UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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GOOGLE LLC,
Petitioner,

v.

BLACKBERRY LTD.,
Patent Owner.

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Case IPR2017-00912
Patent 8,745,149 B2

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PETITIONER'S DEMONSTRATIVE EXHIBITS

Inter Partes **Reviews of**

U.S. Patent No. 8,745,149

IPR2017-00911
IPR2017-00912

Oral Hearing: May 30, 2018

- Claims 1-5, 9-13, and 17 as obvious over *Appelman* and *Toshio*;

- Claims 1, 5-7, 9, 13-15, and 17 as obvious over *Appelman* and *Milton*;

- Claims 8 and 16 as obvious over *Appelman*, *Toshio*, and *MacPhail*; and

- Claims 8 and 16 as obvious over *Appelman*, *Milton*, and *MacPhail*.

IPR2017-00912 – Instituted Grounds

- Claims 1, 5, 7, 9, 13, 15, and 17 as obvious over *Graham*;
- Claims 1, 5-7, 9, 13-15, and 17 as obvious over *Graham* and *Milton*;
- Claims 1-5, 9-13, and 17 as obvious over *Graham* and *Toshio*;
- Claims 8 and 16 as obvious over *Graham* and *MacPhail*;
- Claims 8 and 16 as obvious over *Graham*, *Milton*, and *MacPhail*;
- Claims 8 and 16 as obvious over *Graham*, *Toshio*, and *MacPhail*;
- Claims 1, 5, 7, 9, 13, 15, and 17 as obvious over *Graham* and *Deshpande*;
- Claims 1, 5-7, 9, 13-15, and 17 as obvious over *Graham*, *Milton*, and *Deshpande*;
- Claims 1-5, 9-13, and 17 as obvious over *Graham*, *Toshio*, and *Deshpande*;
- Claims 8 and 16 as obvious over *Graham*, *MacPhail*, and *Deshpande*;
- Claims 8 and 16 as obvious over *Graham*, *Milton*, *MacPhail*, and *Deshpande*; and
- Claims 8 and 16 as obvious over *Graham*, *Toshio*, *MacPhail*, and *Deshpande*.

Representative Independent Claim

1. A method of displaying an instant messaging conversation on a display of an electronic device, the method comprising:

displaying a conversation of instant messages;

displaying a first time information for an instant message in the conversation in response to a first input; and

automatically changing the first time information for the instant message to a second time information as time progresses and displaying the second time information instead of the first time information.

Claim Construction

➢ Whether "automatically" should be interpreted to preclude the manual initiation of prior operations?

➢ Whether "automatically" modifies the "displaying" limitation?

➢ Whether "first input" should be interpreted to mean "any event detected by the electronic device?"

Claim Construction

➢ Whether "automatically" should be interpreted to preclude the manual initiation of prior operations?

➢ Whether "automatically" modifies the "displaying" limitation?

➢ Whether "first input" should be interpreted to mean "any event detected by the electronic device?"

Claim Construction – "Automatically"

Petitioner's Construction	PO's Construction	Board's Preliminary Construction
"by itself with little or no direct human control"	"not manually initiated"	"not manually initiated," but clarified that "the term 'automatically' only applies to the specific operations of changing and then displaying the time information, and that other prior operations can be manually initiated"
IPR2017-00911, Reply (Paper 20) at 2-9 IPR2017-00912, Reply (Paper 20) at 2-8	IPR2017-00911, Resp. (Paper 17) at 12-16 IPR2017-00912, Resp. (Paper 17) at 10-14	IPR2017-00911, Dec. (Paper 7) at 5-8 IPR2017-00911, Dec. (Paper 7) at 5-8

- The term "automatically" does not preclude the manual initiation of prior operations. Such a preclusion would be:
  - Inconsistent with the specification;
  - Inconsistent with the prosecution history; and
  - Inconsistent with the plain and ordinary meaning.

- The BRI of "automatically" is "by itself with little or no direct human control."

Claim Construction – "Automatically"

- The term "automatically" appears once in the specification of the '149 patent.

> For instance, if the first time stamp **84** of FIG. **4** was output as indicated above, and ==if the conversation was not resumed until the following day==, the first time stamp **84** potentially could be configured to ==automatically== change from being displayed as "2:44 pm" on the day of communication of the non-responded-to message **80** to being displayed as, for instance, "2:44 pm Thursday" or, for instance, "2:44 PM Sep. 17, 2004" or, for instance, "2:44 pm yesterday" on the following day, although other configurations will be apparent and will be within the concept of the invention.

'149 Patent (Ex. 1001) at 7:40-50

Claim Construction – "Automatically"

- Dr. Ligler confirmed that a conversation is resumed manually by a user.

> By way of further example, and as is depicted generally in FIG. 5, another message 68 may subsequently be communicated between the devices 4 and 104. Since the message 68 corresponds with a resumption of communication between the devices 4 and 104 after a period of interruption, the message 68 is determined to be a resumption message 88, and a second time stamp 92 is output adjacent the resumption message 88.

'149 Patent (Ex. 1001) at 5:62-6:2

```
14          Q.    So the timestamp 92 is output in
15     response to a user sending another message to
16     resume the conversation?
17          A.    It's output as a result of a
18     resumption of communication.  And yes, a user
19     would have had to resume communication, yes,
20     sir.
```

Ligler Dep. Tr. (Ex. 1018) at 85:14-20

IPR2017-00911, Reply (Paper 20) at 3
IPR2017-00912, Reply (Paper 20) at 2-3

Claim Construction – "Automatically"

- The term "manually" appears once in the specification of the '149 patent.

If such a time stamp is desired, the user may activate a user interface 96, such as the exemplary user interface 96 of FIG. 6a, which can manually cause the output of an inserted time stamp 98 adjacent the message 68, as in FIG. 6b.
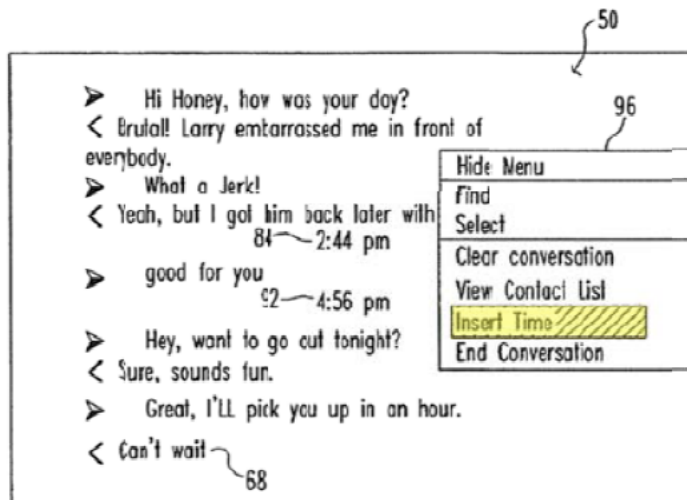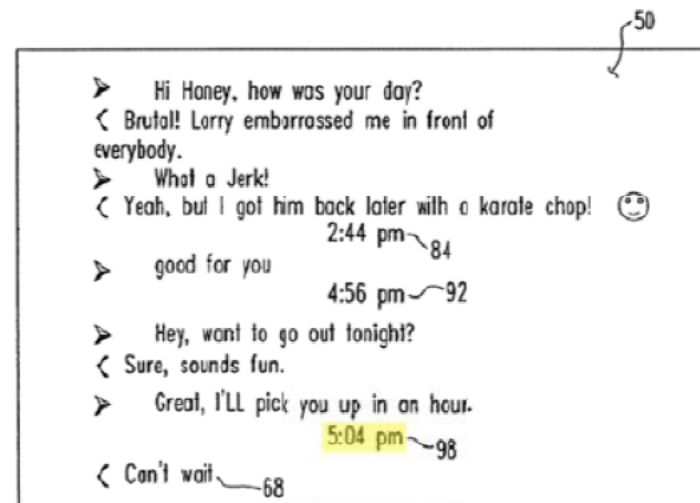
'149 Patent (Ex. 1001) at 6:19-23

FIG.6a

FIG.6b

IPR2017-00911, Reply (Paper 20) at 3-4
IPR2017-00912, Reply (Paper 20) at 3

Claim Construction – "Automatically"

- Dr. Ligler confirmed that the timestamp is inserted manually by a user selecting the "Insert Time" option.

2	Q. In your opinion, is this timestamp
3	inserted manually?
4	A. Yes.
5	Q. And why is that?
6	A. Because it's from a user action of
7	selecting insert time.
8	Q. So because the user is directly
9	selecting the insert time feature, causing the
10	timestamp labeled 98 to appear in figure 6B; is
11	that right?
12	MR. DILLON: Objection to form.
13	A. That's what's happening.

Ligler Dep. Tr. (Ex. 1018) at 84:2-13

IPR2017-00911, Reply (Paper 20) at 4
IPR2017-00912, Reply (Paper 20) at 3

Claim Construction – "Automatically"

- During prosecution, the applicant argued that *Lapuyade* does not disclose "automatically changing" because a user selects a button for the purpose of changing the displayed time.

> Lapuyade teaches a time zone management system for a date book like application. Although Lapuyade shows a prompt allowing the user to select an option to change to a new time zone, it is unclear to Applicant how such a feature would suggest automatically changing time information in an instant messaging conversation.

'149 File History (Ex. 1004) at 238

Claim Construction – "Automatically"

When it is detected that a time zone may have changed, the system tries to determine the new local time zone and display it as a part of the alert. In this illustrative example, the window **712** indicates that the new time zone may be Eastern U.S. as indicated by box **718**. The user is offered the opportunity to accept the new time zone as the display time zone. The user can then either accept the offer by selecting button **724** or reject it by selecting button **730**.

Lapuyade (Ex. 2002) at 6:30-38

FIG. 7   700
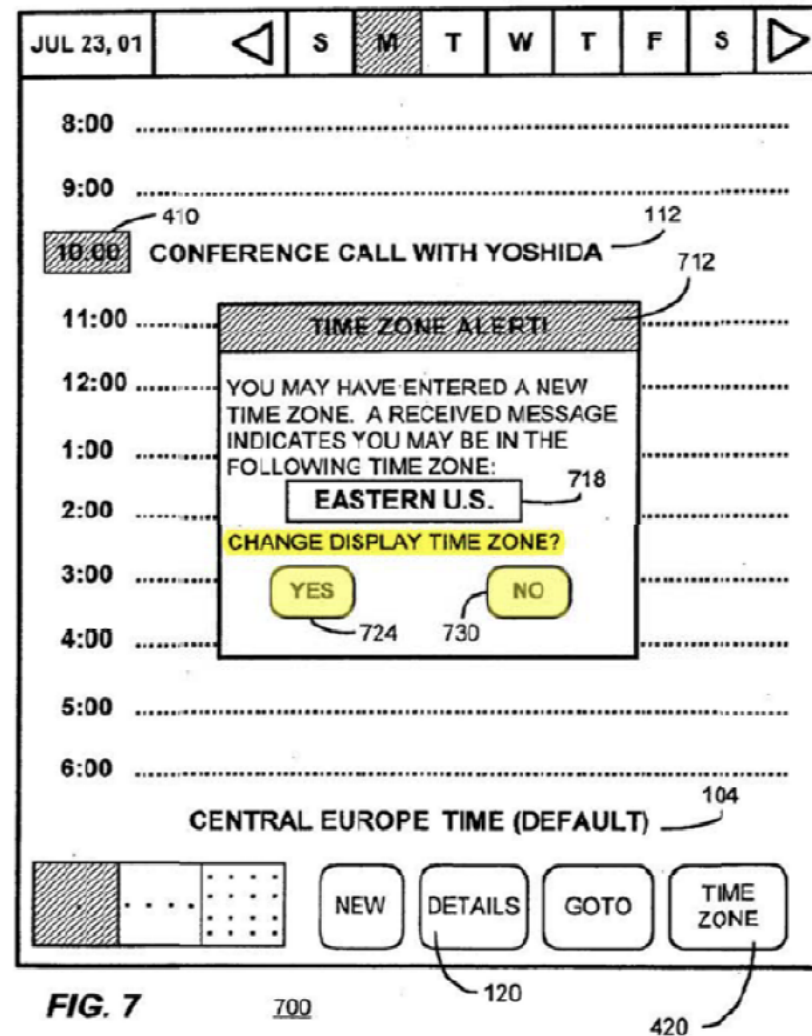
Claim Construction – "Automatically"

- Petitioner's interpretation is consistent with prior art cited by the applicant that describes operations that are "automatically" performed in response to prior manual operations.

> When a transportable application is accessed by a recipient, data for its dynamic content regions is automatically retrieved.

> To begin interacting with the transportable application, the user opens the message. In response, the contents of the transportable application are automatically dynamically updated from a server, such as application server 202 of FIG. 2A.

Axe (Ex. 1019) at 30, 7

> through a hyperlink from the operator's Web page **401**. The hyperlink leads the subscriber to the front end of the PLIM system Privacy Management System **402**, where she provides basic identity information, including her name and mobile phone number **403**. After providing this information, the subscriber is automatically directed to a Web screen informing her that an electronically generated password is being sent to her phone as a text message **404**, and that she will not be granted further access to the system until she logs in using the new password. This system, known as Portal User Session Handling (PUSH),

McDowell (Ex. 1020) at ¶[00144]

- Petitioner's interpretation is consistent with contemporaneous dictionary definitions.

> **automatic** /ɔːtəˈmætɪk/ *adj. & n.* ● *adj.* **1** (of a machine, device, etc., or its function) working by itself, without direct human intervention. **2 a** done spontaneously, without conscious thought or intention (*an automatic reaction*). **b** necessary and inevitable (*an automatic penalty*). **3** *Psychol.* performed unconsciously or subconsciously. **4** (of a firearm) that continues firing until the ammunition is exhausted or the pressure on the trigger is released. **5** (of a motor vehicle or its transmission) using gears that change automatically according to speed and acceleration. ● *n.* **1** an automatic device, esp. a gun or transmission. **2** *colloq.* a vehicle with automatic transmission.

Oxford English Reference Dictionary (Ex. 1021) at 3

IPR2017-00911, Reply (Paper 20) at 7
IPR2017-00912, Reply (Paper 20) at 6

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➤ Whether "automatically" should be interpreted to preclude the manual initiation of prior operations?

➤ Whether "automatically" modifies the "displaying" limitation?

➤ Whether "first input" should be interpreted to mean "any event detected by the electronic device?"

Claim Construction – "Automatically . . . Displaying"

Petitioner's Construction	PO's Construction	Board's Preliminary Construction
"automatically" does not modify the "displaying" limitation	"automatically" modifies the "displaying" limitation	"automatically" modifies the "displaying" limitation, but clarified that "the term 'automatically' only applies to the specific operations of changing and then displaying the time information, and that other prior operations can be manually initiated"
IPR2017-00911, Reply (Paper 20) at 9-12 IPR2017-00912, Reply (Paper 20) at 8-11	IPR2017-00911, Resp. (Paper 17) at 16-18 IPR2017-00912, Resp. (Paper 17) at 14-16	IPR2017-00911, Dec. (Paper 7) at 5-8 IPR2017-00911, Dec. (Paper 7) at 5-8

Claim Construction – "Automatically . . . Displaying"

- The term "automatically" appears beside "changing."

> **1.** A method of displaying an instant messaging conversation on a display of an electronic device, the method comprising:
>
>   displaying a conversation of instant messages;
>
>   displaying a first time information for an instant message in the conversation in response to a first input; and
>
>   <mark>automatically changing the first time information for the instant message to a second time information as time progresses</mark> and <mark>displaying the second time information instead of the first time information</mark>.

'149 Patent (Ex. 1001) at Claim 1

Claim Construction – "Automatically . . . Displaying"

- The prosecution history indicates that "automatically" modifies the "changing" limitation but not the "displaying" limitation.

1. (Currently amended) A method of displaying an instant messaging conversation on a display of an electronic device, the method comprising:

displaying a conversation of instant messages;

displaying a first time information for an instant message in the conversation in response to a first input; and

automatically changing the first time information for the instant message to a second time information as time progresses and displaying the second time information instead of the first time information; and

~~displaying the second time information in response to a second input~~.

'149 File History (Ex. 1004) at 233

Claim 1 has been amended to clarify the protection being sought by combining the final two operations and specifying that the "changing" is done automatically.

'149 File History (Ex. 1004) at 236

Applicant respectfully submits that none of the cited references teach or suggest such an automatic changing of time information.

'149 File History (Ex. 1004) at 237

IPR2017-00911, Reply (Paper 20) at 10-11
IPR2017-00912, Reply (Paper 20) at 9-10

Claim Construction – "Automatically . . . Displaying"

Lapuyade teaches a time zone management system for a date book like application. Although Lapuyade shows a prompt allowing the <u>user</u> to <u>select</u> an option to change to a new time zone, it is unclear to Applicant how such a feature would suggest <mark>automatically changing time information</mark> in an instant messaging conversation.

'149 File History (Ex. 1004) at 70

Applicant believes that the Examiner is reading too much into Lapuyade, particularly in suggesting that these teachings would cause a person skilled in the art to modify Appelman, particularly when Appelman does not mention <mark>changing timestamps (let alone automatically as recited in claim 1)</mark>.

Applicant submits that the Examiner has overlooked that Appleman has failed to recognize let alone teach <mark>automatically changing</mark> such a timestamp.

'149 File History (Ex. 1004) at 71

In contrast, <mark>claim 1 recites automatically changing a particular timestamp</mark> in order to intelligently convey when time has elapsed, thus making the timestamp more useful.

Neither Appelman nor Lapuyade have recognized the benefits of <mark>automatically changing a timestamp</mark>, let alone provided sufficient teachings to lead a person skilled in the art to make a modification to Appelman in the way suggested by the Examiner.

'149 File History (Ex. 1004) at 72

IPR2017-00911, Reply (Paper 20) at 10
IPR2017-00912, Reply (Paper 20) at 9

Claim Construction – "Automatically . . . Displaying"

- The specification does not support PO's interpretation.

> For instance, if the first time stamp **84** of FIG. **4** was output as indicated above, and if the conversation was not resumed until the following day, the first time stamp **84** potentially could be configured to ==automatically change== from being displayed as "2:44 pm" on the day of communication of the non-responded-to message **80** to being displayed as, for instance, "2:44 pm Thursday" or, for instance, "2:44 PM Sep. 17, 2004" or, for instance, "2:44 pm yesterday" on the following day, although other configurations will be apparent and will be within the concept of the invention.

'149 Patent (Ex. 1001) at 7:40-50

Claim Construction – "Automatically . . . Displaying"

Further in this regard, the time stamps can be configured to depict relative times, i.e., elapsed times, rather than absolute times. For instance, and as is depicted generally in FIG. 10, a time stamp 478 associated with a message 468 can be output to say, for example, "less than one minute ago", meaning that the message 468 that has been activated by the cursor 474 has been transmitted less than one minute prior to the current time.
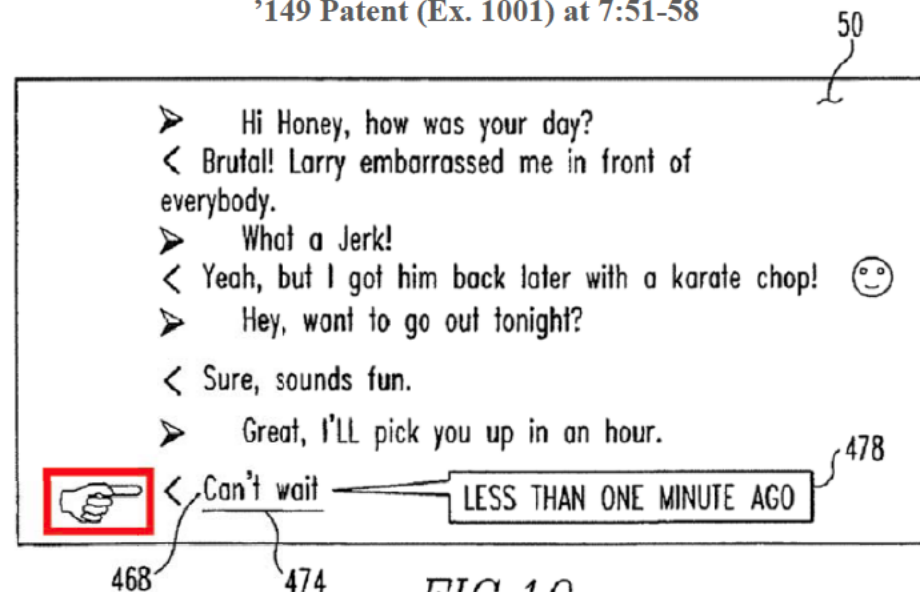
'149 Patent (Ex. 1001) at 7:51-58

FIG.10

IPR2017-00911, Reply (Paper 20) at 11-12
IPR2017-00912, Reply (Paper 20) at 10-11

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➢ Whether "automatically" should be interpreted to preclude the manual initiation of prior operations?

➢ Whether "automatically" modifies the "displaying" limitation?

➢ Whether "first input" should be interpreted to mean "any event detected by the electronic device?"

- Petitioner's proposed BRI of "first input" is "any event detected by the electronic device."

- Neither PO nor the Board construed this term.

- This term does not require express construction to resolve the parties' disputes.

The Challenged Claims Are Obvious

➢ *Graham* renders the challenged claims obvious.

➢ The combinations based on *Toshio* disclose the "automatically changing" and "displaying" limitations under any interpretation.

➢ The combinations based on *Milton* disclose these limitations under Petitioner's and the Board's interpretations.

➢ The "displaying" limitation is also obvious under PO's construction.

➢ A POSA would have combined *Appelman* with *Toshio* or *Milton*.

➢ *Milton* is analogous art.

- ➤ *Graham* renders the challenged claims obvious.

- ➤ The combinations based on *Toshio* disclose the "automatically changing" and "displaying" limitations under any interpretation.

- ➤ The combinations based on *Milton* disclose these limitations under Petitioner's and the Board's interpretations.

- ➤ The "displaying" limitation is also obvious under PO's construction.

- ➤ A POSA would have combined *Appelman* with *Toshio* or *Milton*.

- ➤ *Milton* is analogous art.

The Challenged Claims Are Obvious

➢ *Graham* renders the challenged claims obvious.

 – *Graham* discloses communicating mixed media messages via SMS instant messages.

 – It would have been obvious to communicate mixed media messages via non-SMS instant messaging based on *Deshpande*.

 – *Graham* discloses the "automatically changing" and "displaying" limitations under Petitioner's and the Board's interpretations.

 – *Graham* discloses these limitations under PO's interpretation.

 – PO's statements during foreign prosecution confirm that *Graham* discloses these limitations under PO's interpretation.

1. A method of displaying an instant messaging conversation on a display of an electronic device, the method comprising:

displaying a conversation of instant messages;

displaying a first time information for an instant message in the conversation in response to a first input; and

automatically changing the first time information for the instant message to a second time information as time progresses and displaying the second time information instead of the first time information.

'149 Patent (Ex. 1001) at Claim 1

Graham – "Instant Message[s]"

- Patent Owner argues that *Graham*'s mixed media messaging is limited to email.

Figure 13a

Figure 13b

Figure 13c

Figure 13d

IPR2017-00912, Resp. (Paper 17) at 21-25

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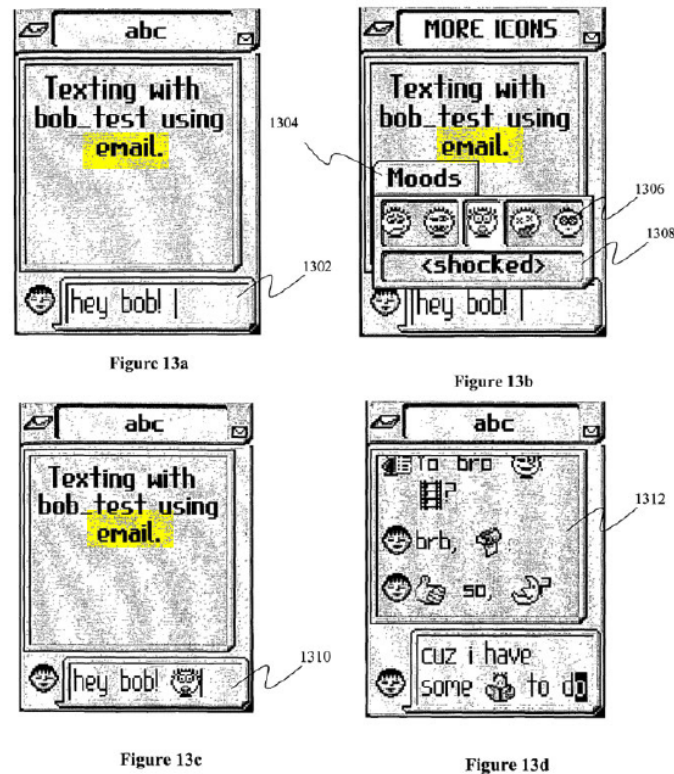
Graham – "Instant Message[s]"

For the purpose of the present application, ==mixed media messages== refer to messages having ==textual and image contents==. However, in two degenerate forms, a mixed media message may nevertheless include ==only textual content== in one case, and include ==only image content== in another. In other embodiments, a non-degenerated mixed media message may also include ==audio, video and other media contents==.

Graham (Ex. 1005) at 14:17-24

Graham – "Instant Message[s]"

- *Graham* does not limit mixed media messaging to email. (*See* Graham (Ex. 1005) at 14:15-15:56.)

- PO does not argue that mixed media messaging cannot be transmitted via SMS.

- *Graham* explains that mobile device 400 can transmit messages via SMS.
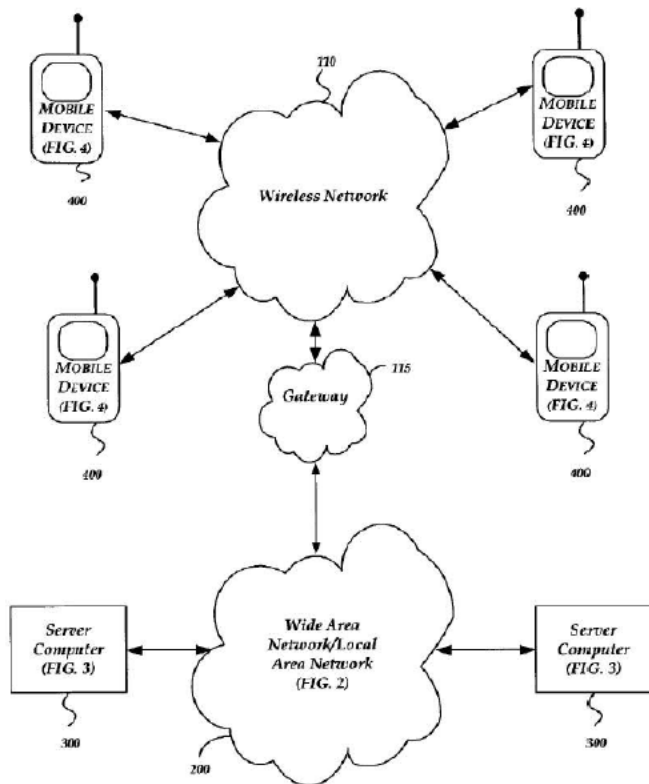
Graham – "Instant Message[s]"

Fig.1

Additionally, Gateway **115** may be used to translate exchanges of other types of messages, e.g., SMS (short message service) messages, between mobile devices **400** that are facilitated by resources (servers) coupled to WAN/LAN **200**.

Graham (Ex. 1005) at 4:43-47

In particular, mobile device **400** may be arranged to send and receive SMS messages that can include data representing an image. Of course, other mes-

Graham (Ex. 1005) at 7:1-6

The Challenged Claims Are Obvious

➢ *Graham* renders the challenged claims obvious.

  – *Graham* discloses communicating mixed media messages via SMS instant messages.

  – It would have been obvious to communicate mixed media messages via non-SMS instant messaging based on *Deshpande*.

  – *Graham* discloses the "automatically changing" and "displaying" limitations under Petitioner's and the Board's interpretations.

  – *Graham* discloses these limitations under PO's interpretation.

  – PO's statements during foreign prosecution confirm that *Graham* discloses these limitations under PO's interpretation.

Combinations with *Deshpande* – "Instant Message[s]"

- If *Graham* does not disclose the "instant message[s]" limitations, these limitations would have been obvious based on *Deshpande*.

> [0004] But, users wanted a faster way to communicate more akin to talking, so now instant messaging services are available that deliver messages faster than email and allow text-based communication to occur in a rapid, conversational fashion.

Graham (Ex. 1005) at ¶[0004]

> Many instant messaging services also include a presence function, which enables the instant messaging system (and also other users) to know when a particular user is online.

Graham (Ex. 1005) at ¶[0006]

> [0008] Users may send and receive instant messages from and to a wide variety of client computing devices

Graham (Ex. 1005) at ¶[0006]

IPR2017-00912, Reply (Paper 20) at 14-15; Pet. (Paper 1) at 60-62

➢ *Graham* renders the challenged claims obvious.

- − *Graham* discloses communicating mixed media messages via SMS instant messages.

- − It would have been obvious to communicate mixed media messages via non-SMS instant messaging based on *Deshpande*.

- − *Graham* discloses the "automatically changing" and "displaying" limitations under Petitioner's and the Board's interpretations.

- − *Graham* discloses these limitations under PO's interpretation.

- − PO's statements during foreign prosecution confirm that *Graham* discloses these limitations under PO's interpretation.

Graham – "Automatically Changing" / "Displaying"

- PO does not dispute that *Graham* discloses:

  - The "automatically changing" and "displaying" limitations <u>under Petitioner's plain and ordinary meaning of these limitations</u>; and

  - The "displaying" limitation <u>under either Petitioner's plain and ordinary meaning of "automatically" or the Board's interpretation where "other prior operations can be manually initiated,"</u> if "automatically" modifies "displaying."

The Challenged Claims Are Obvious

➢ *Graham* renders the challenged claims obvious.

  – *Graham* discloses communicating mixed media messages via SMS instant messages.

  – It would have been obvious to communicate mixed media messages via non-SMS instant messaging based on *Deshpande*.

  – *Graham* discloses the "automatically changing" and "displaying" limitations under Petitioner's and the Board's interpretations.

  – *Graham* discloses these limitations under PO's interpretation.

  – PO's statements during foreign prosecution confirm that *Graham* discloses these limitations under PO's interpretation.

- The <u>only dispute</u> is whether *Graham* discloses the "automatically changing" and "displaying" limitations under PO's interpretation—it does.

- *Graham* discloses "first time information" as (i) an elapsed time, and/or (ii) a color that indicates age.

- *Graham* discloses "automatically changing" the "first time information" and automatically "displaying" "second time information" instead of the first time information.

Graham – "Automatically Changing" / "Displaying"

Elapsed Time

Timer **510** indicates an amount of elapsed time when an image was last sent by the user to other users. In an alternate embodiment, timer **510** may simply denote the time an image was last sent by the user to other users.

Graham (Ex. 1005) at 9:1-4

Although not shown, the invention provides for indicating an amount of elapsed time since the image message was sent (or alternatively the time the image message was sent) by another user to mobile device **501'**.

Graham (Ex. 1005) at 10:29-32

Color Indicating Age

In various embodiments where the sender users are associated with an illuminable input key of the mobile device, the process may also include illuminating the illuminable input key. Further, the illuminable input key may also be illuminated with a color, in particular, with different colors to denote the age of a received image message. For example, the color "green" may be employed to depict the image message received from the sender user is a recently received image message. The illuminable input key may subsequently be changed to other colors, such as "yellow" or "red" to depict the advanced age of received image messages.

Graham (Ex. 1005) at 13:1-12

Graham – "Automatically Changing" / "Displaying"

> Received image message to convey current information may be aged via time and/or color displays.

Graham (Ex. 1005) at Abstract

> In yet another aspect, the invention is directed towards tracking and indicating for a user of a wireless mobile device, image messages sent/received, and the amount of time since the image messages have been sent/received.

Graham (Ex. 1005) at 2:20-23

> Further, the illuminable input key may also be illuminated with a color, in particular, with different colors to denote the age of a received image message. For example, the color "green" may be employed to depict the image message received from the sender user is a recently received image message. The illuminable input key may subsequently be changed to other colors, such as "yellow" or "red" to depict the advanced age of received image messages.

Graham (Ex. 1005) at 13:4-12

IPR2017-00912, Pet. (Paper 1) at 24-27

Graham – "Automatically Changing" / "Displaying"

- ## Regarding elapsed time, Patent Owner argues:

This is contrary to <u>Graham</u>'s disclosure, however, which explains that the user must *manually* request an update to the image messages by, for example, "activating enter button 520":

> Although not shown, the invention provides for indicating an amount of elapsed time since the image message was sent (or alternatively the time the image message was sent) by another user to mobile device 501'. By <u>activating enter button</u> 520 in some sequence and/or in combination with the activation of the buttons included with keypad 503 and scroll-up button 521 and scroll-down button 522, the **<u>user</u> can cause mobile device 501 to request and receive an <u>update to any of the image messages received</u>**.

Ex. 1005, 10:29-37 (emphasis added).

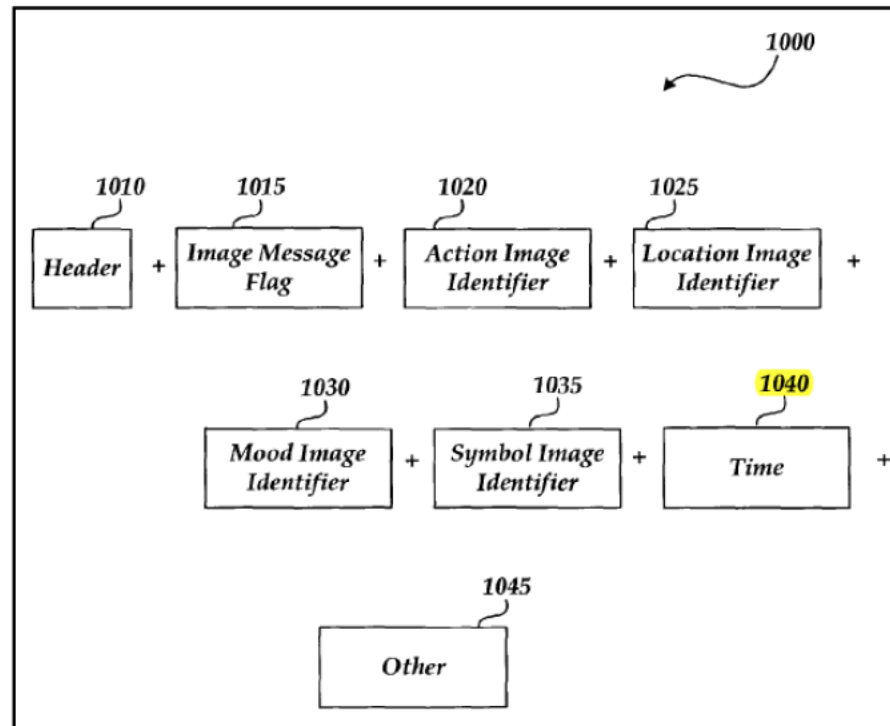# *Graham* – "Automatically Changing" / "Displaying"

FIG. **10** illustrates a process **600** of the present invention for users of mobile devices to ==request updates for image messages, and automatically receiving new image messages==.
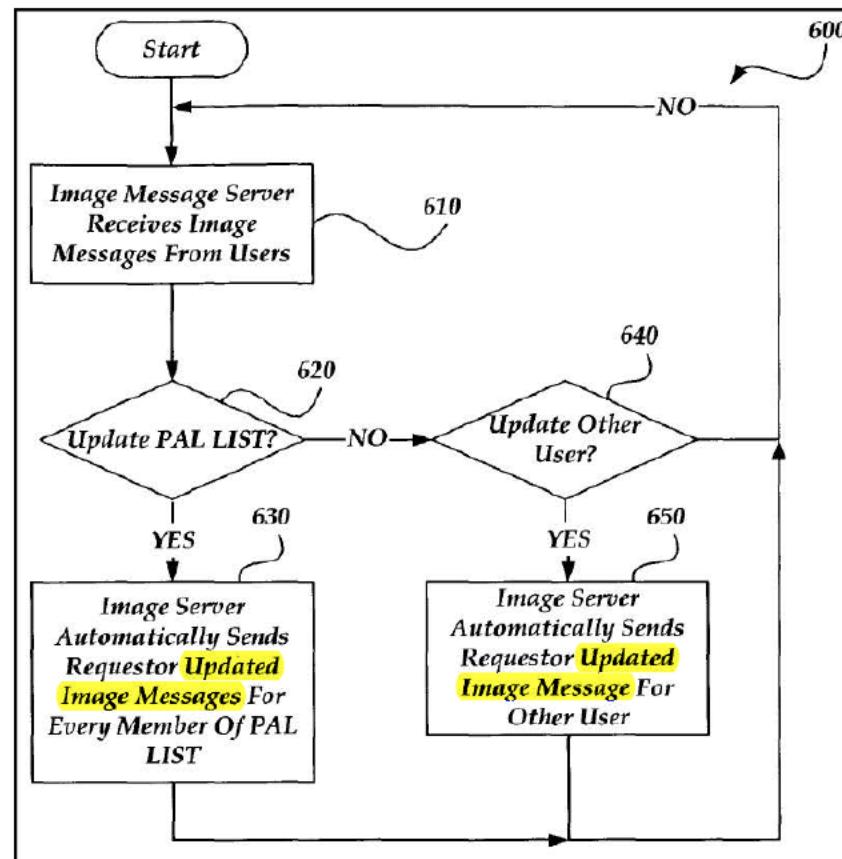
Graham (Ex. 1005) at 13:17-19, FIG. 10

IPR2017-00912, Reply (Paper 20) at 16-17

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Graham – "Automatically Changing" / "Displaying"

> Time identifier **1040** can be an alphanumeric character or string that identifies when the image message was sent, thereby allowing the recipient mobile device to compute and display the amount of elapsed time for the received image message. Other identifier **1045** can contain other information related to the image message.

Graham (Ex. 1005) at 11:14-18, FIG. 7

IPR2017-00912, Reply (Paper 20) at 17-18

Graham – "Automatically Changing" / "Displaying"

If affirmative, the process moves to block **730** where the image server broadcasts (sends) the image message to each member of the enabled CONTACT LIST associated with the user.
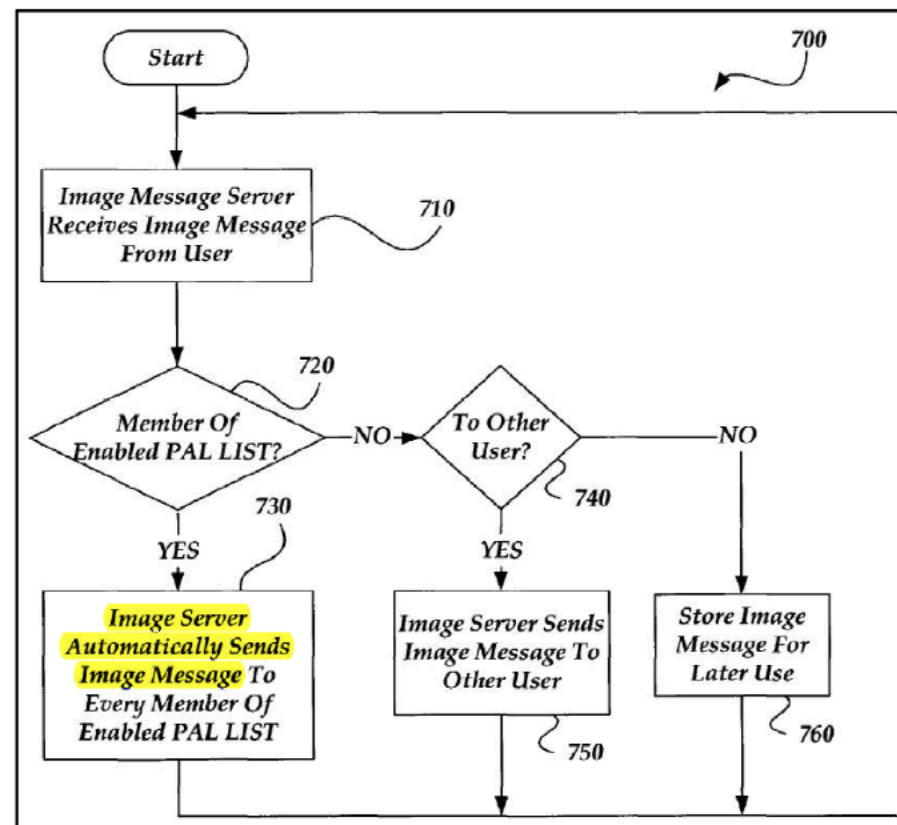
Graham (Ex. 1005) at 13:47-14:11, FIG. 11

IPR2017-00912, Reply (Paper 20) at 18

Graham – "Automatically Changing" / "Displaying"

- ## Regarding color indicating age, Patent Owner argues:

> Moreover, Graham elsewhere explains that "[i]lluminator 450 may remain active for specific periods of time or in response to events … such as *selecting* or sending images." *Id.*, 8:27-39. In this context, Graham at best discloses that manually selecting a given message will illuminate the input key with an associated color for "specific periods of time." Ex. 2007, ¶65; Ex. 1005, 8:27-39, 13:4-12.

IPR2017-00912, Resp. (Paper 17) at 37-38

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Graham – "Automatically Changing" / "Displaying"

As shown, mobile device **400** includes illuminator **450**, haptic interface **452**, and audio interface **454**. Illuminator **450** may remain active for specific periods of time or in response to events. For example, when illuminator **450** is active, it may backlight the buttons on keypad **459** and stay on while the mobile device is powered.

Graham (Ex. 1005) at 8:27-32

The Challenged Claims Are Obvious

➢ *Graham* renders the challenged claims obvious.

- – *Graham* discloses communicating mixed media messages via SMS instant messages.

- – It would have been obvious to communicate mixed media messages via non-SMS instant messaging based on *Deshpande*.

- – *Graham* discloses the "automatically changing" and "displaying" limitations under Petitioner's and the Board's interpretations.

- – *Graham* discloses these limitations under PO's interpretation.

- – PO's statements during foreign prosecution confirm that *Graham* discloses these limitations under PO's interpretation.

Graham – Statements During Foreign Prosecution

- ## EP No. 1668824, claim 1 (period of time):

1.   A method providing an output on at least one of a first electronic device (4) and a second electronic device (104), the first electronic device being adapted to be in electronic communication with the second electronic device, the method comprising:

determining that a first messaging communication (68) has occurred at a first time between the first device and the second device; and,

outputting a first indication that is representative of at least a portion of the first messaging communication;

the method being characterised by further comprising:

determining that a predetermined period of time has elapsed since the first time substantially without further communication between the first device and the second device; and,

outputting after the elapse of said predetermined period of time, if substantially no additional communication has occurred during that period of time, a first time stamp (84) representative of the first time.

European Pat. Appl. (Ex. 1022) at 135-42

IPR2017-00912, Reply (Paper 20) at 20-21

Graham – Statements During Foreign Prosecution

- ## Patent Owner explained that *Graham*'s (D1) indication of time is automatic:

Of particular relevance here is the fact that in D1, this "relative age" information is output automatically, regardless of whether any further communications have taken place.

European Pat. Appl. (Ex. 1022) at 136-37

Rather D1 is only directed to a new method for a receiving device to display, starting as soon as a communication has been received from a sending device, ongoing information on the time elapsed since that communication was received.

European Pat. Appl. (Ex. 1022) at 137-38

IPR2017-00912, Reply (Paper 20) at 20-21

The Challenged Claims Are Obvious

➤ *Graham* renders the challenged claims obvious.

➤ The combinations based on *Toshio* disclose the "automatically changing" and "displaying" limitations under any interpretation.

➤ The combinations based on *Milton* disclose these limitations under Petitioner's and the Board's interpretations.

➤ The "displaying" limitation is also obvious under PO's construction.

➤ A POSA would have combined *Appelman* with *Toshio* or *Milton.*

➤ *Milton* is analogous art.

- PO does not dispute that the *Toshio* combinations disclose:

  – The "automatically changing" and "displaying" limitations <u>under Petitioner's plain and ordinary meaning of these limitations</u>;

  – The "automatically changing" limitation <u>under any interpretation of "automatically"</u>; and

  – If "automatically" modifies "displaying," the "displaying" limitation <u>under either Petitioner's plain and ordinary meaning of "automatically" or the Board's interpretation where "other prior operations can be manually initiated</u>."

- The <u>only dispute</u> is whether the *Toshio* combinations disclose the "automatically changing" and "displaying" limitations under PO's interpretation—they do.

- *Toshio* describes displaying a message on a day after receipt with a time and the number of days elapsed (e.g., "13:20:27; 1 day ago").

- The number of days elapsed is updated automatically and displayed automatically when the date changes.

Toshio Combinations – "Automatically Changing" / "Displaying"

Field of the Invention
This invention relates to a selective call receiver with a display function, wherein the selective call receiver with a display function displays the changes over time.

Means for Solving the Problem
To achieve the objective described above, the present invention is configured as follows: a time function is provided to determine whether the date has been updated; when the date has been updated, the fact that the day the message was received is not today is memorized and displayed along with the incoming message and the receipt time.

(2) The selective call receiver with a display function according to claim (1), wherein the data showing whether the aforementioned received date is today comprises the number of days elapsed from the received day; when the date has been updated, the number of days elapsed since the message was received and stored in the aforementioned storage means is displayed along with the incoming message and the time.

- *Toshio*'s reference to displaying data according to the "user's need" does not detract from these teachings.

> And this message data is displayed on the display unit 11, which is a display means, via the display drive circuit 10 depending on the user's need.

Toshio (Ex. 1007) at 230

- Nor does *Toshio*'s reference to displaying time information when the "message is read."

> Therefore, according to the above-mentioned working example, the number of days elapsed is displayed on the display unit 11a together with an incoming message when the incoming message is read, so it is possible to prevent a user from being confused even in the case of multiple incoming messages received over several days, allowing a user to easily manage the incoming messages.

Toshio (Ex. 1007) at 231

The Challenged Claims Are Obvious

➢ *Graham* renders the challenged claims obvious.

➢ The combinations based on *Toshio* disclose the "automatically changing" and "displaying" limitations under any interpretation.

➢ **The combinations based on *Milton* disclose these limitations under Petitioner's and the Board's interpretations.**

➢ The "displaying" limitation is also obvious under PO's construction.

➢ A POSA would have combined *Appelman* with *Toshio* or *Milton*.

➢ *Milton* is analogous art.

- PO does not dispute that the *Milton* combinations disclose these limitations under Petitioner's proposed plain and ordinary meaning or the Board's interpretation.

- PO <u>only disputes</u> whether the *Milton* combinations disclose the "displaying" limitation under PO's interpretation.

Milton Combinations – "Automatically Changing" / "Displaying"

> Furthermore, if the delta time exceeds a predetermined time interval, such as twenty-four hours, rather than reporting the ==elapsed time==, the system can report the actual ==month and day== on which the message originator delivered the message.

Milton (Ex. 1006) at 1:67-2:4

The Challenged Claims Are Obvious

➢ *Graham* renders the challenged claims obvious.

➢ The combinations based on *Toshio* disclose the "automatically changing" and "displaying" limitations under any interpretation.

➢ The combinations based on *Milton* disclose these limitations under Petitioner's and the Board's interpretations.

➢ **The "displaying" limitation is also obvious under PO's construction.**

➢ A POSA would have combined *Appelman* with *Toshio* or *Milton.*

➢ *Milton* is analogous art.

The "Displaying" Limitation Is Also Obvious Under PO's Construction

To the extent it is argued or found that "automatically" modifies "displaying" in claim 1, it also would have been obvious to automatically display the combined absolute and elapsed time as time progresses in the modified *Appelman*'s system.[11] (Ex. 1002, ¶¶18-19, 49.) One skilled in the art would have recognized that when the date changes, the displayed absolute time ("first time information") may be inaccurate and/or less meaningful, and so a benefit would have been realized by automatically displaying the combined absolute and elapsed time ("second time information") once the date changes. (*Id.*) Additionally, such a skilled person would have realized that, with such a modification, a user would not have needed to restart the messaging application or otherwise refresh the interface in order to see the updated time information.

The "Displaying" Limitation Is Also Obvious Under PO's Construction

- Petitioner's obviousness position is supported by the cited prior art.

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49. I was also asked to consider an interpretation of claim 1 where the term "automatically" modifies "displaying." In my opinion, under this interpretation, one of ordinary skill in the art would have been motivated, based on *Toshio*'s disclosure, to modify the combined *Appelman-Toshio* system and processes such that the combined absolute and elapsed time is automatically displayed as time progresses.

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60. I was also asked to consider an interpretation of claim 1 where the term "automatically" modifies "displaying." Under this interpretation, one of ordinary skill in the art would have recognized, based on *Graham*'s disclosure, that the disclosed updated elapsed time information is automatically displayed for the messages.

IPR2017-00911, Pet. (Paper 1) at 24-25, 44-45; Olsen Decl. (Ex. 1002) at ¶¶18, 19, 49, 82
IPR2017-00912, Pet. (Paper 1) at 25-26, 39, 49-50; Olsen Decl. (Ex. 1002) at ¶¶18, 19, 60, 84, 104

The "Displaying" Limitation Is Also Obvious Under PO's Construction

- Petitioner's obviousness position is supported by Inside Macintosh.

> When a window is drawn or redrawn, the following two-step process usually takes place: The Window Manager draws the window frame, then the application draws the window contents.

> Usually the second step is that the Window Manager generates an update event to get the application to draw the window contents.

> To be able to respond to update events for one of its windows, the application has to keep track of the window's contents, usually in a data structure. In most cases, it's best *never* to draw immediately into a window; when you need to draw something, just keep track of it and add the area where it should be drawn to the window's update region (by calling one of the Window Manager's update region maintenance routines, InvalRect and InvalRgn). Do the actual drawing only in response to an update event.

Inside Macintosh (Ex. 1013) at I-278 to I-279

IPR2017-00911, Pet. (Paper 1) at 24-25, 44-45; Olsen Decl. (Ex. 1002) at ¶¶18, 19, 49, 82
IPR2017-00912, Pet. (Paper 1) at 25-26, 39, 49-50; Olsen Decl. (Ex. 1002) at ¶¶18, 19, 60, 84, 104

The Challenged Claims Are Obvious

➢ *Graham* renders the challenged claims obvious.

➢ The combinations based on *Toshio* disclose the "automatically changing" and "displaying" limitations under any interpretation.

➢ The combinations based on *Milton* disclose these limitations under Petitioner's and the Board's interpretations.

➢ The "displaying" limitation is also obvious under PO's construction.

➢ A POSA would have combined *Appelman* with *Toshio* or *Milton*.

➢ *Milton* is analogous art.

A POSA Would Have Combined *Appelman* with *Toshio*

- ## Patent Owner's argument:

> Appelman and Toshio would not have been combined as Petitioner alleges
>
> because both references are directed to vastly different contexts: Appelman relates
>
> to "dynamic, urgent and interactive" instant messaging, and Toshio relates to days-
>
> old missed calls.

> Appelman
>
> specifically tracks the "time when an instant message was sent to or received from
>
> the person associated with the address stored in the address field 504 *during the*
>
> *current communication session*, if any."

IPR2017-00911, Resp. (Paper 17) at 40-43

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A POSA Would Have Combined *Appelman* with *Toshio*

- *Appelman* does not limit the duration of communication sessions.

Appelman (Ex. 1012) at FIG. 9

IPR2017-00911, Reply (Paper 20) at 20-23

- Dr. Ligler confirmed that FIG. 9 is only a snapshot of an address list at a particular point in time. (Ligler Dep. Tr. (Ex. 1018) at 127:5-133:19.)

- Dr. Ligler could not recall any limit in duration of communication sessions between users of AOL's Instant Messenger. (Ligler Dep. Tr. (Ex. 1018) at 63:5-10, 68:25-70:6.)

- Dr. Ligler confirmed that communication sessions could be initiated at any time of day. (Ligler Dep. Tr. (Ex. 1018) at 62:23-63:4.)

- PO repeats the same arguments it made for the *Appelman-Toshio* combination.

- These arguments fail for the same reasons—i.e., *Appelman*'s communication sessions are not limited in time.

- PO also ignores the differences between the *Appelman-Toshio* combination and the *Appelman-Milton* combination.

A POSA Would Have Combined *Appelman* with *Toshio*

> It would have been obvious to one of ordinary skill in the art at the time of the alleged invention to configure the *Appelman* system and processes based on the teachings of *Milton* such that *Appelman*'s processor is configured to execute embedded instructions to display ==elapsed time information (e.g., 10 minutes ago) ("first time information")== in response to sending/receiving an instant message ("first input").

Pet. (Paper 1) at 38-41

> Furthermore, if the delta time exceeds ==a predetermined time interval, such as twenty-four hours,== rather than reporting the elapsed time, the system can report the actual month and day on which the message originator delivered the message.

Milton (Ex. 1006) at 1:67-2:4

The Challenged Claims Are Obvious

➢ *Graham* renders the challenged claims obvious.

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➢ The "displaying" limitation is also obvious under PO's construction.

➢ A POSA would have combined *Appelman* with *Toshio* or *Milton*.

➢ *Milton* is analogous art.

Milton Is Analogous Art

- *Milton* is in the same field of endeavor as the '149 patent—message communication.

> 1. Field of the Invention
> The invention relates generally to handheld electronic devices and, more particularly, to a handheld electronic device and a method for providing information representative of the times of certain communications in a messaging environment.

'149 Patent (Ex. 1001) at 1:20-24

> 1. A method of displaying an instant messaging conversation on a display of an electronic device, the method comprising:

'149 Patent (Ex. 1001) at Claim 1

Milton Is Analogous Art

- *Milton* and the '149 patent relate to the same problem of indicating time information.

> 1. Field of the Invention
> The invention relates generally to handheld electronic devices and, more particularly, to a handheld electronic device and a method for ==providing information representative of the times of certain communications in a messaging environment.==

'149 Patent (Ex. 1001) at 1:20-24

> It is noted that the appearances of the various time stamps herein is completely exemplary, and that the time stamps could be provided in ==any format== without departing from the concept of the invention. In this regard, and ==in accordance with another aspect of the invention,== a given time stamp may be a ==smart time stamp== and provide additional information depending upon the prevailing circumstances.

'149 Patent (Ex. 1001) at 7:34-40

IPR2017-00911, Reply (Paper 20) at 27-29
IPR2017-00912, Reply (Paper 20) at 29

CERTIFICATE OF SERVICE

I hereby certify that on May 22, 2018, I caused a true and correct copy of the

foregoing Petitioner's Demonstrative Exhibits to be served electronically on Patent

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