop instruction means, and means for stopping the interference performed, which are supported by Figure 9 (described at 10:45-11:5). This figure and disclosure were added on November 9, 1995. Thus, claims 3 and 7 are not entitled to a priority date before November 9, 1995.

#### VI. DETAILED EXPLANATION FOR EACH PROPOSED REJECTION

As required by 37 C.F.R. § 1.510(b)(2), Requestor provides a detailed explanation of the pertinency and manner of applying the cited prior art to claims 1, 3, 10, 15, 17 and 22-38. *See also* Exhibits O and P, *Claim Charts*.

#### A. Detailed Explanation of Tsumura with Respect to Claims 3, 10, and 17

#### 1. Overview of Tsumura

Tsumura was filed December 30, 1994, issued August 20, 1996, and is a continuation of Ser. No. 19,052, filed February 18, 1993 (now abandoned). Tsumura is citable under at least 35 U.S.C. §§ 102(e) and 103. Tsumura generally discloses transmitting computer games from a transmission device to a receiving device so that the games can be played on the receiving device. **Exhibit B**, *Tsumura* at Abstract. In response to a user request, the transmission device

transmits the requested game to the receiving device, where the player can play the game. *Id.* at 4:40-52; 7:33-48; Abstract. The user is charged based on the number of times the user uses the transmitted game. *Id.* at 1:12-15; Abstract.

Tsumura was not cited in the original prosecution and was not raised regarding claims 3,

10 and 17. Tsumura alone raises a SNQ which is different from that raised in the pending reexamination proceeding. MPEP § 2242. A reasonable Examiner would consider Tsumura important because the same question of patentability has not previously been decided.

### 2. <u>Claims 3, 10, and 17 are unpatentable under 35 U.S.C. § 102(e) based</u> on Tsumura

(a) Claim 3

Claim 3 [rewritten in independent form] recites:

- 1. A communication system for transmitting at least one of the program, the data, and a combination of the program and data from a host facility to a communication terminal device, said communication terminal device comprising:
  - (1) an input device for inputting instructions to execute the program or to process the data,
  - (2) receiving means for receiving one of the program, the data, and a combination of the program and data as sent out from said host facility,
  - (3) storage means for storing the program, the data, or a combination of the program and data received by said receiving means,
  - (4) executing means for executing the program stored in said storage means or executing data processing by using the data stored in said storage means, in accordance with instructions from said input device,
  - (5) clock means for keeping a predetermined time period after said receiving means receives the transmission, and
  - (6) interference means for interfering with execution of said executing means when said clock means counts said predetermined time period; and

said host facility comprising:

(7) storage means for storing at least one of the program, the data, and a combination of the program and data together with the duration data indicative of the predetermined time period to be counted by said clock means, and

(8) sending out means for sending out at least one of the program, the data, and a combination of the program and data together with the duration data stored in said storage means to said communication terminal device

said communication terminal device further comprising:

- (9) second clock means for keeping a second predetermined time period shorter than said predetermined time period counted by said clock means, and
- (10) alarm means for issuing an alarm when said second clock means counts said second predetermined time period, and thereby informing that interference by said interference means with execution of said executing means will soon be performed

the communication terminal device further comprising:

- (11) third clock means for keeping a third predetermined time period after said interference means interferes with execution of said executing means,
- (12) interference stop instruction means for instructing to stop the interference performed by said interference means, and
- (13) means for stopping the interference performed by said interference means and thereby allowing resumption of execution of the program or data processing performed by said executing means when said interference stop instruction means receives the instruction before said third clock means counts said third predetermined time period.

As discussed below and in the claim chart (Exhibit P), Tsumura discloses every

limitation of claim 3. With respect to the preamble, Tsumura discloses communication system

for transmitting computer games (i.e., at least one of the program, the data, and a combination of

the program and data) from a transmission device (i.e., host facility) to a receiving device

(communication terminal device). Exhibit B, Tsumura at 4:14-18; 1:9-10, 1:16-18; FIG. 1.

# (1) an input device for inputting instructions to execute the program or to process the data

Tsumura describes a receiving device that includes a "panel of input keys that are used to play the game." *Id.* at 11:1-2.<sup>3</sup> Tsumura discloses a panel of input keys (i.e., an input device) for playing a game (i.e., inputting instructions to execute the program or to process the data). *Id.* 

<sup>&</sup>lt;sup>3</sup> See also id. at 10:61-11:4; 8:50-60; 9:24-31; FIG. 8, item 83.

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## (2) receiving means for receiving one of the program, the data, and a combination of the program and data as sent out from said host facility

Tsumura discloses a transmission device that transmits data through a communications satellite. *Id.* at 4:18-23. The receiving device includes "an antenna for the receipt of signals from the satellite." *Id.* at 4:41-42.<sup>4</sup> Tsumura teaches a receiving device that includes an antenna for receiving satellite signals (i.e., receiving means for receiving one of the program, the data, and a combination of the program and data) sent from the transmission device (i.e., host facility).

## (3) storage means for storing the program, the data, or a combination of the program and data received by said receiving means

After the receiving device receives data through the antenna, the data is stored in a largescale memory device (i.e., storage means for storing the program, the data, or a combination of the program and data). *Id.* at 4:40-52; 5:54-6:9; 1:10-12; 6:28-33; FIG. 3, item 35. Tsumura recites:

The radio waves received by way of the antenna 31 are all input to the tuner 32. [...] In other words, if the order (numbers) that has already been assigned to the game data is input from the control panel 36, this will be processed by the CPU 33, the data strings input serially from the tuner 32 will be checked and game data with numbers with which the file type code B matches stored in the large scale memory device 35. The large-scale memory device 35 normally consists of a hard disk or optical disk.

Id. at 5:55-67 (emphasis added). Tsumura also discloses storing data in RAM. Id. at 8:50-60;

9:24-31; 10:61-11:4. Tsumura discloses the claimed storage means.

#### (4) executing means for executing the program stored in said storage means or executing data processing by using the data stored in said storage means, in accordance with instructions from said input device

Tsumura describes a receiving device that includes a CPU for analyzing received data and controlling the receiving device, and a data processing device for processing data. *Id.* at

<sup>&</sup>lt;sup>4</sup> See also id. at 4:40-52; 7:62-66; 5:4-14; 5:54-56; 8:50-60; FIG. 3, item 31; FIG. 5.
4:40-52; 7:1-14; FIG. 3, items 33 and 37. Tsumura recites: "It is obviously possible, in this sort of case, simply to read the required game data out of the large-scale memory device 35 and into the data processing device 37 in order to play the game." *Id.* at 6:33-37.<sup>5</sup> Tsumura discloses a similar method for executing games stored in RAM. *Id.* at 8:50-60; 9:39-42; 10:61-11:4; 14:30-38. Tsumura describes players using keyboard inputs in order to input instructions for starting and playing games. *Id.* at 11:60-62; 14:15-20. As such, Tsumura discloses that game data is read out of a memory device (i.e., storage means) and into the data processing device in order to play the game (i.e., executing data processing by using the data stored in the storage means), in accordance with keyboard inputs (i.e., instructions from the input device).

### (5) clock means for keeping a predetermined time period after said receiving means receives the transmission

Tsumura describes a receiving device utilized as a commercial game machine where the user pays a fee each time the machine is used. *Id.* at 8:40-45. A requested game is downloaded to the receiving device. *Id.* at 9:29-31. The receiving device includes an internal clock for keeping a predetermined length of time until use of a game is discontinued. *Id.* at 9:56-10:4. Tsumura recites:

In the case of games like role playing games that can take a long time to play, on the other hand, it would be desirable to incorporate an additional charge facility that would function automatically at fixed intervals during the course of a game. The CPU's 71 internal clock, for example, could be used to calculate the unit time and to call for the insertion of an additional fee before a predetermined length of time has elapsed, and to cause the game to be discontinued as soon as that length of time has elapsed if the required additional fee has not been paid.

*Id.* at 9:56-65 (emphasis added). Tsumura specifically discloses that a user must first pay to use a machine and select a game for download, after which the machine immediately receives the

<sup>&</sup>lt;sup>5</sup> See also id. at 6:9-21; 6:33-51.

requested program and the player can play the game. *See, e.g.*, 9:12-51. Prior to discontinuing the game, the machine calls for the insertion of an additional fee. *Id.* at 9:56-65. Thus, the predetermined time period before the game is discontinued is necessarily measured from the time the game is received. Accordingly, Tsumura inherently discloses that the predetermined length of time kept by the internal clock (i.e., clock means) is measured from the time the game is received (i.e., after receiving means receives the transmission).

#### (6) interference means for interfering with execution of said executing means when said clock means counts said predetermined time period

Tsumura discloses that after a predetermined length of time has elapsed, the CPU causes the game to be discontinued. *Id.* at 9:56-65. Tsumura discloses a CPU (i.e., interference means) for discontinuing a game (i.e., interfering with execution of said executing means) when the internal clock (i.e., clock means) calculates that the predetermined length of time has elapsed (i.e., counts said predetermined time period).

# (7) storage means for storing at least one of the program, the data, and a combination of the program and data together with the duration data indicative of the predetermined time period to be counted by said clock means

Tsumura discloses a transmission device with a database that contains data for transmission. *Id.* at 4:18-26; FIG. 2, item 22. Tsumura teaches the transmission database contains computer games for transmission. *Id.* at 4:18-26. Tsumura discloses a database (i.e., storage means) for storing data including computer games (i.e., at least one of the program, the data, and a combination of the program and data together with the duration data indicative of the predetermined time period to be counted by said clock means).

#### (8) sending out means for sending out at least one of the program, the data, and a combination of the program and data together with the duration data stored in said storage means to said communication terminal device

Tsumura describes the transmission device as including a transmitter for transmitting data through an antenna to a communications satellite. *Id.* at 4:18-23; 5:18-53; 9:3-10; FIG. 2, items 23 and 24. Tsumura recites: "The transmission computer 21 reads game data in a prescribed order from the database 22 in which it is stored and, after adding various control and other necessary signals, outputs it in the form of a data string to the transmitter 23." *Id.* at 5:8-12. Tsumura discloses a transmitter (i.e., sending out means) for transmitting data (i.e., sending out at least one of the program, the data, and a combination of the program and data together with the duration data) stored in the database (i.e., storage means) to the receiving device (i.e., communication terminal device).

#### (9) second clock means for keeping a second predetermined time period shorter than said predetermined time period counted by said clock means

Tsumura describes an additional charge facility that "would function automatically <u>at</u> <u>fixed intervals during the course of a game</u>." *Id.* at 9:58-60 (emphasis added). As such, the internal clock keeps a predetermined length of time prior to discontinuation of a game, in which to call for an additional fee. *Id.* at 9:56-10:4. Tsumura recites:

The CPU's 71 internal clock, for example, could be used to calculate the unit time and to call for the insertion of an additional fee before a predetermined length of time has elapsed, and to cause the game to be discontinued as soon as that length of time has elapsed if the required additional fee has not been paid.

*Id.* at 9:60-65 (emphasis added). Tsumura discloses that the internal clock (i.e., second clock means) calculates a second unit of time prior to the discontinuation of the game (i.e., keeping a second predetermined time period shorter than the first).

# (10) alarm means for issuing an alarm when said second clock means counts said second predetermined time period, and thereby informing that interference

### by said interference means with execution of said executing means will soon be performed

Tsumura discloses that the CPU calls for an additional fee at fixed intervals during a game, where if the player does not provide the required additional fee, the game is discontinued. *Id.* at 9:56-10:4. Tsumura discloses that the CPU (i.e., alarm means) calls for the insertion of an additional fee (i.e., informs that interference by the interference means with the execution of the executing means will soon be performed) when the CPU's internal clock calculates the second unit time (i.e., issues an alarm when the second clock means counts the second predetermined time period).

### (11) third clock means for keeping a third predetermined time period after said interference means interferes with execution of said executing means

Tsumura describes pausing a program for a predetermined length of time after the game

is discontinued in order for the player to input more money. Id. at 9:56-10:4. Tsumura recites:

An alternative arrangement would be to <u>cause the game program to</u> pause for a predetermined length of time after the game has been <u>discontinued</u> in order to allow time for the player to put more money in the machine. The pause could be released and the game continued if the requisite additional charge is paid within the time allowed.

*Id.* at 9:65-10:4 (emphasis added). Tsumura discloses that the CPU's internal clock (i.e., third clock means) calculates a third unit time (i.e., keeps a third predetermined time period) during which the game is paused (i.e., after the interference means interferes with execution of the executing means).

### (12) interference stop instruction means for instructing to stop the interference performed by said interference means

Tsumura discloses that the CPU (i.e., interference stop instruction means) determines whether an additional charge has been paid within the time allowed and either allows the player to resume the game or not based on the determination (i.e., instructing to stop the interference performed by said interference means). *Id.* at 9:65-10:4.

(13) means for stopping the interference performed by said interference means and thereby allowing resumption of execution of the program or data processing performed by said executing means when said interference stop instruction means receives the instruction before said third clock means counts said third predetermined time period

Tsumura discloses that the CPU (i.e., means for stopping the interference performed by said interference means) allows a player to resume a paused game (i.e., allowing resumption of execution of the program or data processing performed by said executing means) if the player inserted an additional fee prior to the expiration of the third time period (i.e., when the interference stop instruction means receives the instruction before the third clock means counts the third predetermined time period). *Id.* at 9:65-10:4. Claim 3 is unpatentable because it is anticipated under 35 U.S.C. § 102(e) by Tsumura as Tsumura teaches all elements of claim 3.

#### (b) Claim 10

Claim 10 (written in its independent form) is similar to claim 3. With the exception of element (5), claim 10 (written in its independent form) is identical to claim 3. The difference between element (5) of claim 10 (written in its independent form) and claim 1 is underlined below:

# clock means for keeping a predetermined time period after <u>said</u> executing means starts execution of the program or data processing

The analysis with respect to claim 10 (written in its independent form) is identical to claim 3, except with respect to element (5). *See* Section VI.A.2(a) above. With respect to element (5), Tsumura describes the receiving device as being utilized as a commercial game machine where "the user will pay a charge <u>each time the machine is used</u>" (emphasis added). *Id.* at 8:44-45.<sup>6</sup>

<sup>&</sup>lt;sup>6</sup> See also id. at 8:40-45.

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Tsumura discloses an additional charge facility that "would function automatically <u>at fixed</u> <u>intervals during the course of a game</u>." (emphasis added) *Id.* at 9:58-60. The receiving device includes an internal clock for keeping a predetermined length of time until use of a game is discontinued. Tsumura recites:

The CPU's 71 internal clock, for example, could be used to calculate the unit time and to call for the insertion of an additional fee before a predetermined length of time has elapsed, and to cause the game to be discontinued as soon as that length of time has elapsed if the required additional fee has not been paid.

*Id.* at 9:60-63 (emphasis added).<sup>7</sup> Tsumura specifically discloses that a user must first pay to use a machine and select a game for download, after which the machine immediately receives the requested program and the player can play the game. *See, e.g.,* 9:12-51. Prior to discontinuing the game, the machine calls for the insertion of an additional fee. *Id.* at 9:56-65. Thus, the predetermined time period before the game is discontinued is necessarily measured from the time the game starts, which is the same as the time that the game is received. Accordingly, Tsumura discloses that the predetermined length of time kept by the internal clock (i.e., clock means) is measured from the time the game starts being used until the game is discontinued (i.e., after executing means starts execution of the program or data processing). Claim 10 (written in its independent form) is unpatentable because it is anticipated under 35 U.S.C. § 102(e) by Tsumura.

#### (c) Claim 17

Claim 17 (written in its independent form) is similar to claim 3. With the exception of element (5), claim 17 (written in its independent form) is identical to claim 3. The difference

<sup>&</sup>lt;sup>7</sup> See also id. at 9:56-10:4.

between element (5) of claim 17 (written in its independent form) and claim 3 is underlined below:

clock means for keeping a predetermined time period after <u>said</u> <u>execution means ends the execution of the program or data</u> <u>processing to count a time period during which at least one of the</u> <u>program, the data, and a combination of the program and data is</u> <u>continuously unused</u>

The analysis with respect to claim 17 (written in its independent form) is identical to that of claim 3, except with respect to element (5). *See* Section VI.A.2(a) above. With respect to element (5), Tsumura describes the receiving device, including an internal clock for keeping a predetermined length of time until use of a game is discontinued. *Id.* at 9:56-65. Tsumura discloses that the internal clock can keep a predetermined length of time after the game has been discontinued, during which a game is paused to allow for the player to insert more money. *Id.* at 9:65-10:4. Tsumura recites:

An alternative arrangement would be to <u>cause the game program to</u> <u>pause for a predetermined length of time after the game has been</u> <u>discontinued</u> in order to allow time for the player to put more money in the machine. <u>The pause could be released and the game</u> <u>continued if the requisite additional charge is paid within the time</u> <u>allowed</u>.

*Id.* at 9:65-10:4 (emphasis added). Tsumura discloses an internal clock (i.e., clock means) for keeping a predetermined length of time after the game has been discontinued (i.e., after said execution means ends the execution of the program or data processing), during which the game is paused for the predetermined length of time (i.e., count a time period during which at least one of the program, the data, and a combination of the program and data is continuously unused). Claim 17 (written in its independent form) is unpatentable because it is anticipated under 35 U.S.C. § 102(e) by Tsumura.

#### 3. <u>Claims 3 and 10 are unpatentable under 35 U.S.C. § 103 based on</u> <u>Tsumura</u>

#### (a) Claim 3

Tsumura alone discloses all elements of claim 3. See Section VI.A.2(a). To the extent that "clock means for keeping a predetermined time period after said receiving means receives the transmission" is not implicitly or inherently disclosed by Tsumura, it would have been obvious to one of skill in the art, given the teachings of Tsumura, to keep a predetermined time period after receiving the transmission. For example, Tsumura discloses clock means for keeping a predetermined time period until use of the program/data is discontinued. Id. at 9:56-65. Tsumura specifically discloses that a user must first pay to use a machine and select a game for download, after which the machine immediately receives the requested program and the player can play the game. See, e.g., 9:12-51. Prior to discontinuing the game, the machine calls for the insertion of an additional fee. Id. at 9:56-65. In view of this disclosure, measuring this time period from receipt would have been an obvious variation, requiring no technological insight. With respect to element (10), to the extent that Tsumura's disclosure of a warning is not deemed to be an "alarm," using an alarm to warn the user of the upcoming time at which play will be discontinued would have been an obvious variation requiring no technological insight. Claim 3 is unpatentable under 35 U.S.C. § 103 based on Tsumura because it would have been obvious to those skilled in the art at the time of the invention in view of the teachings of Tsumura.

#### (b) Claim 10

Tsumura alone discloses all elements of claim 10. *See* Section VI.A.2(b). To the extent that "clock means for keeping a predetermined time period after said executing means starts execution of the program or data processing" is not implicitly or inherently disclosed by Tsumura, it would have been obvious to one of skill in the art, given the teachings of Tsumura, to keep a predetermined time period after the game starts. For example, Tsumura discloses clock

means for keeping a predetermined time period until use of the program/data is discontinued. *Id.* at 9:56-65. Tsumura specifically discloses that a user must first pay to use a machine and select a game for download, after which the machine immediately receives the requested program and the player can play the game. *See, e.g.*, 9:12-51. Prior to discontinuing the game, the machine calls for the insertion of an additional fee. *Id.* at 9:56-65. In view of this disclosure, measuring this time period from the start of a game would have been an obvious variation, requiring no technological insight. With respect to element (10), to the extent that Tsumura's disclosure of a warning is not deemed to be an "alarm," using an alarm to warn the user of the upcoming time at which play will be discontinued would have been an obvious variation requiring no technological insight. Claim 3 is unpatentable under 35 U.S.C. § 103 based on Tsumura because it would have been obvious to those skilled in the art at the time of the invention in view of the teachings of Tsumura.

### **B.** Detailed Explanation of Tsumura in view of Suzuki with Respect to Claims 3, 10, and 17

#### 1. Overview of Tsumura and Suzuki

Tsumura is citable under at least 35 U.S.C. §§ 102(e) and 103. Suzuki published on June 30, 1989, from an application filed December 23, 1987 and is citable under at least 35 U.S.C. §§ 102(a) and (b) and 103. Suzuki describes a "paid software administration and maintenance system." **Exhibit C**, *Suzuki* at 2. A customer pays to use software for a period of time ("term") and, before the term expires, there is an alert period in which the customer's use of the software generates customer alert message warning of the forthcoming expiration. *Id.* at 3-4. At the end of the contract term, the customer may continue to use the software during a grace period, which allows the parties to negotiate additional charges for further use. *Id.* After the grace period

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expires, the customer's attempt to use the software will be rejected, i.e., the software is disabled until the software maker receives further payment to extend the term. *Id.* at 4.

Tsumura and Suzuki both relate to managing the use of data on distributed computer systems and charging a fee based on the use of data in a computing device. These references are analogous art and are properly combinable. Tsumura and Suzuki also both include known prior art elements (CPUs, memory, transmitters and receivers, and charging devices) that can be combined through the use of ordinary skill to yield predictable results. Any additional differences between the art and what the claims cover may be bridged by the knowledge of one of ordinary skill in the art.

The combination of Tsumura and Suzuki was not raised in the original prosecution or the subsequent re-examination with respect claims 3, 10, and 17. The combination of Tsumura and Suzuki raises a SNQ which is different from that raised in the pending re-examination. MPEP § 2242. A reasonable Examiner would consider Tsumura and Suzuki important because the same question of patentability has not previously been decided.

#### 2. <u>Claims 3, 10, and 17 are unpatentable under 35 U.S.C. § 103 based on</u> <u>Tsumura in view of Suzuki</u>

As discussed below and in **Exhibit O**, Tsumura in view of Suzuki discloses all limitations of claim 3. Tsumura renders claim 3 unpatentable. *See* Sections VI.A.2(a) and VI.A.3. To the extent that the limitation of claim 3 stating: "alarm means for issuing an alarm when said second clock means counts said second predetermined time period, and thereby informing that interference by said interference means with execution of said executing means will soon be performed" is not expressly or inherently disclosed by Tsumura, Suzuki describes clock means for keeping a predetermined time period during the allowed usage of the software. **Exhibit C**, *Suzuki* at 2-4. Suzuki discloses keeping a time period after which a user is warned

that the software time limit has expired, and a second period, shorter than the first, after which the software becomes unusable. *Id.* At the end of the first time period, when the user's time has expired, Suzuki discloses providing a warning, notifying the user that time expired, but providing a period during which the user may "renew" before interference takes effect. *Id.* at 3. Suzuki recites:

For paid software that has reached its contract expiration, <u>an alert</u> <u>message is output</u> before the expiration is reached and an interruption message is periodically output even after the expiration has been reached. Thus, work will not be spontaneously interrupted and the like since the user is granted an extension.

*Id.* at 3 (emphasis added). Claims 10 and 17 recite identical "alarm means" limitations to claim 3. Accordingly, claims 3, 10, and 17 are unpatentable under 35 U.S.C. § 103 based on Tsumura in view of Suzuki.

# C. Detailed Explanation of Tsumura in view of Kaniwa with Respect to Claims 3, 10, and 17

#### 1. Overview of Tsumura and Kaniwa

Tsumura is citable under at least 35 U.S.C. §§ 102(e) and 103. Kaniwa was filed on February 17, 1995, issued on December 16,  $1997^8$  and is citable under at least 35 U.S.C. §§102(e) and 103. Kaniwa describes an information recording and reproduction apparatus for recording and reproducing information, such as video or computer software, supplied from a transmitting office. **Exhibit D**, *Kaniwa* at 7:8-23; Abstract. Kaniwa further discloses an apparatus that limits the reproduction of recorded data based on associated deadline information. *Id.* at 5:28-46; Abstract. When a deadline is reached, the program is cut off. *Id.* 

<sup>&</sup>lt;sup>8</sup> As described in Section V.F, at least original claim 3 is not entitled to a priority date before November 9, 1995 and, with respect to Section V.E, at least original claims 10 and 17 are not entitled to a priority date before July 2, 1998.

Tsumura and Kaniwa both relate to distributing data from a host facility to a device and managing the use of the data on distributed computer systems. These references are analogous art and are properly combinable. Tsumura and Kaniwa both include known prior art elements (CPUs, memory, and transmitters and receivers) that can be combined through the use of ordinary skill to yield predictable results. Any additional differences between the art and what the claims cover may be bridged by the knowledge of one of ordinary skill in the art.

The combination of Tsumura and Kaniwa was not raised in the original prosecution or any subsequent re-examination with respect claims 3, 10, and 17. The combination of Tsumura and Kaniwa raises a SNQ which is different from that raised in the pending re-examination. MPEP § 2242. A reasonable Examiner would consider Tsumura and Kaniwa important because the same question of patentability has not previously been decided.

#### 2. <u>Claims 3, 10, and 17 are unpatentable under 35 U.S.C. § 103 based on</u> <u>Tsumura in view of Kaniwa</u>

Tsumura in view of Kaniwa discloses all limitations of claim 3. *See* Sections VI.A.2(a) and VI.A.3; **Exhibit B**. To the extent that Tsumura does not expressly or inherently disclose "storage means" for storing programs together with duration data or "sending out means" for sending out programs together with the duration data, Kaniwa describes a transmitting office that stores data in a large-capacity memory. **Exhibit D**, *Kaniwa* at 7:17-23. Kaniwa discloses that deadline information is added to transmitted data before the data is sent out from the host facility to the device. *Id.* at 7:27-53. Kaniwa recites:

At the same time, temporal information such as the date and time (hereinafter referred to as "the date/time information") supplied from a calendar timer circuit 43 and <u>deadline information for</u> determining a deadline of the transmission information supplied from a deadline information generating circuit 45 are added to the transmission information as an index signal.

*Id.* at 7:27-33.<sup>9</sup> Kaniwa discloses program data that is stored together with deadline information (i.e., duration data indicative of the predetermined time period to be counted by the clock means) in a transmitting office. Kaniwa teaches that the transmitting office sends out the program together with the deadline information to the requesting devices. Claims 10 and 17 recite identical "sending out means" limitations to claim 3. Claims 3, 10, and 17 are unpatentable under 35 U.S.C. § 103 based on Tsumura in view of Kaniwa.

#### D. Detailed Explanation of Tsumura with Respect to Claims 1, 15, and 22-38

#### 1. Overview of Tsumura

Tsumura is citable under at least 35 U.S.C. §§ 102(e) and 103. Tsumura was not cited during the original prosecution of the '520 Patent but was raised in the pending re-examination. In the re-examination, ADC amended claims 1 and 15 and added new claims 22-38. Requester provides information raising a SNQ with respect to the new and amended claims that have been proposed by ADC. MPEP § 2242. Tsumura alone raises a SNQ with respect to claims 1, 15, 22-38. A reasonable Examiner would consider Tsumura important because the same question of patentability has not previously been decided.

#### 2. <u>Claims 1, 15, 22-23, 25, 28-29, 32-33, and 35-38 are unpatentable</u> <u>under 35 U.S.C. § 102(e) based on Tsumura</u>

#### (a) Claim 1

Tsumura discloses all limitations of amended claim 1. Exhibit B. The analysis with respect to amended claim 1 is identical to that set forth in Section VI.A.2(a) with respect to elements (1) through (8) of claim 3, except with respect to element (2). ADC amended element (2) of claim 1 to include wireless transmission of data to the communication terminal device. (amended language underlined):

<sup>&</sup>lt;sup>9</sup> See also id. at 3:19-22; 7:8-65; 21:30-36; 24:32-38; FIG. 2.

receiving means for receiving, via wireless transmission, one of the program, the data, and a combination of the program and data as sent out from said host facility

With respect to element (2) of claim 1, Tsumura describes a transmission device that transmits data through a communications satellite. **Exhibit B**, *Tsumura* at 4:18-23. The receiving device includes "an antenna for the receipt of signals from the satellite." *Id.* at 4:41-42.<sup>10</sup> With respect to the newly added "wireless transmission limitation," this limitation does not create a patentable distinction between the claimed invention and the prior art. Tsumura expressly discloses use of satellite transmission (i.e., wireless transmission). Tsumura discloses a receiving device that includes an antenna for receiving satellite signals (i.e., receiving means for receiving, via wireless transmission, one of the program, the data, and a combination of the program and data) sent out from the transmission device (i.e., host facility). Claim 1 is unpatentable because it is anticipated under 35 U.S.C. § 102(e) by Tsumura.

#### (b) Claim 15

Tsumura discloses all limitations of amended claim 15. **Exhibit B**. The analysis with respect to amended claim 15 is identical to that set forth in Section VI.A.2(c) with respect to elements (1) through (8) of claim 17, (written in its independent form) except with respect to ADC's two claim amendments. First, ADC amended element (2) of claim 15 to include wireless transmission of data to the communication terminal device. With respect to element (2) of claim 15, and as set forth in Section VI.D.2(a) with respect to amended claim 1, Tsumura discloses this limitation. **Exhibit B**, *Tsumura* at 4:18-23; 4:40-52; 7:62-66; 5:4-14; 5:54-56; 8:50-60; FIG. 3, item 31; FIG. 5.

Second, ADC added the following limitation:

<sup>&</sup>lt;sup>10</sup> See also id. at 4:40-52; 7:62-66; 5:4-14; 5:54-56; 8:50-60; FIG. 3, item 31; FIG. 5.

wherein the communication terminal device is further configured to connect over telecommunication lines to at least another communication terminal device to facilitate interactive communication between the at least two communication terminal devices regarding the program, the data, or the combination of program and data

With respect to the newly added limitation, Tsumura describes a system "whereby a plurality of players using mutually remote machines are each able to participate in the same game...." *Id.* at 3:34-35. Receiving devices are connected to a host computer via a communications network, where data is exchanged by way of telephone lines. *Id.* at 12:62-13:22. Tsumura discloses that a host computer registers players for multiplayer role playing games, where each player uses his or her own game terminal to play the game. *Id.* at 15:26-16:4; 13:43-14:14; 14:15-61; 14:62-15:25; FIGS. 11-13. Tsumura discloses a receiving device (i.e., communication terminal device) that is connected by way of telephone lines (i.e., telecommunication lines) to other receiving devices (i.e., to at least another communication terminal device), such that each remotely located receiving device can participate in the same multiplayer game (i.e., facilitate interactive communication between the at least two communication terminal devices regarding the program, the data, or the combination of the program and data). Claim 15 is unpatentable because it is anticipated under 35 U.S.C. § 102(e) by Tsumura.

#### (c) Claim 22

Newly added claim 22 depends from claim  $8^{11}$  and recites: "The communication system according to claim 8, wherein the receiving means is configured for reception via wireless transmission." The analysis of claim 8 elements (1) – (8) is set forth in section VI.D.2(a). Tsumura discloses a receiving device that includes an antenna for receiving satellite signals (i.e.,

<sup>&</sup>lt;sup>11</sup> Analysis with respect to claim 8 is included in claim 10, which has been written in independent form.

receiving means is configured for reception via wireless transmission). *See* Section VI.D.2(a); *See Id.* at 4:18-23; 4:40-52; 7:62-66; 5:4-14; 5:54-56; 8:50-60; FIG. 3, item 31; FIG. 5. Claim 22 is unpatentable because it is anticipated under 35 U.S.C. § 102(e) by Tsumura.

#### (d) Claims 23 and 25

Newly added claim 23 depends from claim 1 and recites: "The communication system according to claim 1, wherein the communication terminal device is further configured to connect over telecommunication lines to at least another communication terminal device to facilitate interactive communication between the at least two communication terminal devices regarding the program, the data, or the combination of program and data." Tsumura alone discloses every element of claim 1. See Section VI.D.2(a). The new limitation of claim 23 is identical to the limitation of amended claim 15. See Section VI.D.2(b). Tsumura discloses a receiving device (i.e., communication terminal device) that is connected by way of telephone lines (i.e., telecommunication lines) to other receiving devices (i.e., to at least another communication terminal device), such that each remotely located receiving device can participate in the same multiplayer game (i.e., facilitate interactive communication between the at least two communication terminal devices regarding the program, the data, or the combination of the program and data). Id. at 3:35-36; 15:26-16:4; 12:62-13:22; 13:43-14:14; 14:15-61; 14:62-15:25; FIGS. 11-13. Tsumura discloses every limitation of claim 23 and the identical limitations of claim 23. Accordingly, claims 23 and 25 are unpatentable under 35 U.S.C. § 102(e) based on Tsumura.

#### (e) Claims 28 and 32

Newly added claim 28 depends from claim 1 and recites: "The communication system according to claim 1, wherein the program comprises a video game." Tsumura discloses every element of claim 1. *See* Section VI.D.2(a). Tsumura presents a computer game device for

"communication of large volumes of data of the type used in <u>computer games</u>." *Id.* at 1:9-10 (emphasis added).<sup>12</sup> Tsumura discloses a communication system that can distribute video games. *Id.* Tsumura discloses every limitation of claim 28 and the identical limitations of claim 32. Accordingly, claims 28 and 32 are unpatentable under 35 U.S.C. § 102(e) based on Tsumura.

#### (f) Claims 29 and 33

Newly added claim 29 depends from claim 1 and recites: "The communication system according to claim 1, wherein the program comprises multimedia audio/video data." Tsumura alone discloses all elements of claim 1. *See* Section VI.D.2(a). Tsumura further presents a computer game device for "communication of large volumes of data of the type used in <u>computer games</u>." *Id.* at 1:9-10 (emphasis added).<sup>13</sup> The computer games, as described by Tsumura include both video and audio data. *Id.* at 4:40-52. Tsumura discloses a communication system that can distribute multimedia audio/video data. *Id.* Tsumura discloses every limitation of claim 29 and the identical limitation of claim 33. Claims 29 and 33 are unpatentable under 35 U.S.C. § 102(e) based on Tsumura.

#### (g) Claims 35 and 37

Newly added claim 35 depends from claim 5 and recites: "The communication system according to claim 5, wherein the program, the data, or the combination of program and data comprises either a video game, karaoke data, or multimedia audio/video data like a movie, and further wherein the predetermined time period comprises a rental period for the software program, and still further wherein the interference means is configured to cease blocking the view on the screen in response to a payment of an additional charge." Tsumura discloses every element of claim 5. Exhibit B. Tsumura discloses a communication system that can distribute

<sup>&</sup>lt;sup>12</sup> See also id. at Abstract; 4:18-26.

<sup>&</sup>lt;sup>13</sup> See also id. at Abstract; 4:18-26

video games (i.e., the program, the data, or the combination of program and data comprises either a video game, karaoke data, or multimedia audio/video data like a movie). Exhibit B, *Tsumura* at 1:9-10; 4:18-26; Abstract. Players are charged based on the use of downloaded games (e.g., rental fee). *Id.* at 1:12-15; 8:42-50. Tsumura discloses a CPU (i.e., interference means) for discontinuing a game when an internal clock calculates that a predetermined length of time has elapsed (i.e., rental period for the software program). *Id.* at 9:56-10:4. Tsumura discloses that the internal clock can keep a predetermined length of time after the game has been discontinued, during which a game is paused to allow for the player to insert more money. *Id.* at 9:65-10:4. Tsumura recites:

An alternative arrangement would be to <u>cause the game program to</u> <u>pause for a predetermined length of time after the game has been</u> <u>discontinued</u> in order to allow time for the player to put more money in the machine. <u>The pause could be released and the game</u> <u>continued if the requisite additional charge is paid within the time</u> <u>allowed</u>.

*Id.* (emphasis added). Tsumura discloses a CPU (i.e., interference means) that releases a paused game in order to allow a player to continue the game (i.e., cease blocking the view on the screen) upon payment of an additional charge. Tsumura discloses every limitation of claim 35 and the identical limitations to claim 37. Accordingly, claims 35 and 37 are unpatentable under 35 U.S.C. § 102(e) based on Tsumura.

#### (h) Claims 36 and 38

Newly added claim 36 depends from claim 35 and recites: "The communication system according to claim 35, wherein the communication terminal device is further configure to connect over telecommunication lines to at least another communication terminal device to facilitate interactive communication between the at least two communication terminal devices regarding the software program." Tsumura discloses all limitations of claim 35. *See* Section

VI.D.2(b). Tsumura discloses a receiving device (i.e., communication terminal device) that is connected by way of telephone lines (i.e., telecommunication lines) to other receiving devices (i.e., to at least another communication terminal device), such that each remotely located receiving device can participate in the same multiplayer game (i.e., facilitate interactive communication between the at least two communication terminal devices regarding the program, the data, or the combination of the program and data). *See* Section VI.D.2(b); *Id.* at 3:35-36; 15:26-16:4; 12:62-13:22; 13:43-14:14; 14:15-61; 14:62-15:25; FIGS. 11-13. Tsumura discloses every limitation of claim 36 and the identical limitations to claim 38. Accordingly, claims 36 and 38 are unpatentable under 35 U.S.C. § 102(e) based on Tsumura.

#### 3. <u>Claims 1, 23-24, 27-31, and 34-36 are unpatentable under 35 U.S.C.</u> § 103 based on Tsumura

#### (a) Claim 1

Tsumura discloses all elements of claim 1. *See* Section VI.D.2(a). To the extent that "clock means for keeping a predetermined time period after said receiving means receives the transmission" is not implicitly or inherently disclosed by Tsumura, it would have been obvious to one of skill in the art, given the teachings of Tsumura, to keep a predetermined time period after receiving the transmission. For example, Tsumura discloses clock means for keeping a predetermined time period until use of the program/data is discontinued. *Id.* at 9:56-65. In view of this disclosure, measuring this time period from receipt would have been an obvious variation, requiring no technological insight. Claim 1 is unpatentable under 35 U.S.C. § 103 based on Tsumura because it would have been obvious to those skilled in the art at the time of the invention in view of the teachings of Tsumura.

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#### (b) Claims 23, 28-29, and 35-36

Tsumura renders claim 1 unpatentable. *See* Section VI.D.3(a). Tsumura discloses the limitations of new dependent claims 23, 28-29, and 35-36. *See* Sections VI.D.2(d)-VI.D.2(h). Claims 23, 28-29, and 35-36 are unpatentable under 35 U.S.C. § 103 based on Tsumura.

#### (c) Claims 24 and 26

Newly added claim 24 depends from claim 23 and recites: "The communication system according to claim 23, wherein the interactive communication facilitated between the at least two communication terminal devices comprises real-time communication incident to the data processing of the program, the data, or the combination of program and data." Tsumura alone discloses all elements of claim 23. See Section VI.D.2(d). Tsumura discloses a receiving device (i.e., communication terminal device) that is connected by way of telephone lines (i.e., telecommunication lines) to other receiving devices (i.e., to at least another communication terminal device), such that each remotely located receiving device can participate in the same multiplayer game (i.e., facilitate interactive communication between the at least two communication terminal devices regarding the program, the data, or the combination of the program and data). Id. at 3:35-36; 15:26-16:4; 12:62-13:22; 13:43-14:14; 14:15-61; 14:62-15:25; FIGS. 11-13. Tsumura discloses that the system enables users to play a variety of different games, including shooting games and role playing games. Id. at 9:52-56; 12:37-40; 13:14-21. In view of Tsumura's disclosure of allowing remotely located devices to participate interactively in the same game, real-time communication incident to each player's execution of the games would have been an obvious variation. Newly added claim 26 includes identical limitations to claim 24. Accordingly, claims 24 and 26 are unpatentable under 35 U.S.C. § 103 based on Tsumura because it would have been obvious to those skilled in the art at the time of the invention in view of the teachings of Tsumura.

#### (d) Claims 27 and 31

Newly added claim 27 depends from claim 1 and recites: "The communication system according to claim 1, wherein the data comprises karaoke data." Tsumura renders claim 1 unpatentable. See Section VI.D.3(a). Tsumura presents a computer game device for "communication of large volumes of data of the type used in computer games." Id. at 1:9-10 (emphasis added).<sup>14</sup> Tsumura discloses computer games which include both video and audio data. Id. at 4:40-52. The '520 Patent discloses that karaoke information may include audio information and video information. Exhibit A, '520 Patent at 3:10-18; 8:61-9:17; 9:61-10:4. As further described, "karaoke music software" may be found on a "video disk, video tape containing video and audio information, and music tape containing only audio information." Id. at 1:36-39. The '520 Patent describes the process for sending and receiving karaoke data as being similar to the process for sending video game data. See e.g., id. at 3:22-24. In view of Tsumura's disclosure for distributing large volumes of data such as video games that include video and audio data, communication of karaoke data would have been an obvious variation, requiring no technological insight. Newly added claim 31 includes identical limitations to claim 27. Claims 27 and 31 are unpatentable under 35 U.S.C. § 103 based on Tsumura because it would have been obvious to those skilled in the art at the time of the invention in view of the teachings of Tsumura.

#### (e) Claims 30 and 34

Newly added claim 30 depends from claim 29 and recites: "The communication system according to claim 29, wherein the multimedia audio/video data comprises a movie." Tsumura alone discloses all limitations of claim 29. *See* Section VI.D.2(f). Tsumura discloses a

<sup>&</sup>lt;sup>14</sup> See also id. at Abstract; 4:18-26.

communication system that can distribute video games, which include both audio and video data (i.e., multimedia audio/video). **Exhibit B**, *Tsumura* at 1:9-10; 4:18-26; 4:40-52 Abstract. Tsumura describes a distribution system for "<u>communication of large volumes of data</u> of the type used in computer games." *Id.* at 1:9-10 (emphasis added). In view of Tsumura's disclosure for distributing large volumes of data such as video games, communication of movies would have been an obvious variation, requiring no technological insight. Newly added claim 34 includes identical limitations to claim 30. Claims 30 and 34 are unpatentable under 35 U.S.C. § 103 based on Tsumura because it would have been obvious to those skilled in the art at the time of the invention in view of the teachings of Tsumura.

#### E. Detailed Explanation of Tsumura in view of Sanbe with Respect to Claims 27 and 31

#### 1. Overview of Tsumura and Sanbe

Tsumura is citable under at least 35 U.S.C. §§ 102(e) and 103. Sanbe was published February 4, 1992, and is citable under 35 U.S.C. §§ 102(a) and (b) and 103. Sanbe discloses a karaoke system for transmitting karaoke song data from a karaoke data transmission device to a karaoke reproduction device via digital communication lines. **Exhibit E**, *Sanbe* at 2; 5; FIG. 1. Karaoke song data is initially stored in a hard disk storage device provided in a central karaoke data transmission device. *Id.* at 2. In response to a user request, the karaoke data transmission device transmits the requested karaoke song data to a karaoke reproduction device, where it is played back to the user. *Id.* at 4; 5. The karaoke data transmission device records the frequency of song number requests to determine usage fees. *Id.* at 4; 6.

Tsumura and Sanbe both relate to distributing data from a host facility to a device and managing the use of the data on distributed computer systems. These references are analogous art and are properly combinable. Tsumura and Sanbe both include known prior art elements (CPUs, memory, and transmitters and receivers) that can be combined through the use of ordinary skill to yield predictable results. Any additional differences between what the art shows and what the claims cover may be bridged by the knowledge of one of ordinary skill in the art. Tsumura and Sanbe were not cited during the original prosecution and Tsumura alone was cited in the pending re-examination. Requester provides information raising a SNQ with respect to the new claims 27 and 31. MPEP § 2242. A reasonable Examiner would consider Tsumura and Sanbe important because the same question of patentability has not previously been decided.

#### 2. <u>Claims 27 and 31 are unpatentable under 35 U.S.C. § 103 based on</u> <u>Tsumura in view of Sanbe</u>

Newly added claim 27 depends from claim 1 and recites: "The communication system according to claim 1, wherein the data comprises karaoke data." Tsumura renders claim 1 unpatentable. *See* Sections VI.D.2(a) and VI.D.3(a). Sanbe discloses a karaoke system for transmitting karaoke information (e.g., karaoke song data) from a karaoke data transmission device to a karaoke reproduction device via digital communication lines. **Exhibit E**, *Sanbe* at 2; 5; FIG. 1. The karaoke song data of Sanbe comprises song data, subtitle data, and image data. *Id.* at 2. The combination of Tsumura and Sanbe describes a system that can distribute karaoke data. Newly added claim 31 includes identical limitations to claim 27. Claims 27 and 31 are unpatentable under 35 U.S.C. § 103 based on Tsumura in view of Sanbe.

### F. Detailed Explanation of Tsumura in view of Thacher with Respect to Claims 24 and 26

#### 1. Overview of Tsumura and Thacher

Tsumura is citable under at least 35 U.S.C. §§ 102(e) and 103. Thacher was filed August 3, 1988, issued on Jan. 21, 1992, and is citable under at least 35 U.S.C. §§ 102(a) and 102(b), and 103. Thacher discloses a system for playing tournament games between remote computer terminals. **Exhibit F**, *Thacher* at 1:50-57. A user inserts a credit card into a computer

terminal and the computer determines whether the user has credit. *Id.* at 2:53-62. If the user has credit, the user is allowed to play a game on the computer. *Id.* 

Tsumura and Thacher both relate to managing the use of data on distributed computer systems and charging a fee based on the use of data in a computing device. These references are analogous art and are properly combinable. The Tsumura and Thacher references also include known prior art elements (CPUs, memory, transmitters and receivers, and charging devices) that can be combined through the use of ordinary skill to yield predictable results. Any additional differences between what the art shows and what the claims cover may be bridged by the knowledge of one of ordinary skill in the art.

Tsumura and Thacher were not cited during the original prosecution and Tsumura alone was cited in the pending re-examination. Requester provides information raising a SNQ with respect to the new claims 24 and 26. MPEP § 2242. A reasonable Examiner would consider Tsumura and Thacher important because the same question of patentability has not previously been decided.

#### 2. <u>Claims 24 and 26 are unpatentable under 35 U.S.C. § 103 based on</u> <u>Tsumura in view of Thacher</u>

Newly added claim 24 depends from claim 23 and recites: "The communication system according to claim 23, wherein the interactive communication facilitated between the at least two communication terminal devices comprises real-time communication incident to the data processing of the program, the data, or the combination of program and data." Tsumura renders claim 23 unpatentable. *See* Section VI.D.2(d). Thacher discloses a game playing tournament system where remotely located people can interactively play the same game. **Exhibit F**, *Thacher* at 1:50-57; 3:41-55; 18:64-68. Thacher discloses that "players at different games can play interactive games with each other via the data links to the central computer." *Id.* at 18:64-68.

Thacher also discloses that game data can be continuously transmitted (i.e., real-time communication incident to the data processing). *Id.* at 3:1-3; 8:6-8. The combination of Tsumura and Thacher describes a system that facilitates interactive communication between two devices with real-time communication incident to the data processing. Newly added claim 26 includes identical limitations to claim 24. Claims 24 and 26 are unpatentable under 35 U.S.C. § 103 based on Tsumura in view of Thacher.

### G. Detailed Explanation of Tsumura in view of Roskowski with Respect to Claims 24 and 26

#### 1. Overview of Tsumura and Roskowski

Tsumura is citable under at least 35 U.S.C. §§ 102(e) and 103. Roskowski was filed June 6, 1994, and issued April 29, 1997. As described in Section V.C, claims 24 and 26 are not entitled to a priority date before July 2, 1998; as such Roskowski is citable under at least 35 U.S.C. §§ 102(a) and (e), and 103. Roskowski discloses a video game enhancement system for allowing a user to download video game enhancements (e.g., new levels, new characters, etc.) from an online service, store them, and use them to enhance a cartridge-based game. **Exhibit G**, *Roskowski* at 5:62-6:3; 6:35-46. The system includes a video game enhancer with an internal modem that "is sandwiched directly between the game cartridge 1 and video game console 7." *Id.* at 5:1-4. The video game enhancer maintains statistics on usage for per-usage billing from an account on the on-line service. *Id.* at 6:46-65.

Tsumura and Roskowski both relate to transmitting requested data from a distribution center to a requesting device and charging a fee based on the use of the transmitted data in the requesting device. See Tsumura at Abstract; Roskowski at 2:40-52; 7:62-65. These references are analogous art and are properly combinable. The Tsumura and Roskowski references also include known prior art elements (CPUs, memory, transmitters and receivers, and charging

devices) that can be combined through the use of ordinary skill to yield predictable results. Any additional differences between what the art shows and what the claims cover may be bridged by the knowledge of one of ordinary skill in the art.

Tsumura and Roskowski were not cited during the original prosecution and Tsumura was alone cited in the pending re-examination. Requester provides information raising a SNQ with respect to the new claims 24 and 26. MPEP § 2242. A reasonable Examiner would consider Tsumura and Roskowski important because the same question of patentability has not previously been decided.

#### 2. <u>Claims 24 and 26 are unpatentable under 35 U.S.C. § 103 based on</u> <u>Tsumura in view of Roskowski</u>

Newly added claim 24 is recited in Section VI.D.2(d). Tsumura renders claim 23 unpatentable. *See* Section VI.D.2(d). Roskowski discloses an on-line service that "can serve as a matchmaker for the user by finding other users with video game enhancers who are playing the same game." **Exhibit G**, *Roskowski* at 6:11-13. Roskowski states:

The on-line service provides the enhancer 4 operating system with the telephone number of another user <u>playing the same game</u> (or provide the telephone number of telephone outlet 10 to another user). Then, the operating system directs the modem 24 to hang up from the on-line service and dial the other user (or await a call from the said other user) and <u>establish a direct telephone modem</u> <u>connection between the enhancer 4 and the other user's enhancer</u> <u>4. A two- (or more than two-) player video game can then be</u> <u>played between the users</u>.

*Id.* at 6:19-29 (emphasis added). In this way, video game enhancer 4 can connect directly to another video game enhancer 4 so that multiple players can participate in the same game. Roskowski also describes each video game enhancer as including a modem with "real-time requirements [...] of playing video games over a telephone line." *Id.* at 9:51-53. *See also id.* at 9:47-53. The combination of Tsumura and Roskowski describes a system that facilitates

interactive communication between two devices with real-time communication incident to the data processing. Newly added claim 26 includes identical limitations to claim 24. Claims 24 and 26 are unpatentable under 35 U.S.C. § 103 based on Tsumura in view of Roskowski.

#### VII. CONCLUSION

For at least the reasons given above, Requestor respectfully submits that substantial new questions of patentability exist regarding original claims 3, 10, and 17, amended claims 1 and 15, and new claims 22-38 of the '520 Patent. Requestor requests that this Request be granted and that claims 1, 3, 10, 15, 17, and 22-38 be finally rejected.

Dated: July 16, 2010

Respectfully submitted,

SHOOK, HARDY & BACON LLP

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#### **CERTIFICATE OF SERVICE**

I hereby certify, pursuant to 37 C.F.R. §§ 1.33(c) and 1.510(b)(5), that on the date indicated below, I caused a true and correct copy of the foregoing REQUEST FOR EX PARTE RE-EXAMINATION UNDER 35 U.S.C. §§ 302-307 AND 37 C.F.R. § 1.510, including exhibits, to be served via First Class U.S. Mail upon the following attorney of record at the PTO:

ADC Technology, Inc. c/o Kinney & Lange P.A. The Kinney and Lange Building 312 South Third Street Minneapolis MN 55415-1002

And on counsel for ADC in the Litigation:

ADC Technology, Inc. c/o Whitaker Law Group 1420 Fifth Avenue, Suite 2200 Seattle, WA 98101

Date: July 16, 2010

/Eric A. Buresh/\_\_

Eric A. Buresh

Electronic Patent Application Fee Transmittal							
Application Number:							
Filing Date:							
Title of Invention:		eractive Communic raoke Software	ation System Fo	or Communicating	Video Game and		
First Named Inventor/Applicant Name:	First Named Inventor/Applicant Name:     Takeya Okamoto						
Filer:	Ro	bert H. Reckers/Tam	nmy Dunkin				
Attorney Docket Number:	SCI	EA.146736					
Filed as Large Entity							
ex parte reexam Filing Fees							
Description		Fee Code	Quantity	Amount	Sub-Total in USD(\$)		
Basic Filing:							
Request for ex parte reexamination		1812	1	2520	2520		
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(\$)
Miscellaneous:				
	Tot	al in USD	(\$)	2520

Electronic Ac	Electronic Acknowledgement Receipt								
EFS ID:	8026418								
Application Number:	90011098								
International Application Number:									
Confirmation Number:	4621								
Title of Invention:	Interactive Communication System For Communicating Video Game and Karaoke Software								
First Named Inventor/Applicant Name:	Takeya Okamoto								
Customer Number:	05251								
Filer:	Robert H. Reckers/Tammy Dunkin								
Filer Authorized By:	Robert H. Reckers								
Attorney Docket Number:	SCEA.146736								
Receipt Date:	16-JUL-2010								
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Time Stamp:	12:03:16								
Application Type:	Reexam (Third Party)								

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RAM confirma	tion Number	8499							
Payment was	successfully received in RAM	\$2520							
Payment Type		Credit Card							
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Bib Data Sheet

#### **CONFIRMATION NO. 4621**

| <b>SERIAL NUMB</b><br>90/011,098                                                                                                                                                                                                              | ER    | FILING OR 371(c)<br>DATE<br>07/16/2010<br>RULE | C         | <b>CLASS</b><br>434 | GRO   | GROUP ART UNIT<br>3993 |          | D | ATTORNEY<br>OCKET NO.<br>CEA.146736 |  |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|------------------------------------------------|-----------|---------------------|-------|------------------------|----------|---|-------------------------------------|--|--|
| APPLICANTS<br>6193520, Residence Not Provided;<br>ADC TECHNOLOGY INC., AICHI, JAPAN;<br>ERIC A. BURESH (3RD PTY REQ.), KANSAS CITY, MO;<br>SHOOK, HARDY & BACON LLP, KANSAS CITY, MO<br>** CONTINUING DATA ********************************** |       |                                                |           |                     |       |                        |          |   |                                     |  |  |
| Foreign Priority claimed yes no<br>35 USC 119 (a-d) conditions yes no Met after<br>met Allowance Initials STATE OR<br>CUNTRY Stream COUNTRY COUNTRY COUNTRY CLAIMS<br>CLAIMS<br>CLAIMS<br>21<br>3<br>ADDRESS                                  |       |                                                |           |                     |       |                        |          |   |                                     |  |  |
| 164<br>TITLE                                                                                                                                                                                                                                  |       | <u>.</u>                                       |           |                     |       |                        |          |   |                                     |  |  |
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| Application Number | Application/Control No. | Applicant(s)/Patent under<br>Reexamination |
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|                    | 90/011,098              | 6193520                                    |
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| Reexamination | Application/Control No.<br>90/011,098 | Applicant(s)/Patent Under<br>Reexamination<br>6193520 |  |
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| Requester                 | Correspondence Address:                                              | Patent Owner | ⊠ Third Party |
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