

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TCL CORPORATION; TCL COMMUNICATION TECHNOLOGY
HOLDINGS, LTD.; TCT MOBILE LIMITED; TCT MOBILE INC.; AND
TCT MOBILE (US) INC.,

Petitioners,

v.

TELEFONAKTIEBOLAGET LM ERICSSON,

Patent Owner.

Case IPR2015-01674

U.S. Patent No. RE43,931

**PATENT OWNER'S SUBMISSION OF
DEMONSTRATIVE EXHIBITS FOR ORAL ARGUMENT**

Patent Owner's Submission of
Demonstrative Exhibits for Oral Argument
Case IPR2015-01674
U.S. Patent No. RE43,931

In accordance with 37 C.F.R. § 42.70(b) and with the Board's Trial Order dated December 6, 2016 (Paper 31), filed herewith are Patent Owner's demonstrative exhibits to be relied upon in the Oral Hearing for IPR2015-01674 scheduled on December 15, 2016. The demonstrative exhibits have been served to Petitioners' counsel on December 9, 2016.

Respectfully submitted,
Oblon, McClelland, Maier &
Neustadt, LLP

Dated: December 13, 2016

/W. Todd Baker/
W. Todd Baker
Reg. No. 45,265

Customer Number
22850
Tel. (703) 413-3000
Fax. (703) 413-2220

**TCL CORP. et al.,
v.
TELEFONAKTIEBOLAGET LM ERICSSON**

**IPR2015-01674, -01676, -01761, -01806
U.S. Patent RE43,931**

Trial Hearing

**Patent Owner Ericsson's Demonstrative
Exhibits DX-1-27 for December 15, 2016 Oral Argument**

The '931 Patent: Claim 1

1. A radiotelephone, comprising:
 - a housing having a front surface, a rear surface and first and second side surfaces adjoining respective opposite edges of the front surface and extending from the respective opposite edges of the front surface to respective opposite edges of the rear surface, the housing configured to be held in a user's hand such that the rear surface confronts the user's palm;...

Ex. 1001 at 10:25-32

The '931 Patent: Claim 1

....a contact-sensitive transducer, supported by the housing and having a contact-sensitive surface disposed at said front surface, which produces an output signal in response to moving contact of an object along the contact-sensitive surface of the contact-sensitive transducer....

The '931 Patent: Claim 1

....a controller, responsive to the output signal and operatively associated with the display and the radiotelephone communications transceiver, which controls at least one of the display and the radiotelephone communications transceiver according to and which scrolls displayed rows along an axis of the display based upon the output signal of the contact-sensitive transducer...

Ex. 1001 at 10:44-50

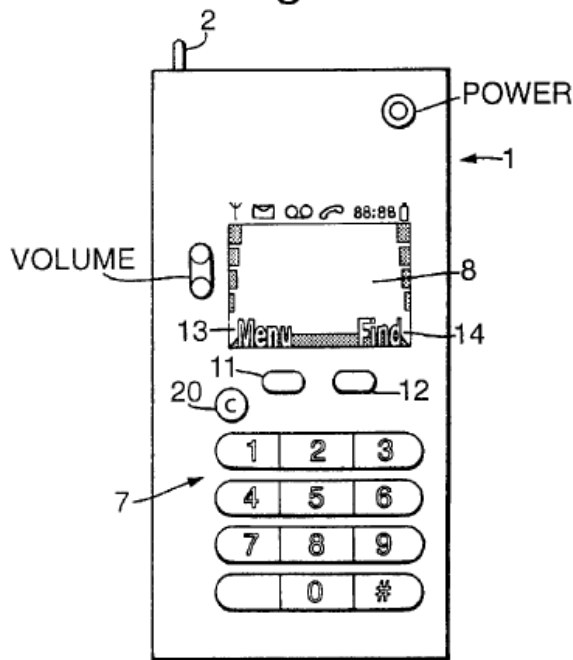
The '931 Patent: Claim 1

...the controller having a first mode wherein the controller is responsive to contact with the contact-sensitive transducer and a second mode wherein the controller is unresponsive to contact with the contact-sensitive transducer, the second mode being entered in response to an input from a user

Ex. 1001 at 10:50-55

Palatsi Scroll Buttons

Fig.2.



Ex. 1087 at Fig. 2

- “Typically, three keys are provided to allow the user to operate the menu system. One key causes the next menu item to be displayed, another key causes the preceding menu item to be displayed, and the third key is used to select the currently-displayed item. This is a form of "scroll-and-select" menu system.” Ex. 1087 at 1:15-21
- “The keypad 7 has at least two "soft" keys 11, 12.” Ex. 1087 at 2:26
- “When a scroll-and-select menu is in operation the user can scroll through the menu items and then select the desired one. In a conventional telephone this would be done using the dedicated arrow keys and a "select" key. However, the telephone shown in the figures has none of these keys.” Ex. 1087 at 2:40-45

Moore Touch Strips

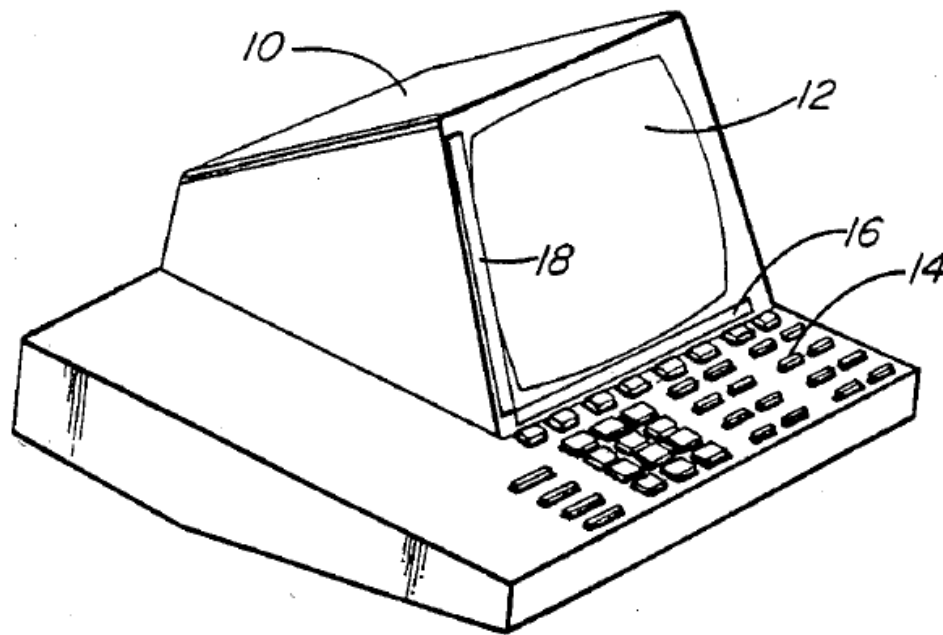


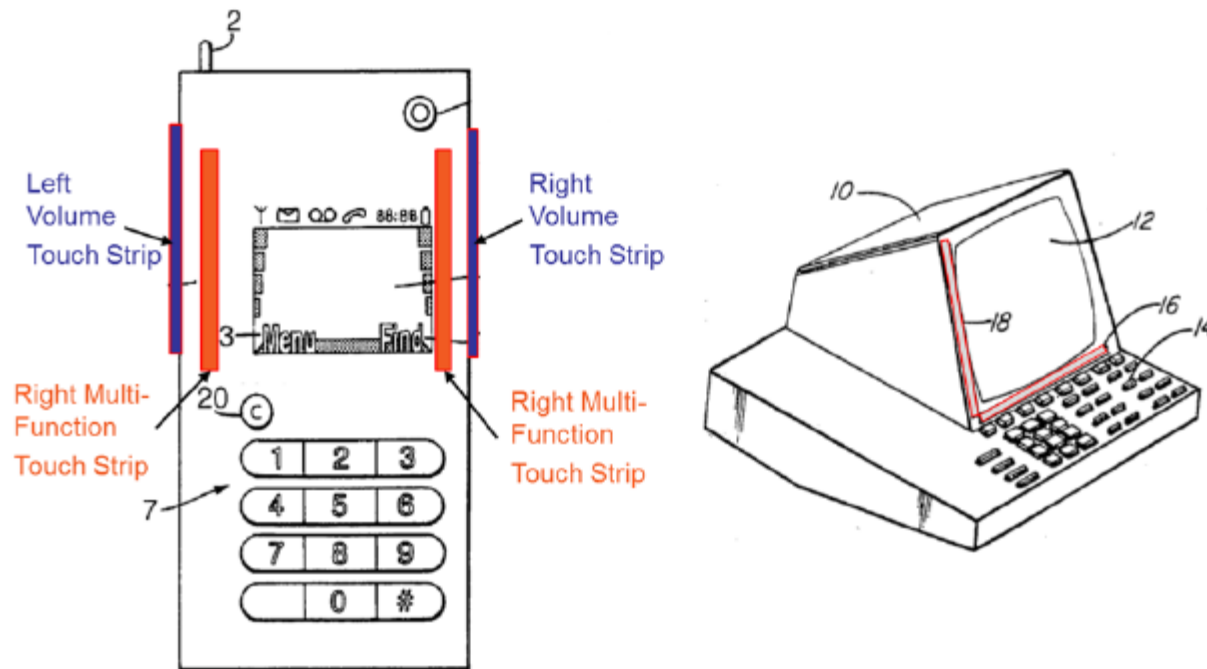
FIG. 1

Ex. 1012 at Fig. 1

“contact sensitive transducer”

“Accordingly, each touch strip of the proposed modification to Palatsi by Moore is a contact-sensitive transducer that responds to moving contact along its surface and produces an output as “a voltage output which is representative of the distance along it at which it is touched.”

Alleged Combination in '1674 IPR



(Demonstrative Fig. 2 (Palatsi modified by Moore).)

“second mode”

“Second, the proposed modification to Palatsi by Moore discloses “a second mode wherein the controller is unresponsive to contact with the contact-sensitive transducer.” (*Id.* ¶ 185.) Specifically, Moore describes that “a bank of [] touch strips can be mounted along each edge” and “keys associated with the functional keyboard [enable] switching between different ones of the banks of touch strips.” (*Id.*; Ex. 1012,. at 4:33-36.)”

‘1674 Petition at 38

“second mode”

Claim 2 Recitation	Citation to Moore in ‘1674 Petition
“...a second mode wherein the controller is unresponsive to contact with the contact-sensitive transducer, the second mode being entered in response to an input from a user.”	Although the invention has been described in terms of two touch strips along respective adjacent edges of a display terminal screen, it will be appreciated that touch strips may extend along all the edges of the screen. Moreover, if desired, a bank of such touch strips can be mounted along each edge. In this latter case keys associated with the functional keyboard must permit switching between different ones of the banks of strips.

Ex. 1001 at 10:52-55; and Ex.
1012 at 4:33-36.

Alleged Motivation to Combine in '1674 IPR

“However, by virtue of the ability to hold the portable telephone in a user’s hand with a thumb extending around one side and the thumb extending around the other, as described above with respect to Claim 1a, a configuration with touch strips flanking either side of the display would create a risk of the user accidentally activating an unintended touch strip on the opposite side of the display. Id., ¶¶ 154-157, 185.) A POSITA would have appreciated that switching a non-used bank of touch strips off, such that the non-used bank of touch strips and the controller would be unresponsive to contact with the non-used bank of touch strips, would intuitively solve this problem. (Id., ¶ 185.) Notably, Moore teaches this exact functionality.” [Emphasis added]

'1674 Petition at 38-39

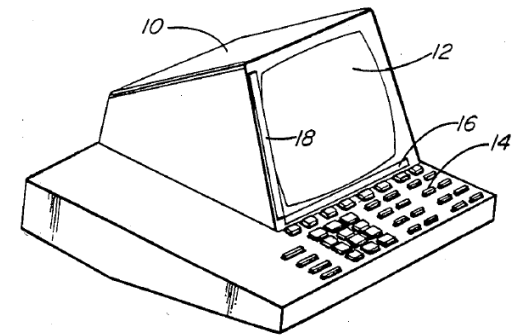


FIG. 1

Ex. 1012 at Fig. 1

Alleged Motivation to Combine in ‘1674 IPR

“Specifically, Moore discloses “switching between ones of the banks of touch strips” to disable one bank of touch strips, such that the controller is unresponsive to contact with the one bank of touch strips, while enabling another bank of touch strips, such that the controller is responsive to contact with the other bank of touch strips. (Id., ¶ 185; Ex. 1012, 4:33-36.).” [Emphasis added]

‘1674 Petition at 39

Deposition of Dr. Andrew Wolfe

Where does Moore use the term "and disable," that it's disabling a bank of touch strips?

A I don't think he does use the term. He teaches the concept.

Ex. 2003 at 99:9-12

Q And yes or no. Does Moore use the word "unresponsive" -- or the phrase "unresponsive to contact"?

A No. As I said, he teaches the concept, but he doesn't use those words.

Ex. 2003 at 101:5-9

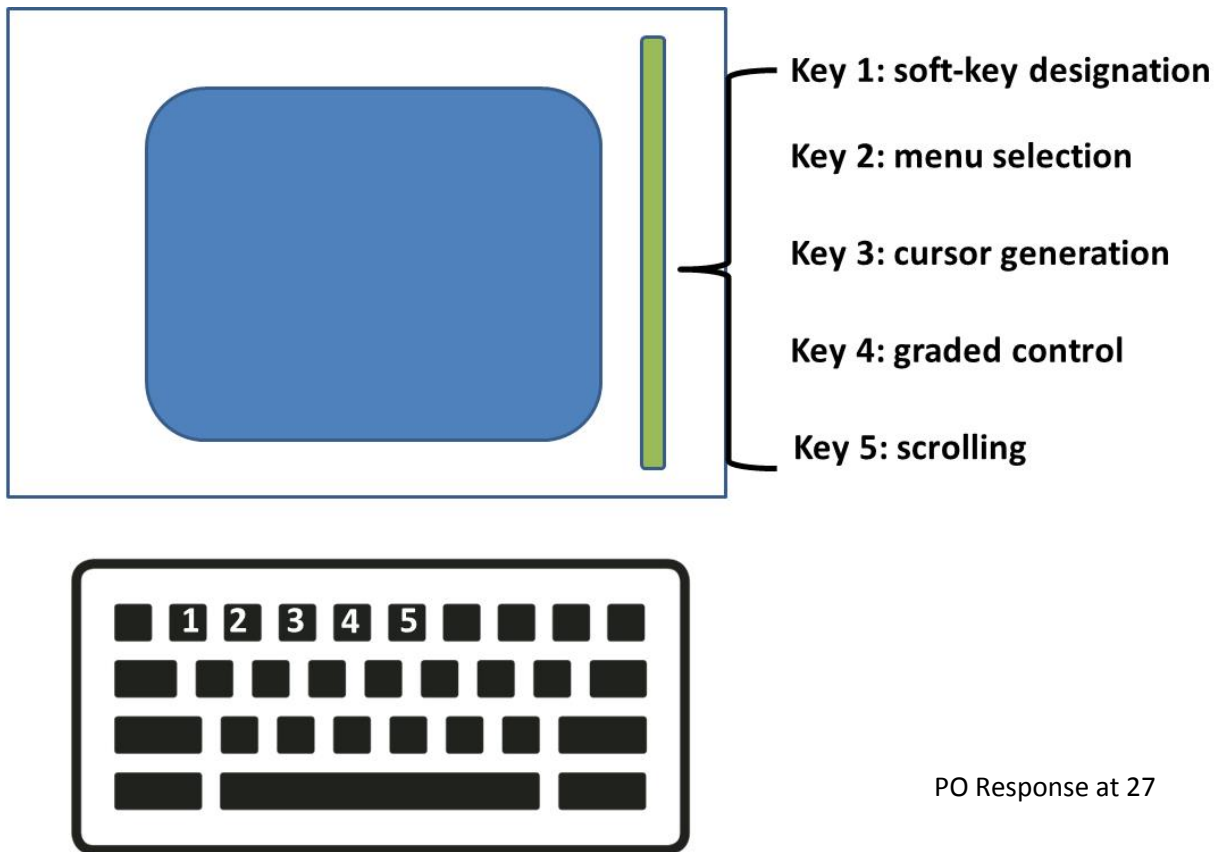
Deposition of Dr. Andrew Wolfe

Q Could switching have another meaning?

A I guess, hypothetically. But that's not the way I would understand it in the context of the way it's taught in this patent.

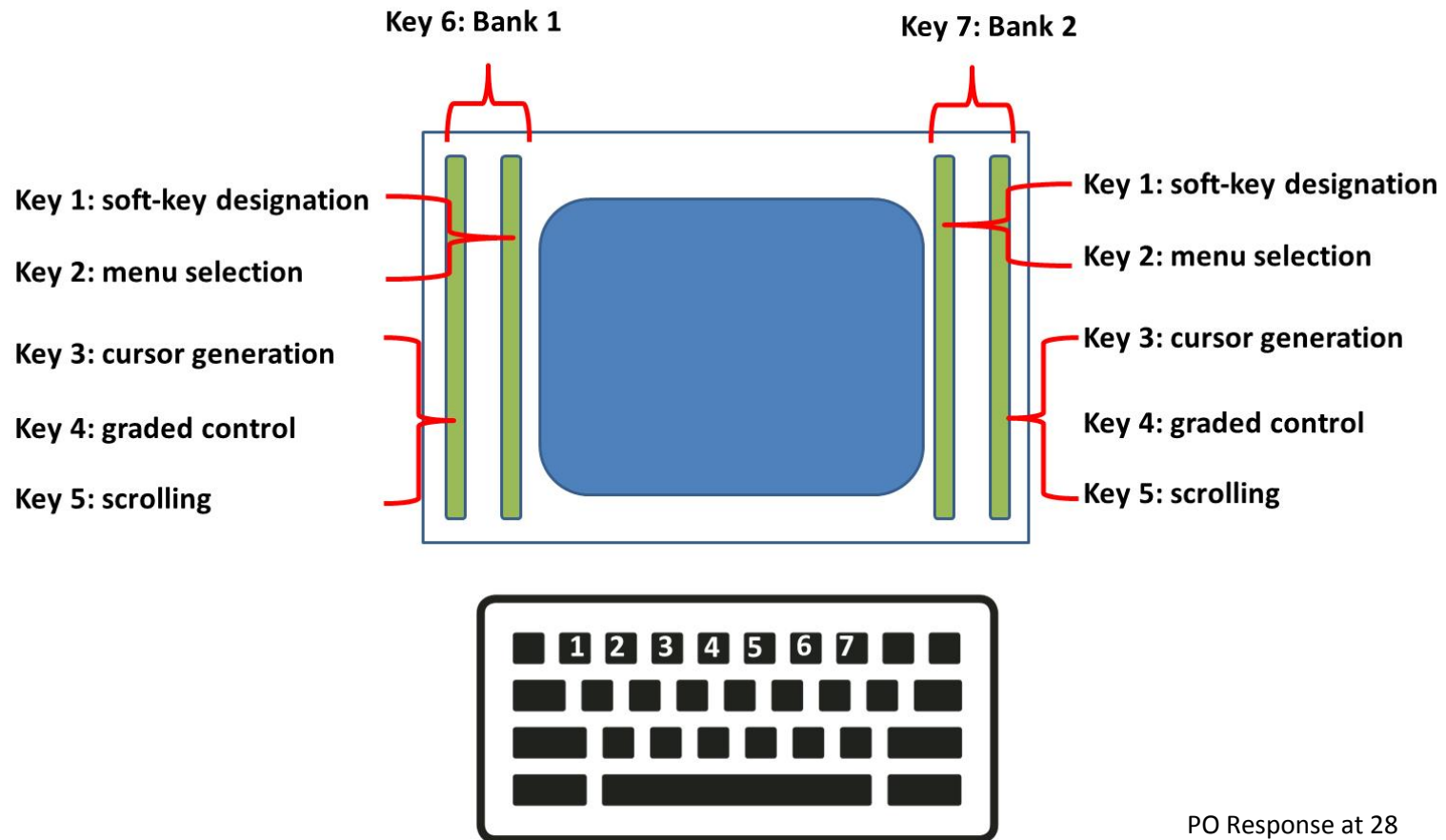
Ex. 2003 at 100:2-5

Moore Functions Explanation



PO Response at 27

Moore “banks” of Touch Strips



PO Response at 28

Moore filter/buffer circuit

An output voltage representing a position touched on the touch strip is monitored as the difference between potentials V_c and V_b . The monitored potential difference is received at the filter/buffer circuit which monitors when a contact has been initially made at the touch strip, ascertains whether that contact is truly a deliberate actuation of the touch strip, and generates a voltage representing the position touched on the strip. The time constant of the filter circuit is appropriately set so as to register most strip actuations which are deliberate and so as not to register most of the touch strip contacts which are unintended.

Ex. 1012 at 2:57-68

Claims 2-3 of Moore

2. A terminal as claimed in claim 1 wherein in response to a selectable output from the selector, the control program defines both a plurality of individually energizable discrete lengths within the touch strip, and a corresponding plurality of regions of the display screen.

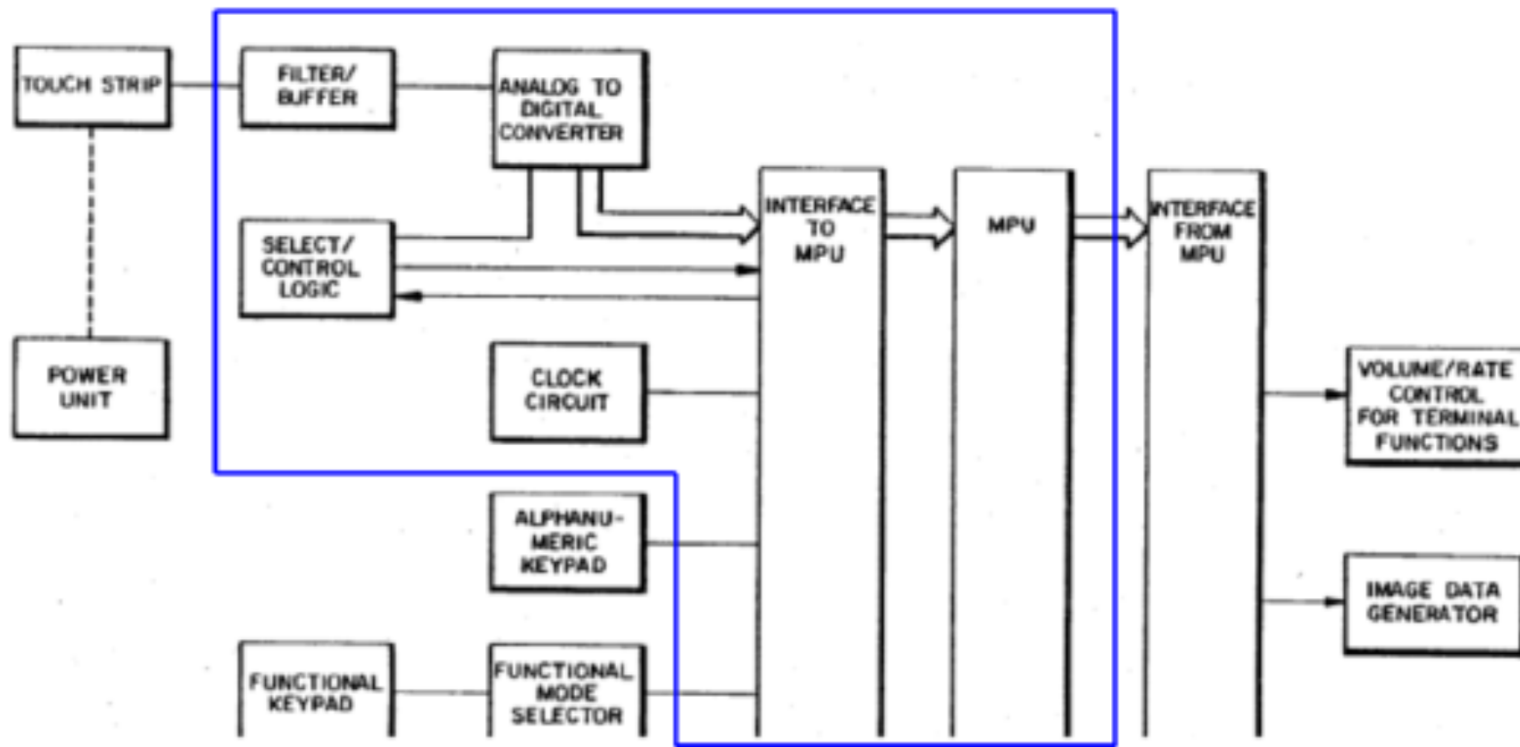
3. A terminal as claimed in claim 2 wherein the control program functions to preclude input data originating when the touch strip is touched other than at positions within said discrete lengths.

Moore “spacer section”

Optionally, the user can establish a neutral or spacer section between adjacent assigned key intervals within the touch strip before going on to program the second and subsequent selections along the touch strip. Once programmed, the terminal operator uses the terminal as if the touch strip were divided into a number of separate keys functioning essentially as an extension of the fixed keyboard.

Ex. 1012 at 3:37-44

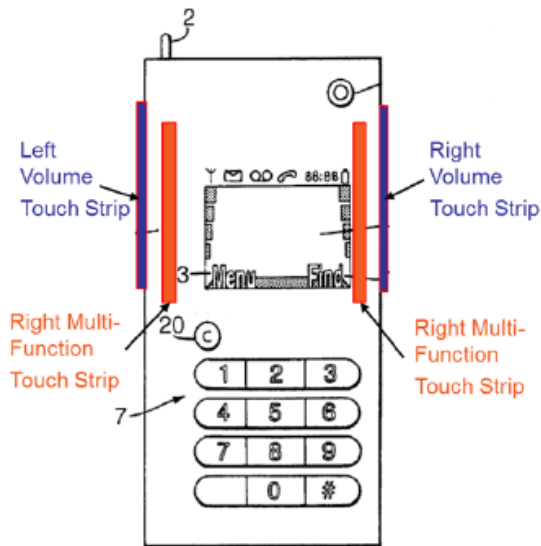
Moore's Hardware Description



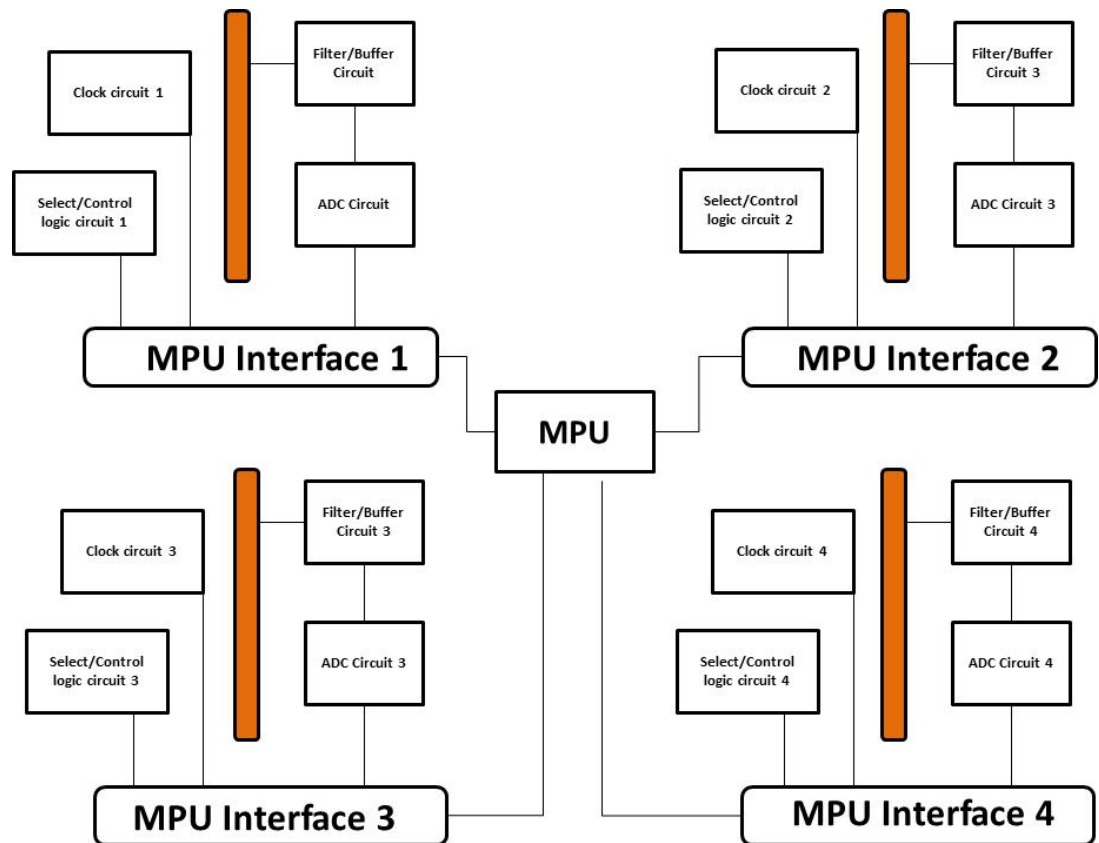
(Annotated Fig. 3 (Moore).)

'1674 Petition at 39

Four Touch Strip Explanation



'1674 Petition at 20



PO Response at 38

From Palatsi

“There is a need for portable telephones (especially hand-portable telephones) to be smaller, to make them more convenient to carry, and as they become smaller it is necessary to reduce the size of their keypads. However, this has the risk of making the telephones less easy to use; either because the keys are too small or, if fewer keys are used, because a more basic but less user-friendly control system has had to be adopted.”

Ex, 1087 at 1:22-28

Ex. 1213

8XC552 OVERVIEW

The 8XC552 is a stand-alone high-performance microcontroller designed for use in real-time applications such as instrumentation, industrial control, and automotive control applications such as engine management and transmission control. The device provides, in addition to the 80C51 standard functions, a number of dedicated hardware functions for these applications.

Ex. 1213 at p. 2

Moore

“As shown schematically in FIG. 3 the touch strip has a power supply to establish the voltage gradient along the resistive substrate. The output of the touch strip is taken to the input of a filter/buffer unit and the output of the filter/buffer unit is taken to one input of an analog-to-digital converter.”

Ex. 1012 at 2:38-43

“An output voltage representing a position touched on the touch strip is monitored as the difference between potentials V_c and V_b . The monitored potential difference is received at the filter/buffer circuit which monitors when a contact has been initially made at the touch strip, ascertains whether that contact is truly a deliberate actuation of the touch strip, and generates a voltage representing the position touched on the strip.”

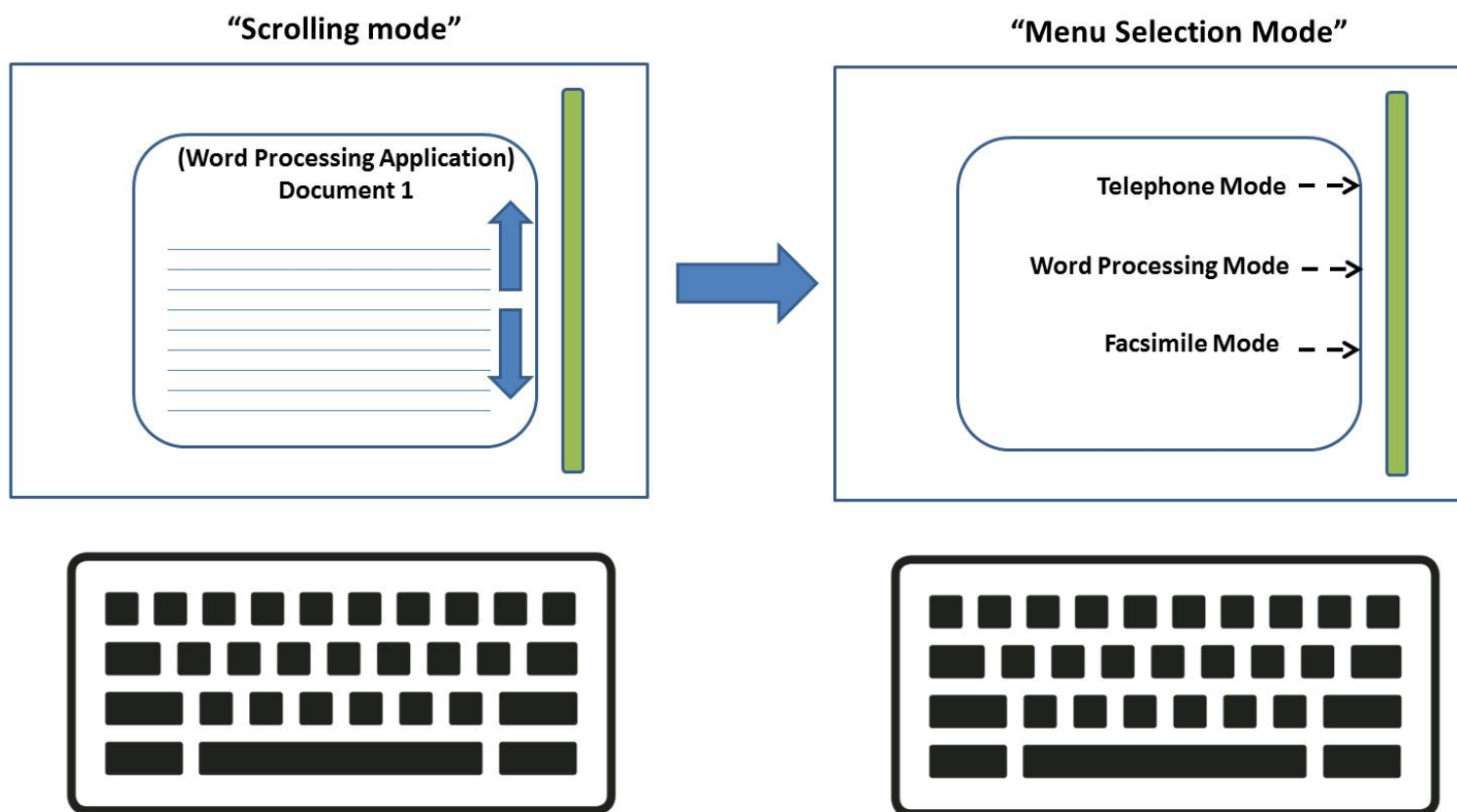
Ex. 1012 at 2:57-64

Claim 11

“...wherein the controller is operative, responsive to the contact-sensitive transducer to detect a momentary contact with the contact-sensitive transducer and to initiate the action associated with the identified graphical object responsive to detection of the momentary contact.”

Ex. 1001 at 11:33-38

Explanation of Moore



PO Response at 48

CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. § 42.6(e), the undersigned certifies service of
PATENT OWNER'S SUBMISSION OF DEMONSTRATIVE EXHIBITS FOR
ORAL ARGUMENT on the counsel of record for the Petitioners by filing this
document through the PTAB E2E System as well as delivering a copy via
electronic mail to the following addresses:

TCL-Ericsson-IPRs@morganlewis.com
LegalTm-TCL-IPRs@sheppardmullin.com

Dated: December 13, 2016

/W. Todd Baker/
W. Todd Baker
Reg. No. 45,265