

*Hanshow Technology Co., Ltd. v. SES-imagotag SA.*

IPR2024-00188

February 18, 2025, Oral Hearing  
Patent Owner's Demonstratives  
SES-imagotag (VusionGroup)

# Petitioner Fails To Carry Its Burden

- **No disclosure of limitations 1.3(b) and (c)**
  - Masumoto does not disclose limitations 1.3(b) and (c)
- **No disclosure of limitation 1.4**
  - Swafford does not disclose limitation 1.4
  - Takashi does not disclose limitation 1.4
- **No disclosure of dependent claim 7 or 11**
  - Masumoto does not disclose the broadcast limitation of Claim 7
  - Masumoto does not disclose the UDP multicast limitation of Claim 11
- **Failed to carry burden as to all claims: “communication stage”**
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- **No motivation to combine**

# The '669 Patent: Syncing Videos On Many Store-Shelf Displays

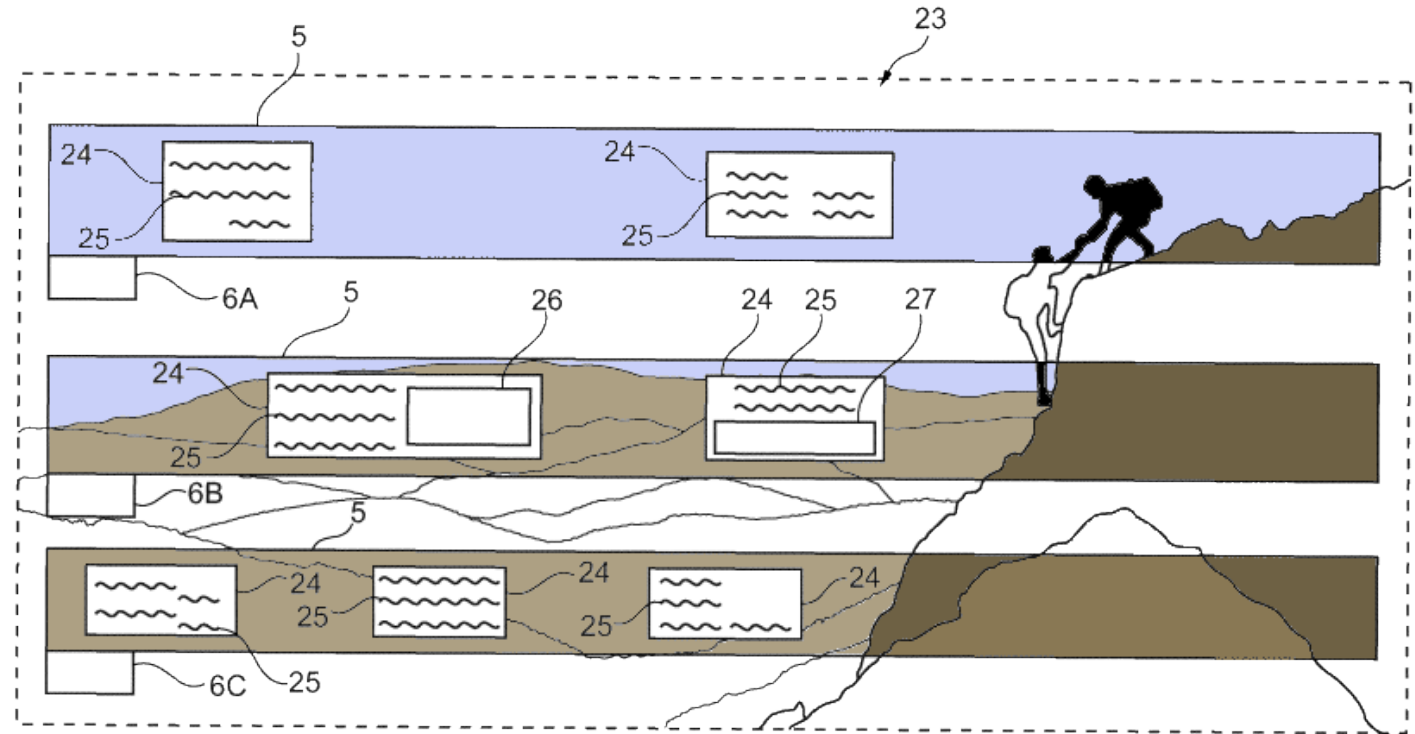
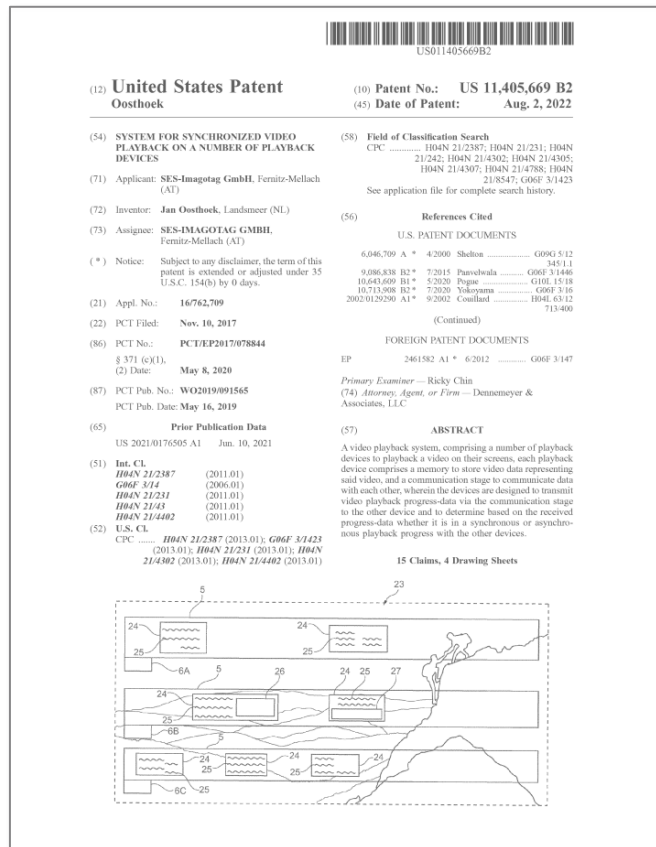


**Fig. 6**

'669 Patent, Fig. 6 (annotated)

# Peer-to-Peer: *Each* Device Transmits and Determines

1. A video playback system (1), comprising a number of playback devices (6A, 6B) to playback a video on their screens (5), each playback device (6A, 6B) comprises a memory to store video data (9) representing said video, and a communication stage to communicate data with each other, wherein the devices (6A, 6B) are designed:

to transmit video playback progress-data via the communication stage to the other device (6B, 6A); and, to determine based on the received progress data whether it is in a synchronous or asynchronous playback progress with the other devices (6B, 6A);

wherein the display devices (6A, 6B) are designed to display product information or product price related information by means of virtual electronic shelf labels displayed within a section of a screen's (5) display area overlapping with a video content or substituting a video content of said section.

Each device transmits

Each device determines

# Each Device Transmits and Determines

1. A video playback system (1), comprising a number of playback devices (6A, 6B) to playback a video on their screens (5), each playback device (6A, 6B) comprises a memory to store video data (9) representing said video, and a communication stage to communicate data with each other, wherein the devices (6A, 6B) are designed:

to transmit video playback progress-data via the communication stage to the other device (6B, 6A); and, to determine based on the received progress data whether it is in a synchronous or asynchronous playback progress with the other devices (6B, 6A);

wherein the display devices (6A, 6B) are designed to display product information or product price related information by means of virtual electronic shelf labels displayed within a section of a screen's (5) display area overlapping with a video content or substituting a video content of said section.

Are *designed* to transmit  
and  
Are *designed* to determine

# Designed, Adapted, and Configured Require Specific Configuration

ASPEX EYEWEAR, INC. v. MARCHON EYEWEAR, INC. 1335  
Cite as 672 F.3d 1335 (Fed. Cir. 2012)

ASPEX EYEWEAR, INC., and Contour  
Optik, Inc., Plaintiffs–Appellants,  
v.  
MARCHON EYEWEAR, INC., and  
Nike, Inc., Defendants–  
Appellees,  
and  
Revolution Eyewear, Inc., and Gary  
Martin Zelman, Defendants–  
Appellees.  
No. 2011–1117.  
United States Court of Appeals,  
Federal Circuit.  
March 14, 2012.

**Background:** Patentee brought action against competitors alleging infringement of patent for primary eyeglass frames designed so that auxiliary frames could be attached to primary frames by magnetic force. Competitors moved for summary judgment on res judicata grounds. The United States District Court for the Southern District of Florida, Marcia G. Cooke, J., 2010 WL 4553642, granted motions. Patentee appealed.

**Holdings:** The Court of Appeals, Bryson, Circuit Judge, held that:

- (1) reexamination of patent, which resulted in modified and added claims, did not prevent application of res judicata doctrine to preclude instant infringement action;
- (2) res judicata did not bar action with respect to accused products that were made or sold after patentee's earlier actions against same competitors alleging infringement of same patent;
- (3) settlement agreement that terminated earlier action precluded infringement claims only with respect to accused products with specified design that were made or sold as of effective date of agreement, not accused products with new design that were introduced after action was filed;
- (4) preamble language in independent claims did not limit claims;
- (5) term "magnetic member" included ferromagnetic materials;
- (6) "rearwardly directed free end" meant the end of the arm that extended rearwardly from auxiliary eyeglass frame and was not attached to the side portion of the frame; and
- (7) "said arms and said pair of magnetic members adapted to extend across respective side portions of a primary spectacle frame" meant that the arms and the pair of magnetic members were made to extend across the top of the respective side portions of the primary frame.

Reversed and remanded.

**1. Courts** ¶96(7)  
Because the general principles of res judicata are not unique to patent law, Court of Appeals for the Federal Circuit looks to regional circuit law for guidance in applying those principles in a patent appeal; however, the question whether a particular claim in a patent case is the same as or separate from another claim has special application to patent cases, and the Court of Appeals for the Federal Circuit therefore applies its own law to that issue.

**2. Patents** ¶327(10)  
Reexamination of patent directed to magnetic clip-on eyewear, which resulted in modified and added claims, did not create new causes of action that patentee could not have pursued in its previous actions alleging infringement of same patent, and thus reexamination did not prevent application of res judicata doctrine to preclude instant infringement action; added and modified claims resulting from re-

primary frame. In that context, the phrase “adapted to” is most naturally understood to mean that the arms and magnetic members are designed or configured to accomplish the specified objective, not simply that they can be made to serve that purpose.

*Aspex Eyewear, Inc. v. Marchon Eyewear, Inc.*,  
672 F.3d 1335, 1349 (Fed. Cir. 2012)

# The Claims Expressly Reference Two Devices *Each* Configured to Reciprocally Transmit and Determine

1. A video playback system (1), comprising a number of playback devices (6A, 6B) to playback a video on their screens (5), each playback device (6A, 6B) comprises a memory to store video data (9) representing said video, and a communication stage to communicate data with each other, wherein the devices (6A, 6B) are designed:  
to transmit video playback progress-data via the communication stage to the other device (6B, 6A); and,  
to determine based on the received progress data whether it is in a synchronous or asynchronous playback progress with the other devices (6B, 6A);  
wherein the display devices (6A, 6B) are designed to display product information or product price related information by means of virtual electronic shelf labels displayed within a section of a screen's (5) display area overlapping with a video content or substituting a video content of said section.

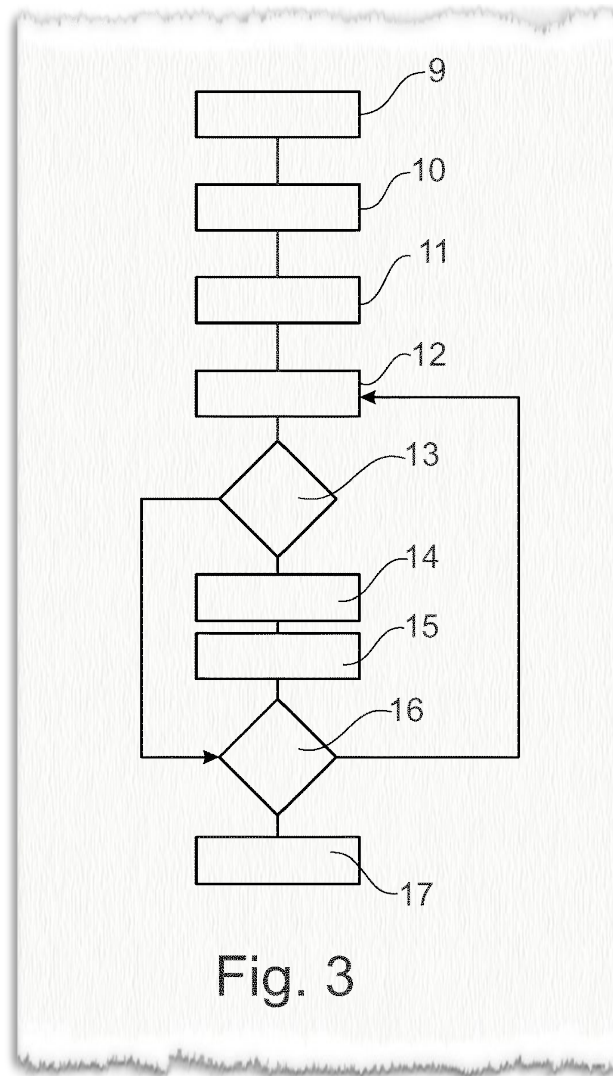
'669 Patent, Claim 1

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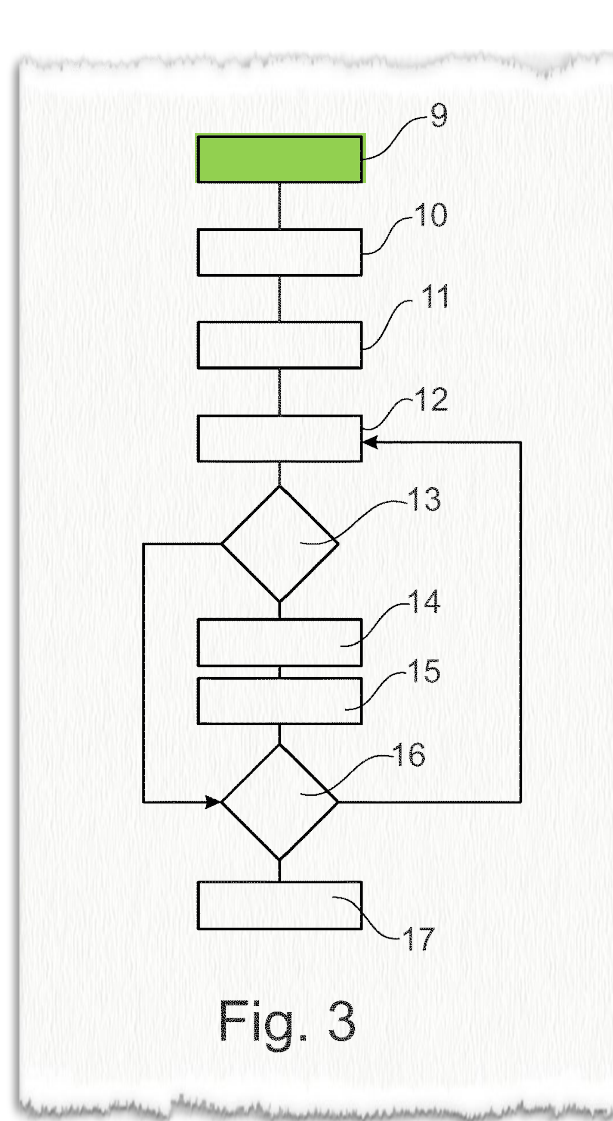
'669 Patent, Claim 1

# Specification Shows Reciprocal/Bilateral Communication



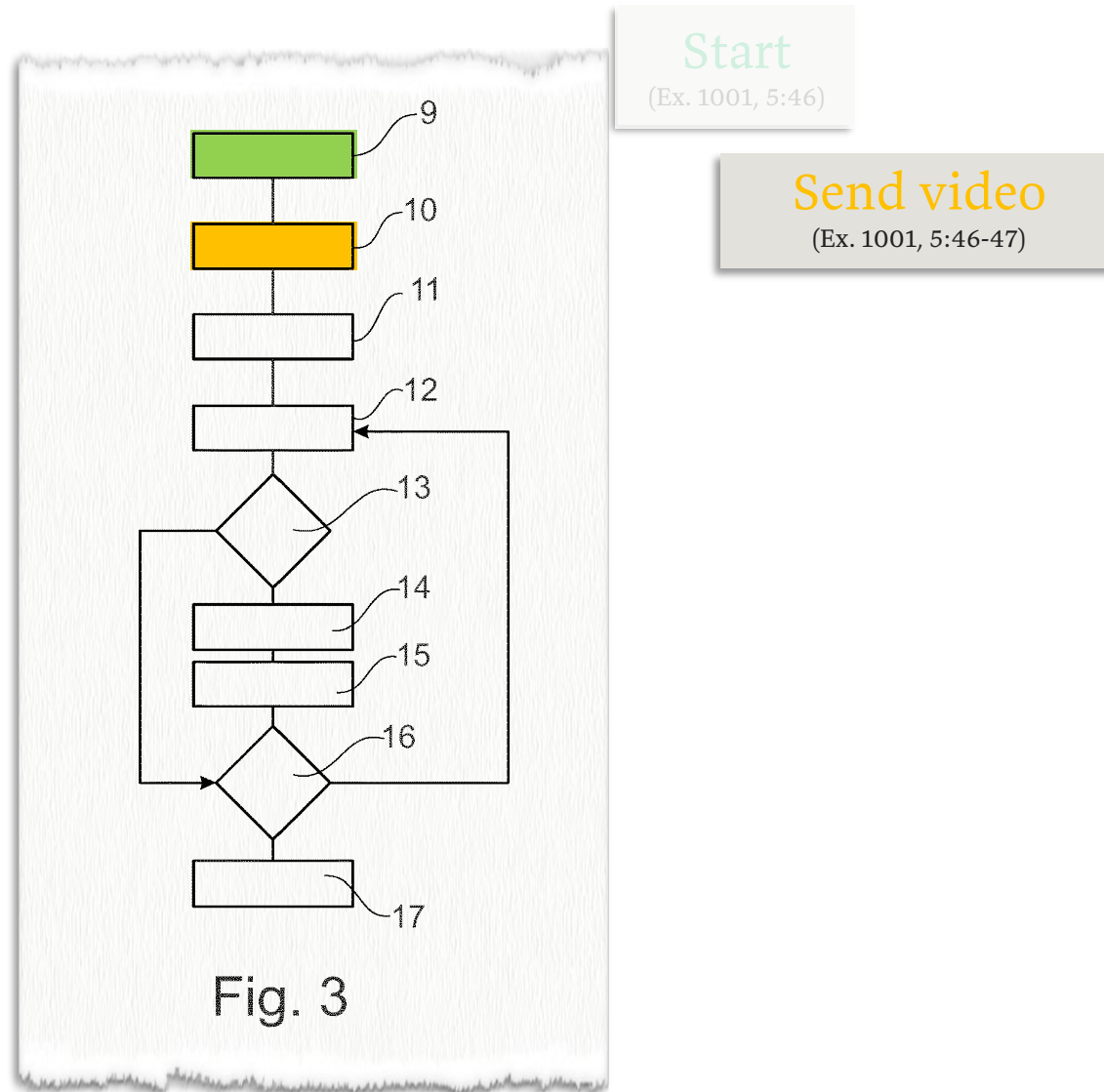
Ex. 1001, Fig. 3

# Specification Shows Reciprocal/Bilateral Communication



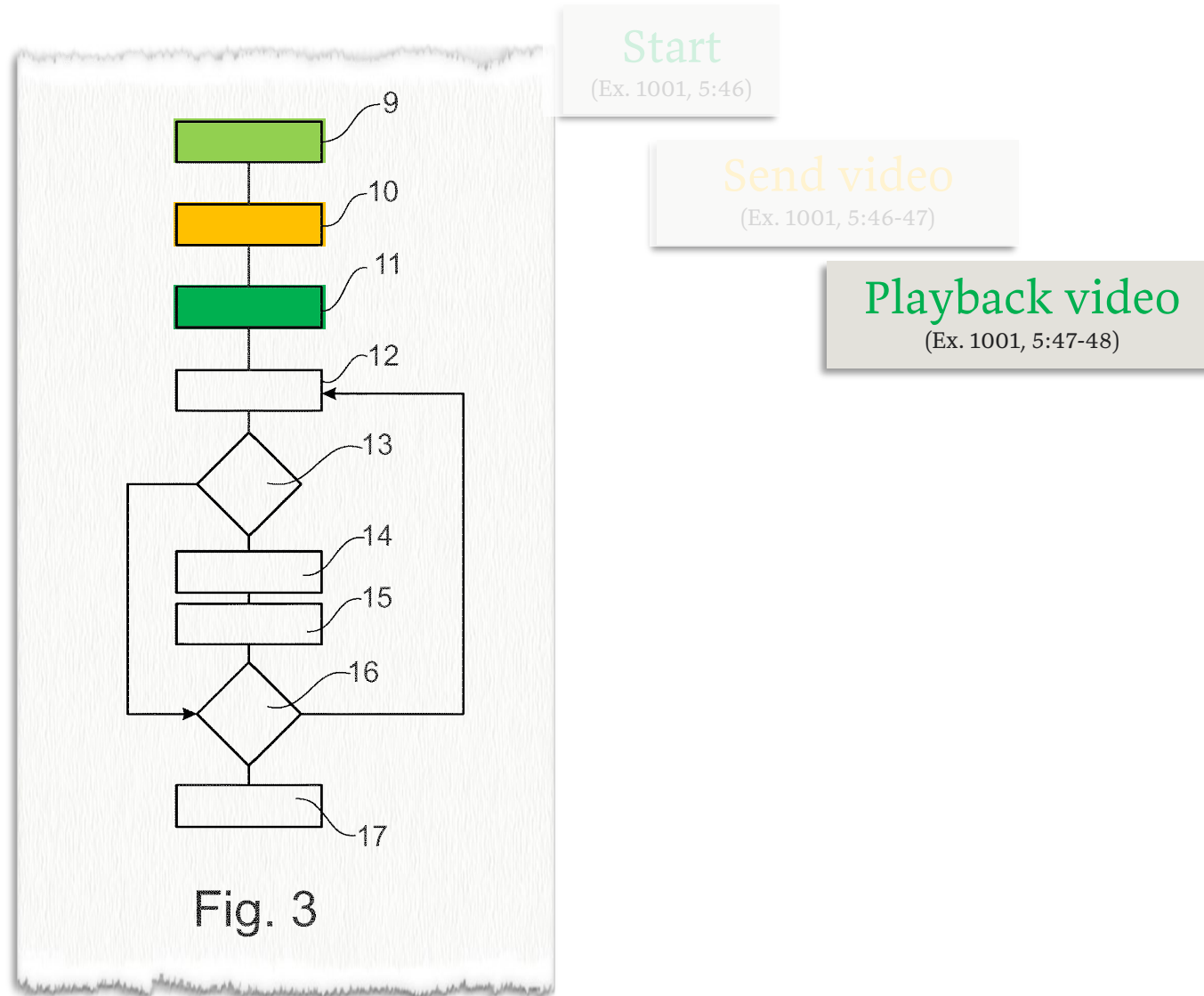
Start  
(Ex. 1001, 5:46)

# Specification Shows Reciprocal/Bilateral Communication



Ex. 1001, Fig. 3 (annotated)

# Specification Shows Reciprocal/Bilateral Communication

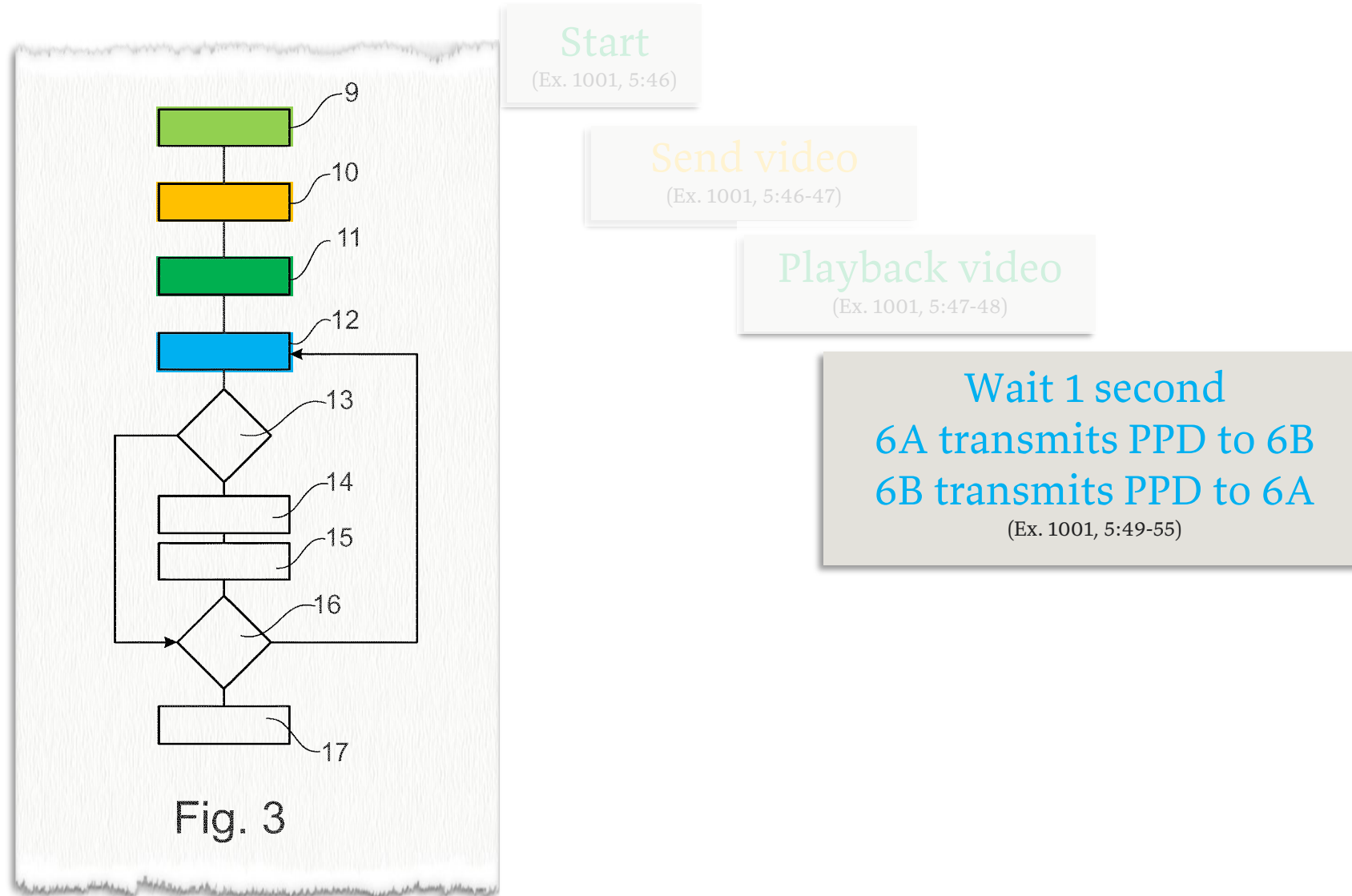


Ex. 1001, Fig. 3 (annotated)

POR, 7, 24-25; Hart, ¶¶29-33, 68

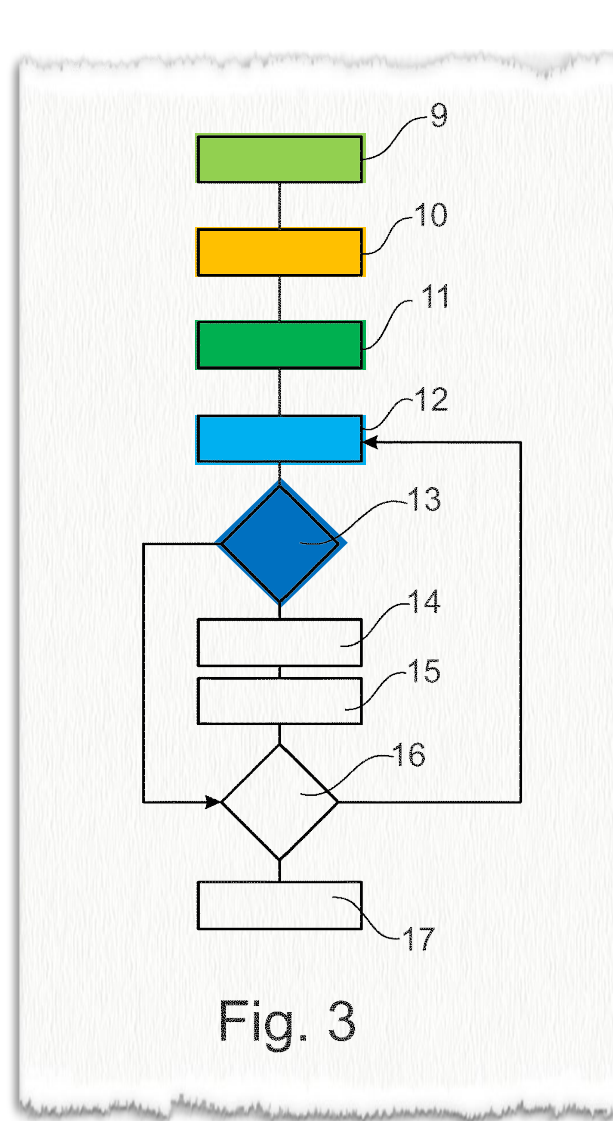
IPR2024-00188 DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

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Ex. 1001, Fig. 3 (annotated)

# Specification Shows Reciprocal/Bilateral Communication



Ex. 1001, Fig. 3 (annotated)

Start  
(Ex. 1001, 5:46)

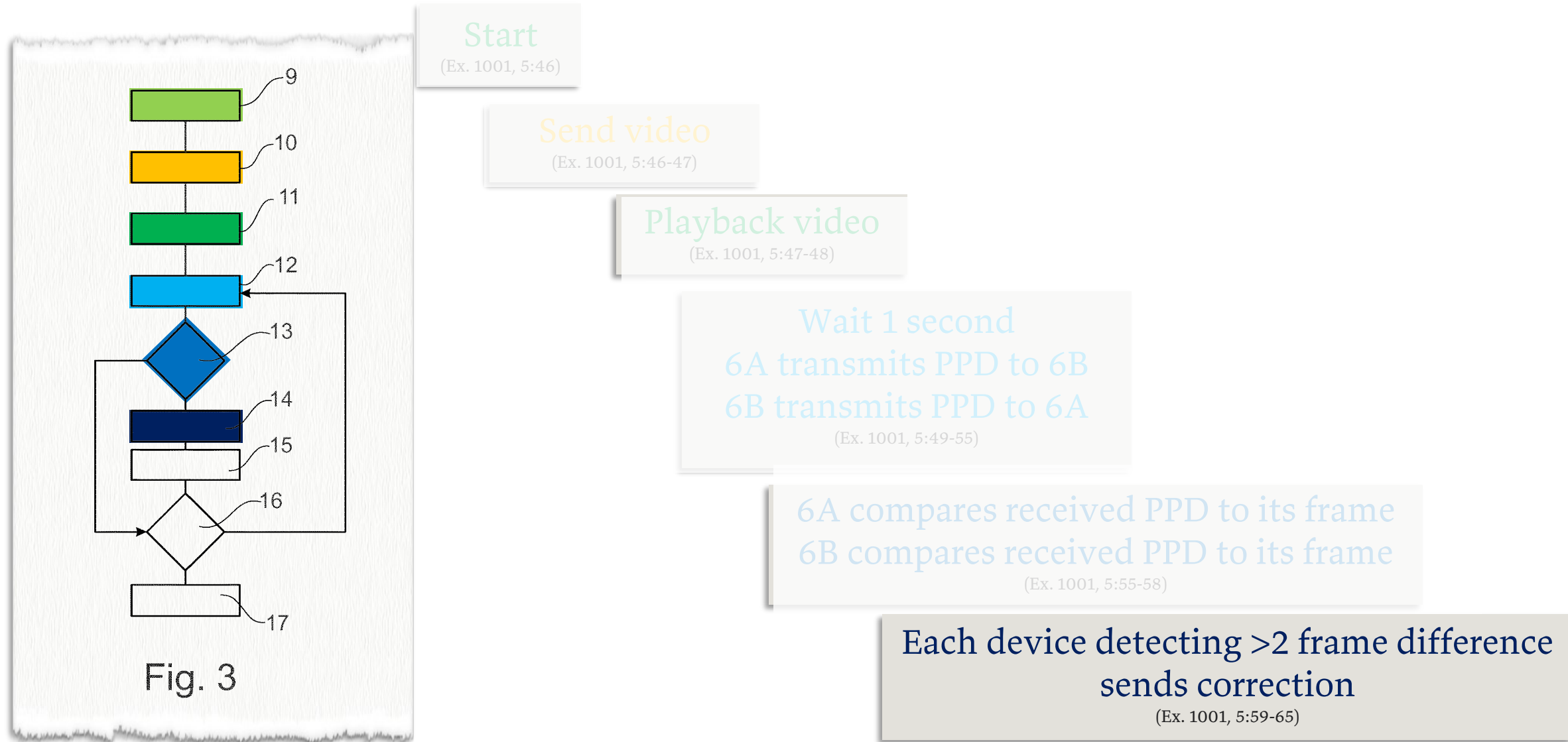
Send video  
(Ex. 1001, 5:46-47)

Playback video  
(Ex. 1001, 5:47-48)

Wait 1 second  
6A transmits PPD to 6B  
6B transmits PPD to 6A  
(Ex. 1001, 5:49-55)

6A compares received PPD to its frame  
6B compares received PPD to its frame  
(Ex. 1001, 5:56-58)

# Specification Shows Reciprocal/Bilateral Communication



Ex. 1001, Fig. 3 (annotated)

POR, 7, 24-25; Hart, ¶¶29-33, 68  
IPR2024-00188 DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

# File History: Reciprocal/Bilateral Communication

Claim 1 is directed to a video playback system, comprising a number of playback devices to playback a video on their screens, each playback device comprising a memory to store video data representing said video. Each playback device further comprises a communication stage *to communicate data with each other*, wherein the devices are designed to transmit video playback progress data *via the communication stage to the other device* and to determine, based on the received progress data, whether it is in a synchronous or asynchronous playback progress with the other devices (*emphasis added*).

The emphasized language in claim 1 has the technical effect that that *each individual playback device can independently detect an asynchronous playback progress within the group of playback devices*. This is achieved by a simple and fast comparison of the playback progress of another device or of other devices with its own playback progress. (See, e.g., specification of present application, US 2021/0176505 A1, paragraph [0007]). *In the words of claim 1, a simple and fast comparison of the playback progress of the devices can be achieved by communicating “with each other”. “With each other” particularly describes a bidirectional relationship (cf. Merriam-Webster dictionary, definition for “Each other”: “each of two or more in reciprocal action or relation”).*

'669 Patent File History, 140-41

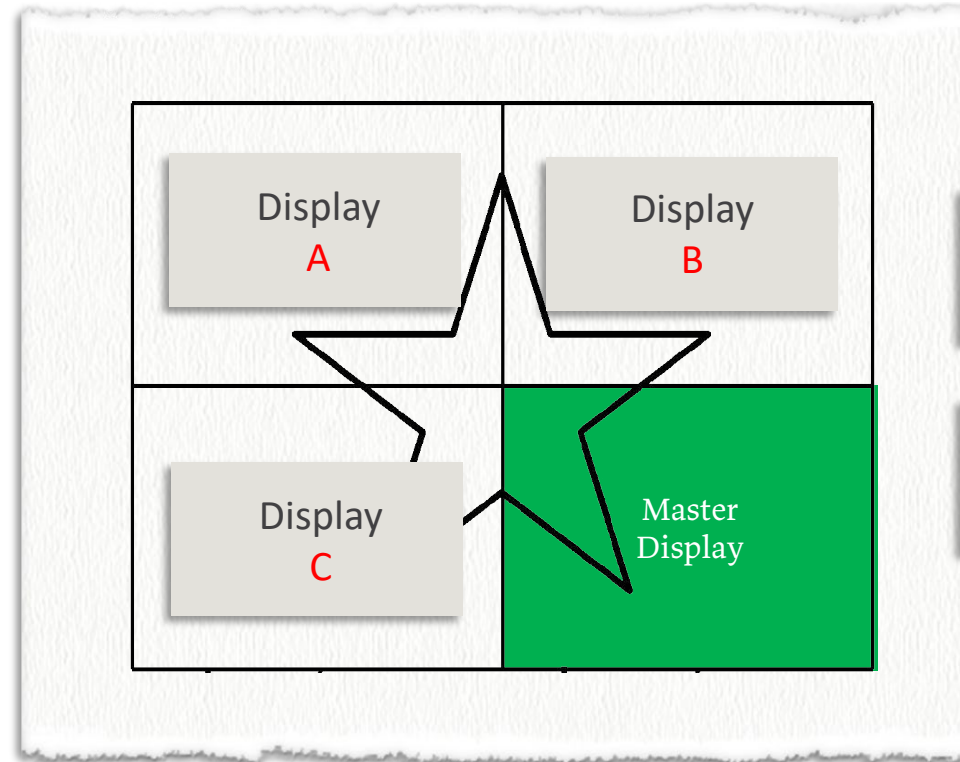
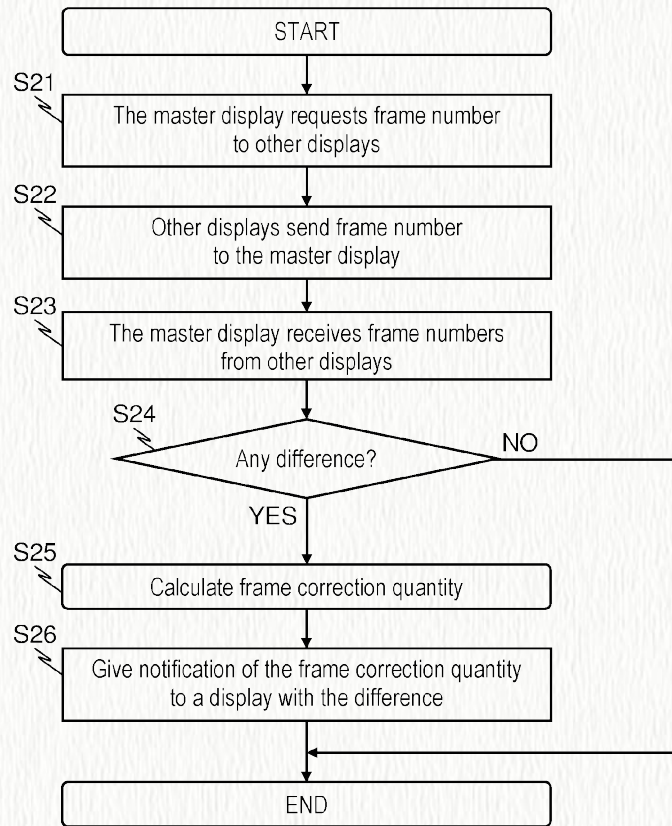
# File History: Reciprocal Exchange

Regarding claim 1, Asami teaches of a video playback system, comprising a number of playback devices to playback a video on their screens (See Fig.2, 5, and 6 which discloses of the reproduction devices each having lcd screens), each playback device comprises a memory to store video data representing said video (See [0007] which discloses of each of the reproduction devices having storage for the video), and a communication stage to communicate data with each other (See [0007] and [0058]-[0064] which discloses bi-directional communication of data to/from each of the reproduction devices and the management device for communicating standby

'669 Patent File History, 115-16

# Masumoto 5th Embodiment

FIG. 9



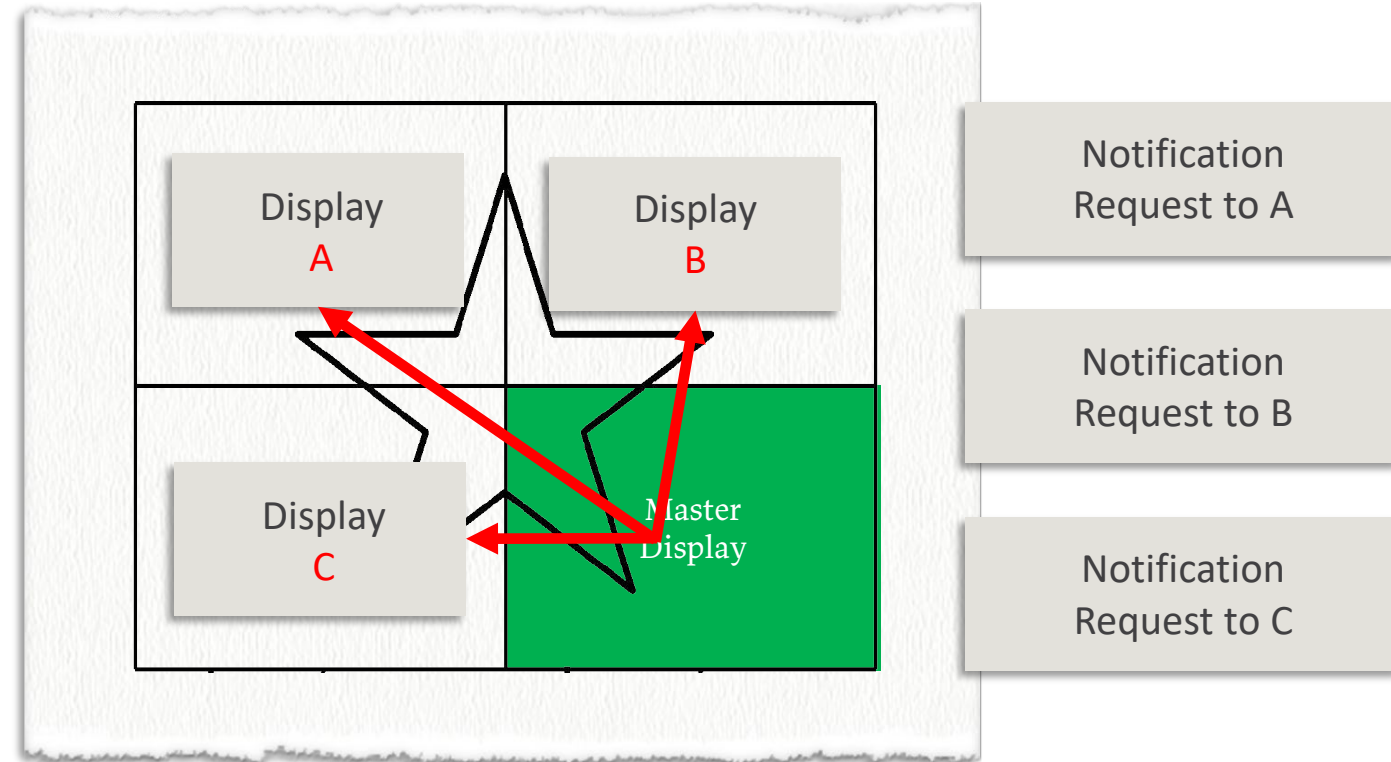
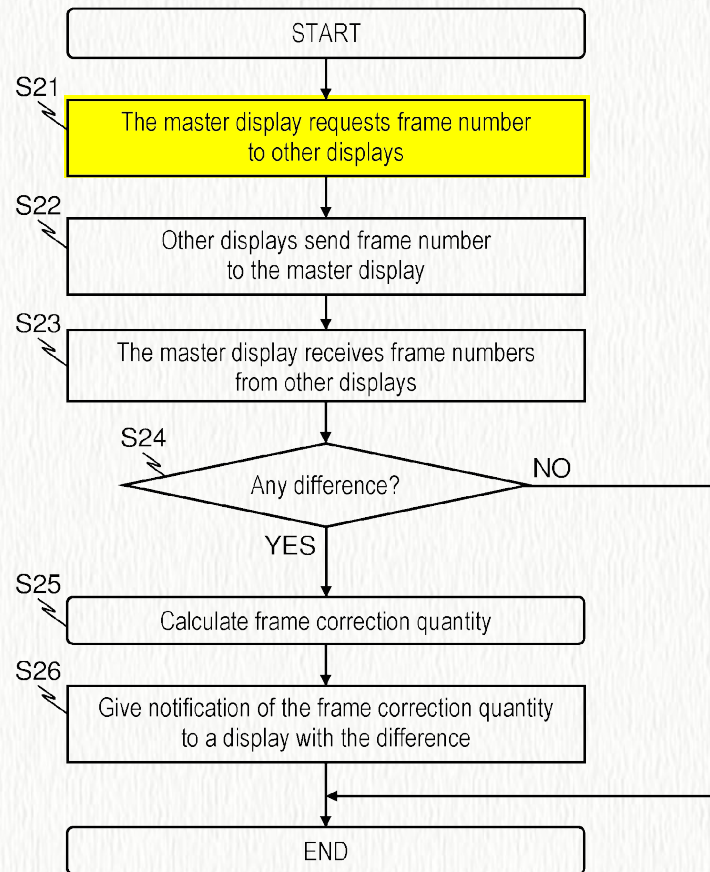
Masumoto, Fig. 1 (excerpted, annotated), [0108]

Only 1 Master Display

ID'd @ Start up or installation

# Masumoto 5th Embodiment

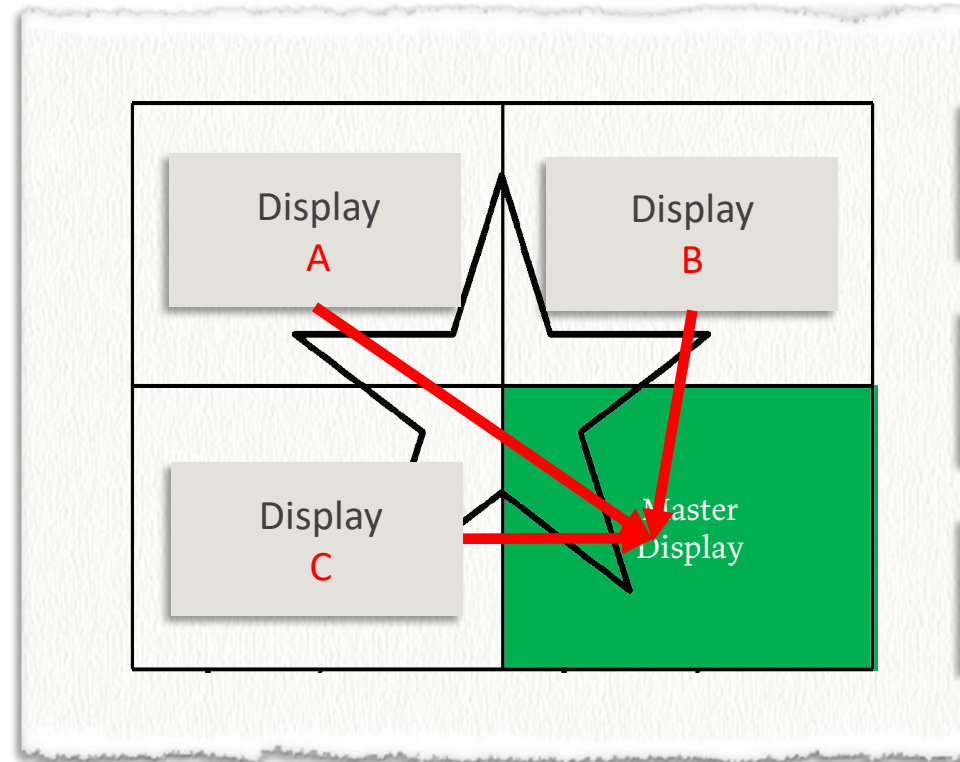
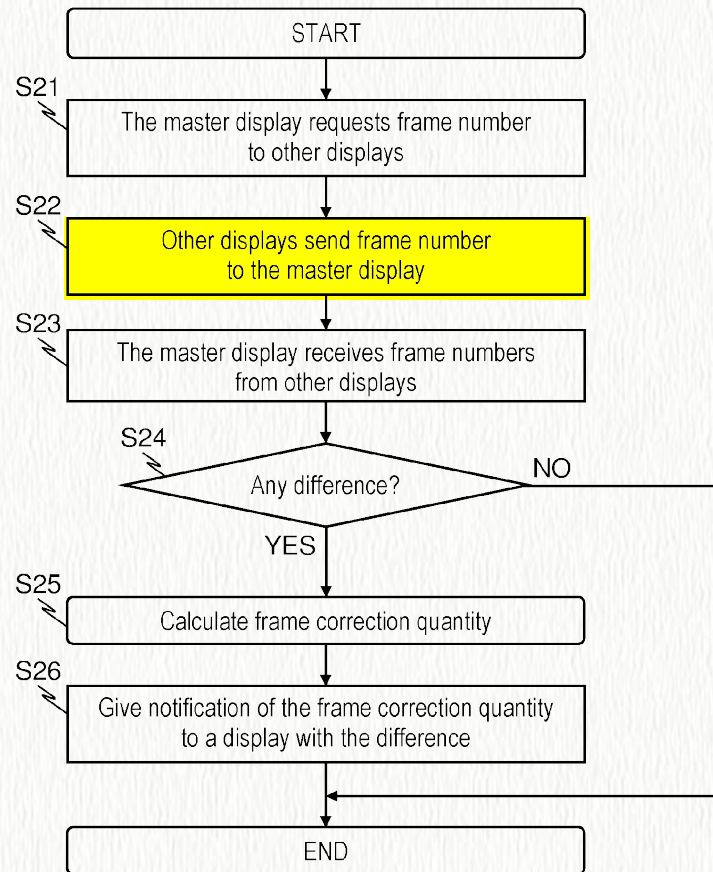
FIG. 9



Masumoto, Fig. 1 (excerpted, annotated), [0108]

# Masumoto 5th Embodiment

FIG. 9



A sends frame # + time

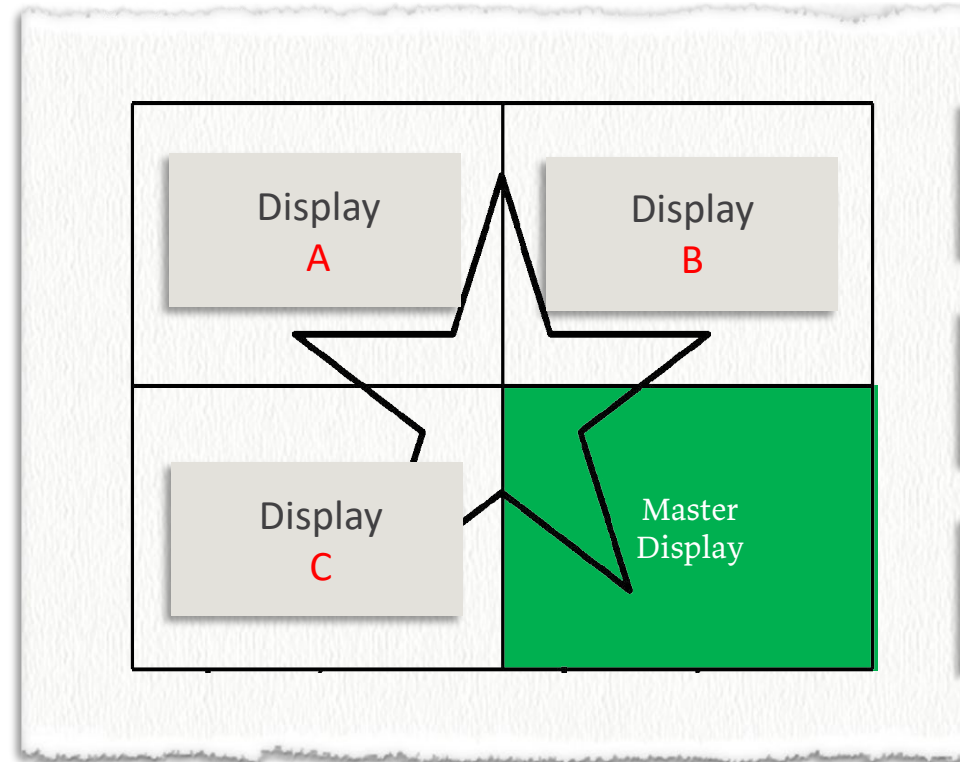
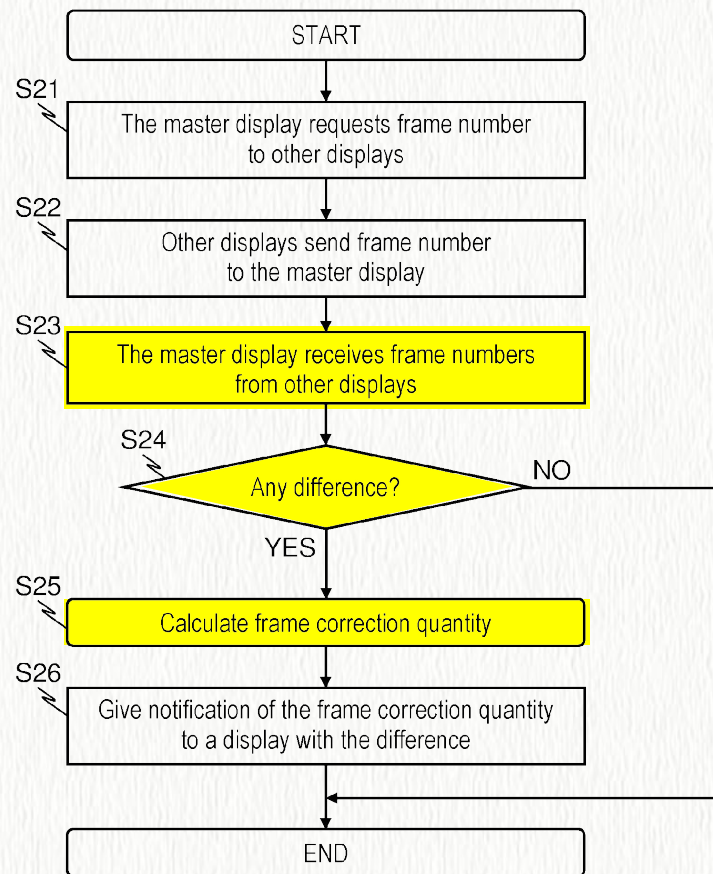
B sends frame # + time

C sends frame # + time

Masumoto, Fig. 1 (excerpted, annotated), [0110]

# Masumoto 5th Embodiment

FIG. 9



A = frame 7190  
@120 sec

Desired @ 120 = 120  
sec x 60 fps = 7200

Correction 7200-  
7190=10

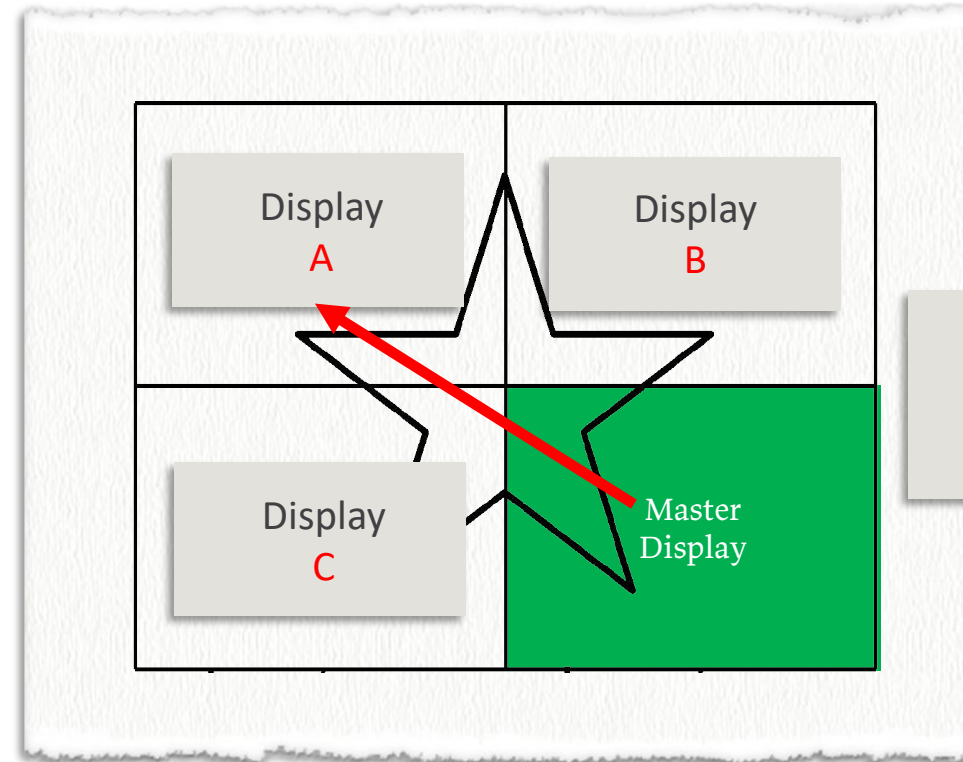
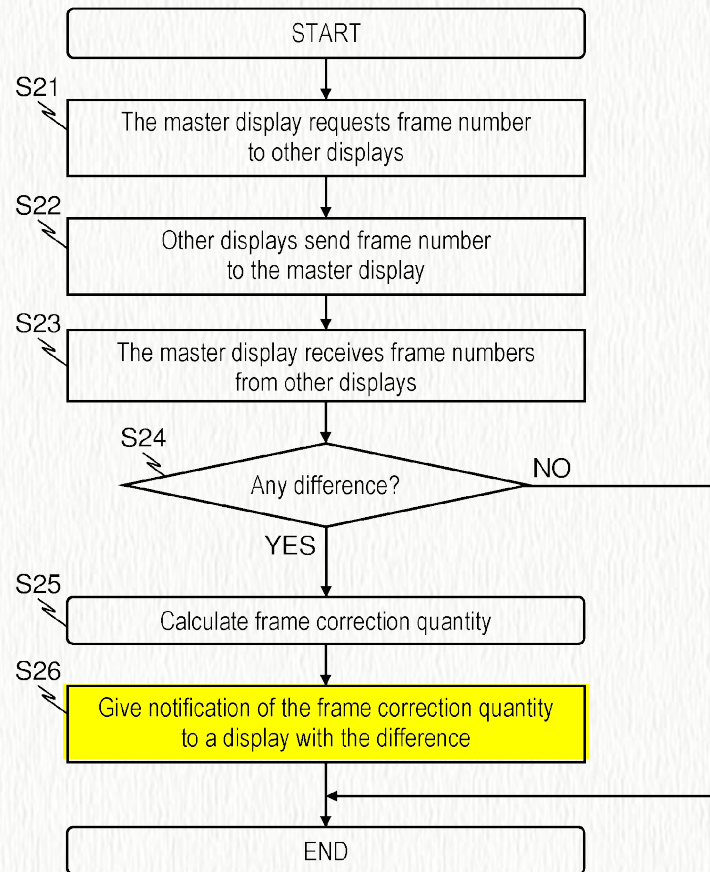
Masumoto, Fig. 1 (excerpted, annotated), [0111]-[0115]

POR, 28-30; Hart, ¶¶112-27

IPR2024-00188 DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

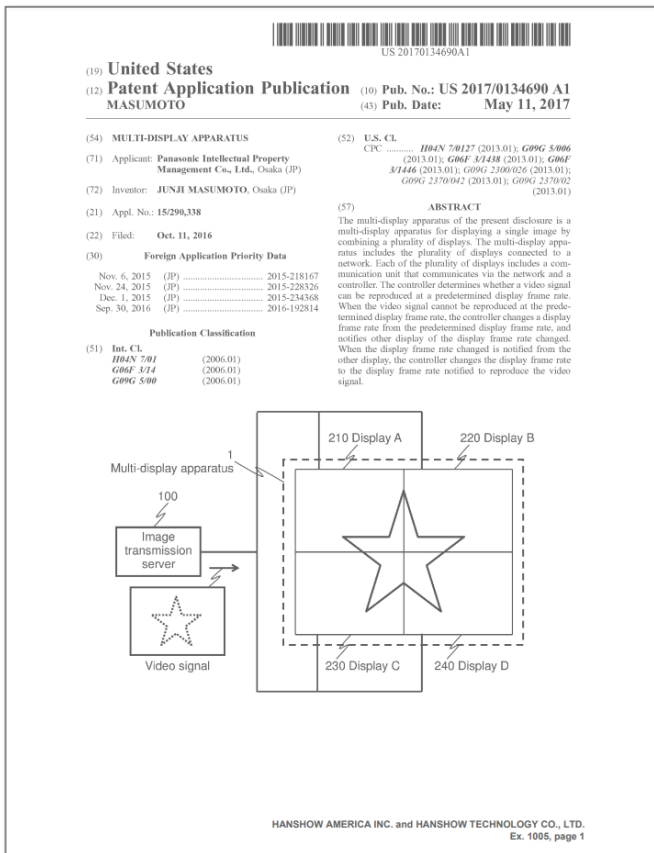
# Masumoto 5th Embodiment

FIG. 9



Masumoto, Fig. 1 (excerpted, annotated), [0118]

# Tomoto's Master Determines Synchronicity By Calculating a "Desired Frame," and Not Its Own Displayed Frame



[0112] Next, display D240 receives a frame number of video signal displayed in each display at specific time from other display A210 to display D230 (Step S23).

**[0113]** Display D240 calculates a desired frame number at  
specific time notified in Step S21, and compares its calcu-  
lation result with the frame number received in step S23 for  
each display to determine any difference (Step S24).

**[0114]** For example, a desired frame number displayed at 2 minutes and 0 second in a 60-fps video signal is frame No. 7200 according to the next formula.

120 sec×60 fps=Frame No. 7200

**[0115]** If the frame number received from display A210 in Step S23 is No. 7190, display on display A210 is delayed from the required value for:

(Frame No. 7200)-(Frame No. 7190)=10 frames, or

$$10 \text{ frames} \times (1/60 \text{ fps}) = 0.16 \text{ sec.}$$

Masumoto, [0112]-[0115]

# Masumoto Does Not Disclose

- Master *never* transmits PPD to other playback devices
- Non-master devices *never* determine synch based on received PPD
- Master device *never* determines whether it is in sync

1. A video playback system (1), comprising a number of playback devices (6A, 6B) to playback a video on their screens (5), each playback device (6A, 6B) comprises a memory to store video data (9) representing said video, and a communication stage to communicate data ~~with each other~~, wherein the devices (6A, 6B) are designed:  
~~to transmit video playback progress data~~ via the communication stage ~~to the other device~~ (6B, 6A); and,  
~~to determine based on the received progress data~~ whether ~~it~~ is in a synchronous or asynchronous playback progress with the other devices (6B, 6A);

'669 Patent, Claim 1

# Only One Master Display

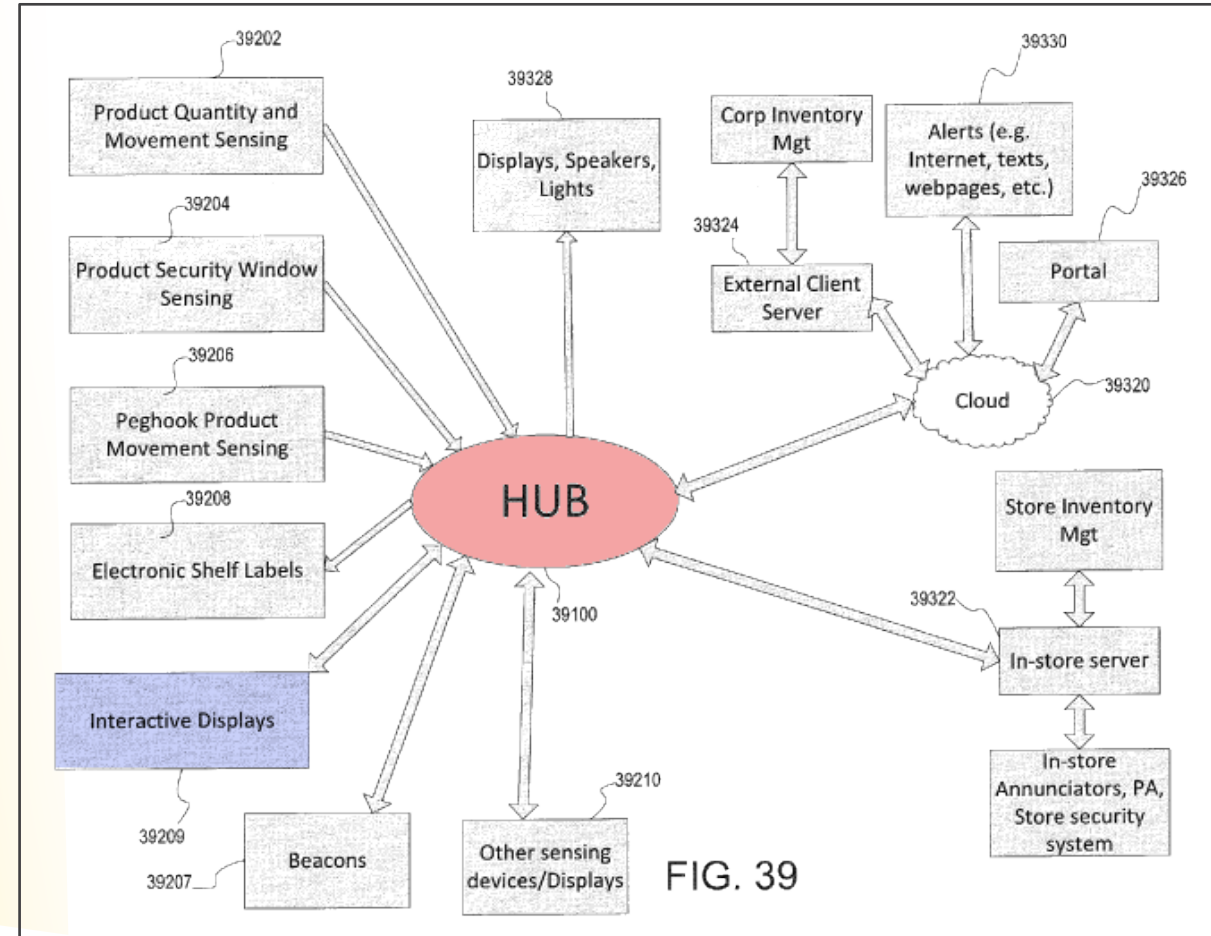
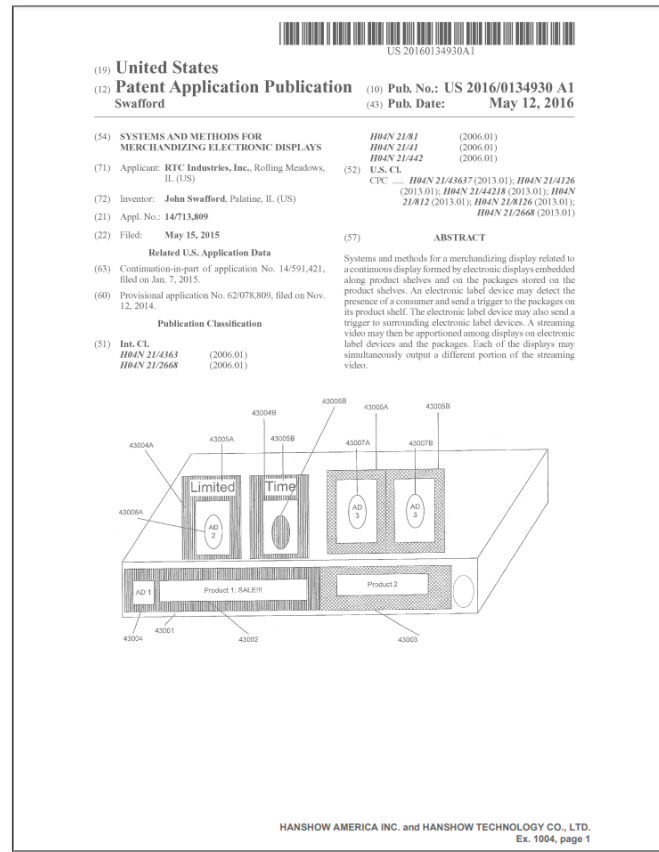
[0076] In multi-display apparatus 1 as configured in FIG. 1, only one display in display A210 to display D240, which are components of multi-display apparatus 1, is designated as a master display for grasping the state of each display A210 to display D240. The master display may be set at initial installation of multi-display apparatus 1, or a system that a display activated first at turning on the power notifies itself as a master display to other displays may be adopted.

Masumoto, [0076]

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# Swafford Does Not Teach Limitation 1.4



Swafford, Fig. 39

# Swafford Does Not Teach Limitation 1.4

1. A video playback system (1), comprising a number of playback devices (6A, 6B) to playback a video on their screens (5), each playback device (6A, 6B) comprises a memory to store video data (9) representing said video, and a communication stage to communicate data with each other, wherein the devices (6A, 6B) are designed:

to transmit video playback progress-data via the communication stage to the other device (6B, 6A); and,  
to determine based on the received progress data whether it is in a synchronous or asynchronous playback progress with the other devices (6B, 6A);

wherein the display devices (6A, 6B) are designed to display product information or product price related information by means of virtual electronic shelf labels displayed within a section of a screen's (5) display area overlapping with a video content or substituting a video content of said section.

'669 Patent, Claim 1

¶87). As shown in FIG. 43, static information about Product 1 or Product 2 (annotated in green) may overlap with a streaming video as a background (annotated in purple). Furthermore, the dynamic advertisement 43004 (annotated in green), information about Product 1 or Product 2 are respectively occupies one section in the displays area 43002 or 43003. The dynamic advertisement 43004 may inherently include same content as the streaming video displayed in the backgrounds of displays 43002 and 43003 by virtue of "advertisement." (Ex.1003, ¶88).

Petition, 28-29

# Swafford Does Not Teach Limitation 1.4

1. A video playback system (1), comprising a number of playback devices (6A, 6B) to playback a video on their screens (5), each playback device (6A, 6B) comprises a memory to store video data (9) representing said video, and a communication stage to communicate data with each other, wherein the devices (6A, 6B) are designed:

to transmit video playback progress-data via the communication stage to the other device (6B, 6A); and,  
to determine based on the received progress data whether it is in a synchronous or asynchronous playback progress with the other devices (6B, 6A);

wherein the display devices (6A, 6B) are designed to display product information or product price related information by means of virtual electronic shelf labels displayed within a section of a screen's (5) display area overlapping with a video content or substituting a video content of said section.

'669 Patent, Claim 1

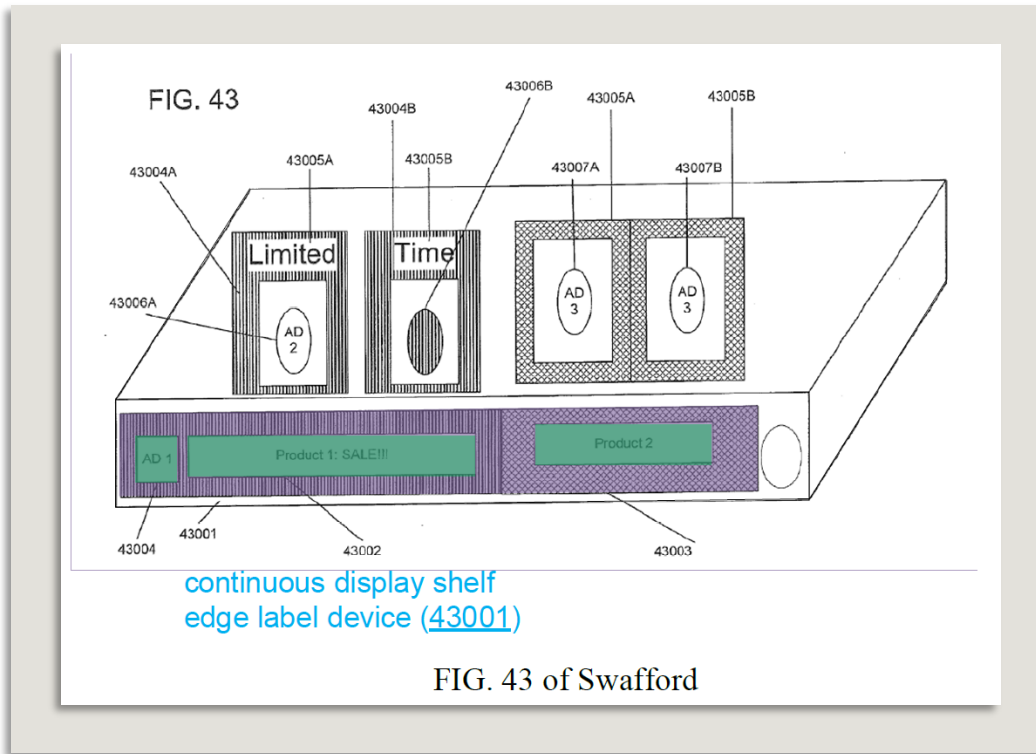
¶87). As shown in FIG. 43, static information about Product 1 or Product 2 (annotated in green) may overlap with a streaming video as a background (annotated in purple). Furthermore, the dynamic advertisement 43004 (annotated in green), information about Product 1 or Product 2 are respectively occupies one section in the displays area 43002 or 43003. The dynamic advertisement 43004 may inherently include same content as the streaming video displayed in the backgrounds of displays 43002 and 43003 by virtue of "advertisement." (Ex.1003, ¶88).

Petition, 28-29

SES argues Swafford does not disclose "overlap." Paper 23, 35. However, claim limitation [1.4] does not always require "overlapping," "substituting" a video content can also meet this limitation. Swafford discloses a dynamic display where "the message may be dynamically and continuously altered." Ex. 1004, [0287]. And "[t]he message may include graphics, text, animations, streaming video, or any combination thereof." *Id.* Therefore, Swafford at least discloses "substituting" video content as in [1.4].

Reply, 17

# Swafford Does Not Teach Limitation 1.4

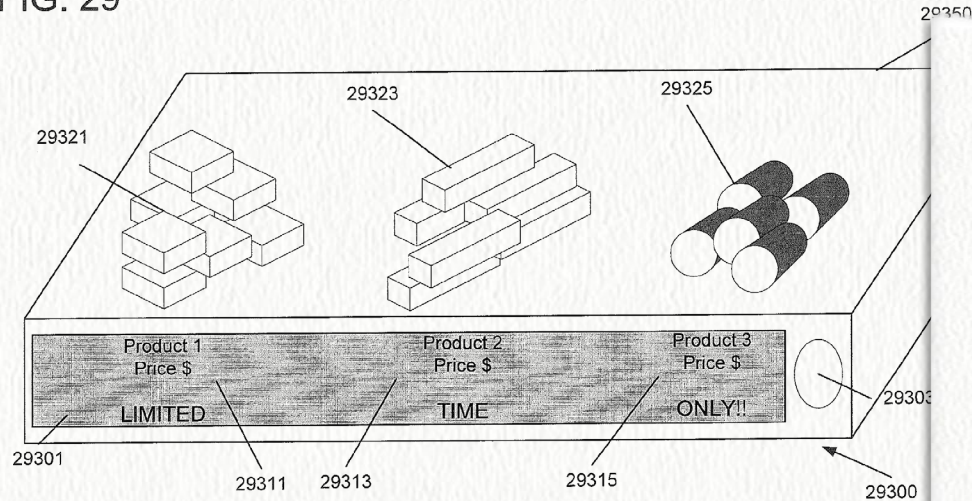


Petition, 14

example discussed above in relation to FIG. 42. Display 43002 provides information on products 43006A and 43006B and may also display a static or dynamic advertisement 43004. For example, the background of display 43002 may display the logo representing the manufacturer of products 43006A and 43006B. Display 43003 can provide information on products 43007A and 43007B. Also the background of display 43003 may display the logo representing the manufacturer of products 43007A and 43007B, where the logo displayed on the background of display 43003 may differ from the logo displayed on the background of display 43002. However, it is contemplated that the backgrounds of displays 43002 and 43003 may display additional information, such as static images or streaming video of products 43006A-B and 43007A-B, promotional content, good-will messages, advertisements or any related information.

# Swafford Does Not Teach Limitation 1.4

FIG. 29



[0287] As the single continuous display **29301** is designed to be dynamic, the displayed messages are not restricted to any particular size or configuration. **Rather, the message may be dynamically and continuously altered,** and may include any combination of any number of single continuous displays, user interfaces, products, and the packages encapsulating the products. In one instance, the separate user interfaces

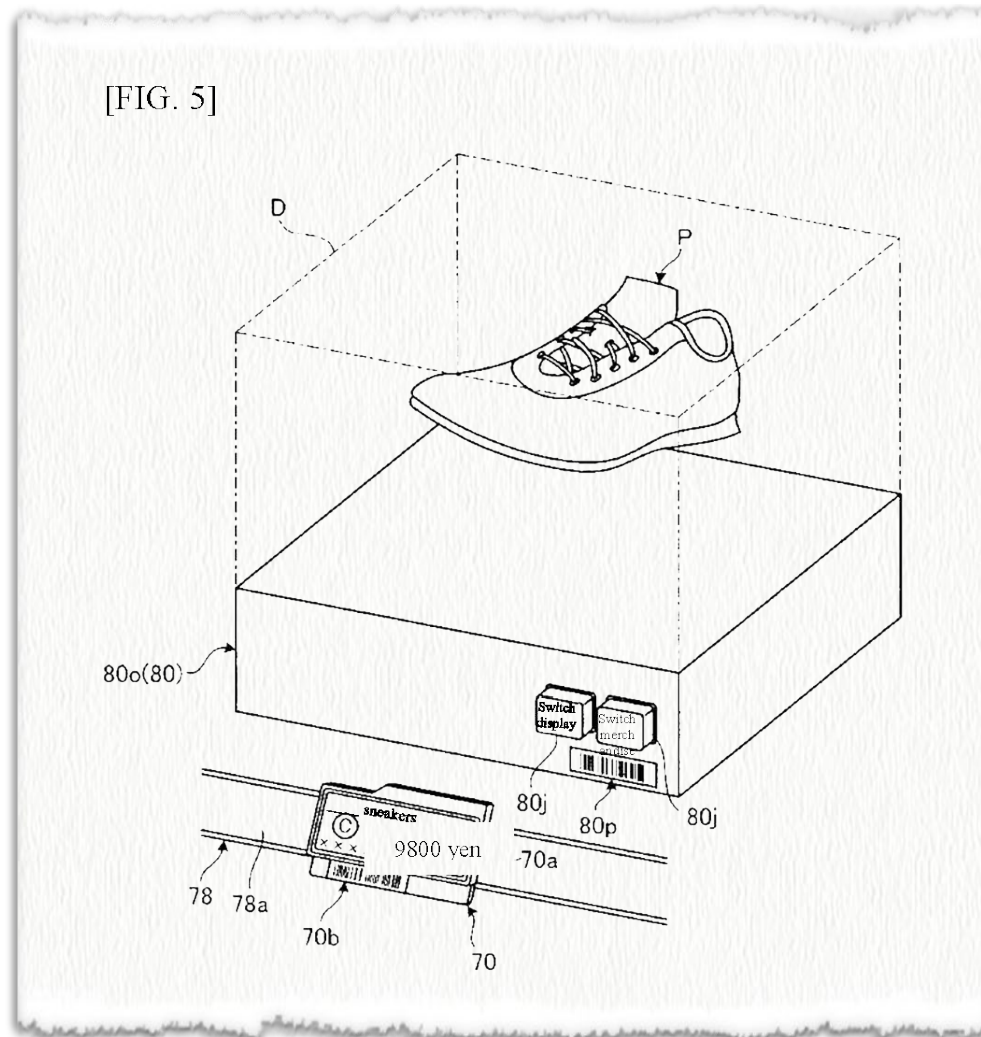
Swafford, [0287]

Swafford, Fig. 29

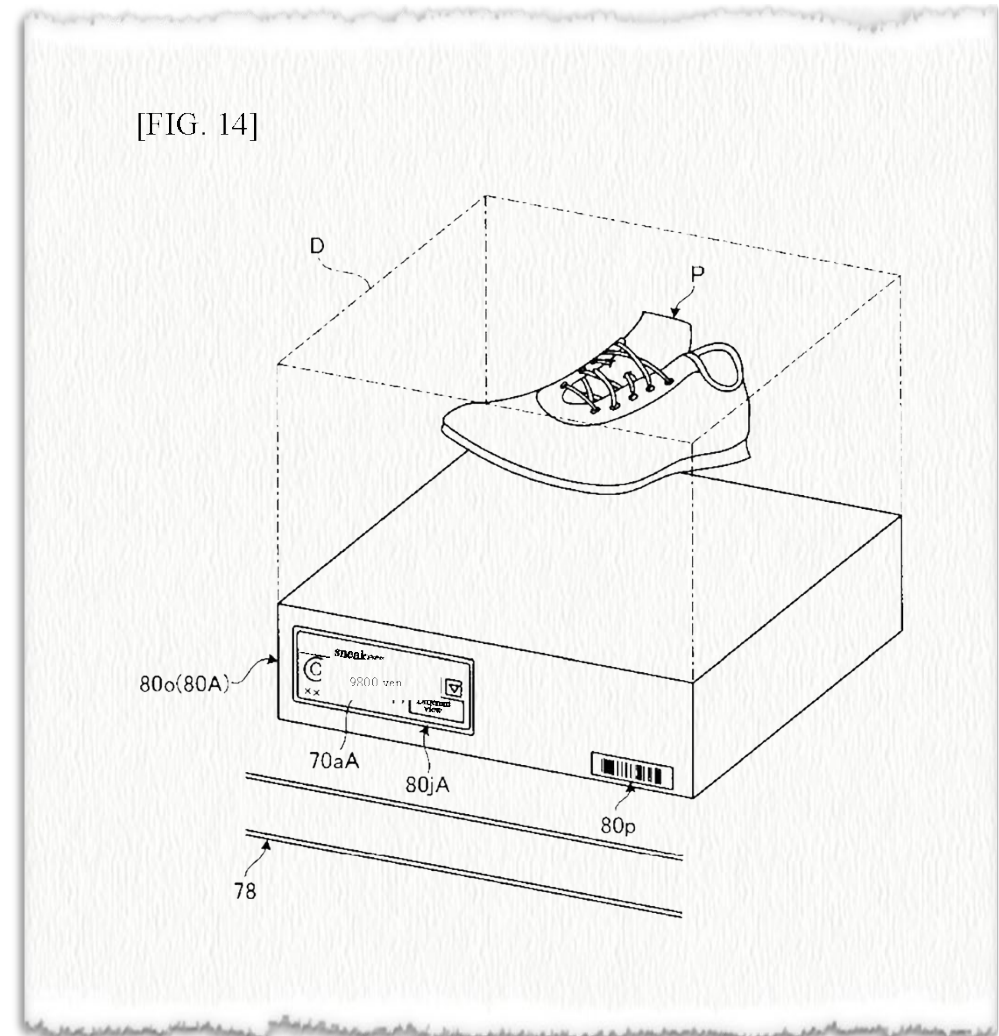
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# Takashi Does Not Teach 1.4

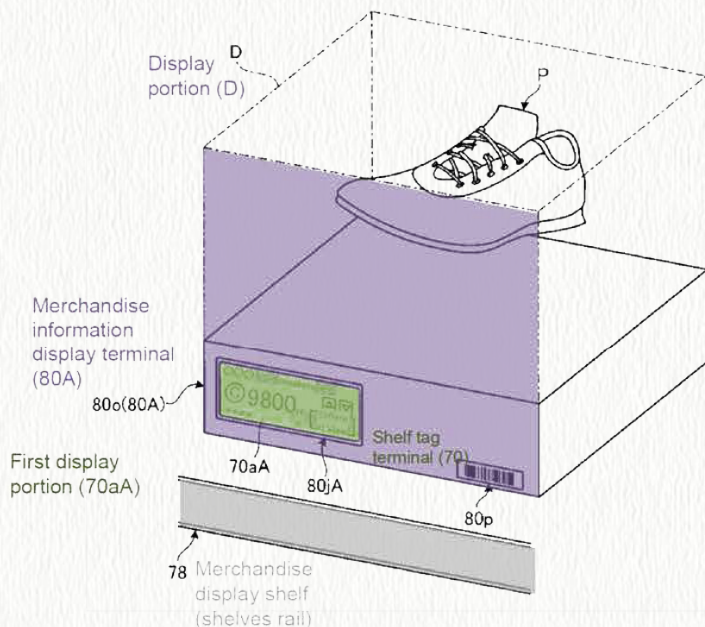


Takashi, Fig. 5



Takashi, Fig. 14

# Takashi Does Not Teach 1.4: Petitioner's Misleading Colorization



【 0 0 5 1 】

Although preferable embodiments of the invention have been described above, the invention is not limited to the above embodiments, and various variations are possible. For example, as shown in FIG. 14, the merchandise information display system 1 may include merchandise an information display terminal 80A having a first display portion 70aA that mainly displays text information about the merchandise, and a display portion D serving as a second display portion that has a display portion larger than the first display portion 70aA and mainly displays images about the merchandise (note, however, that this comparison is of the projection planes generally from a customer's perspective). This can be said to be an integral combination of the shelf tag terminal 70 and the image display terminal 80. Therefore, according to such

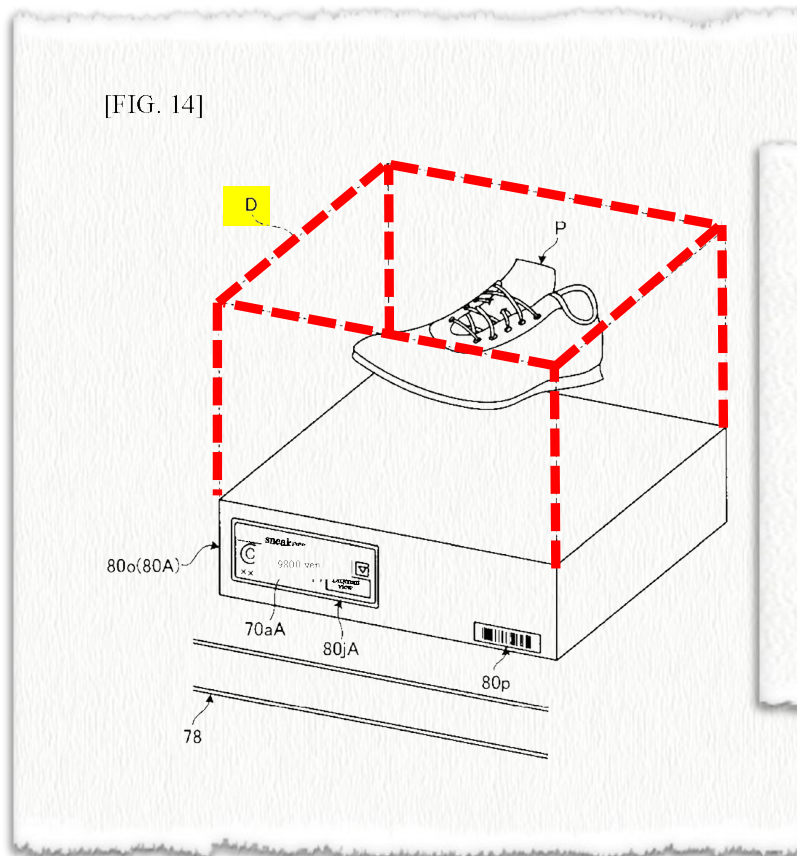
Takashi, [0051]

【 0 0 2 1 】

In addition, in the present embodiment, a housing 80o of the image display terminal 80 is provided with a terminal code display portion 80p showing a barcode as the terminal code, and an input operation portion 80j is also provided for users (customers, store employees, etc.) to perform operations for switching the images P. Note that the image display

Takashi, [0021]

# Takashi Does Not Teach 1.4 Display D Extending Into Housing



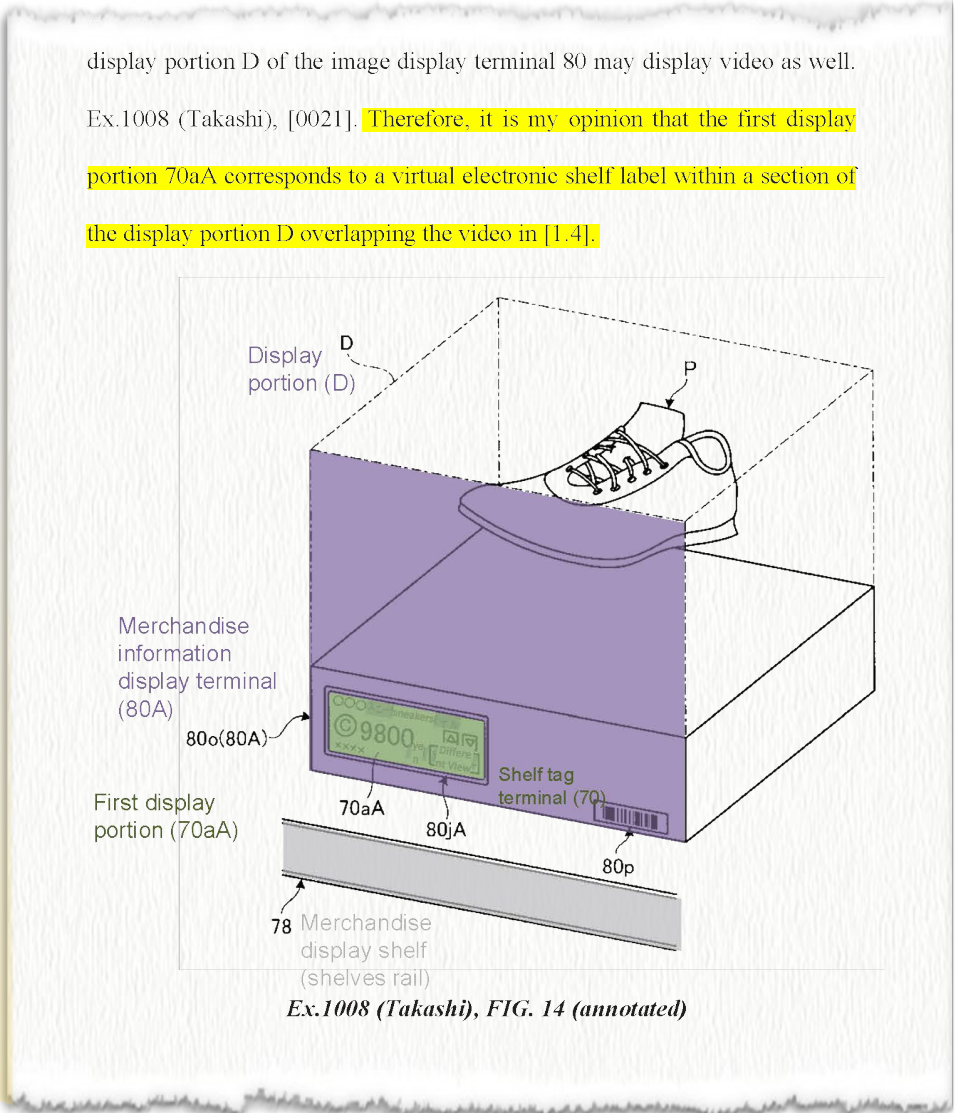
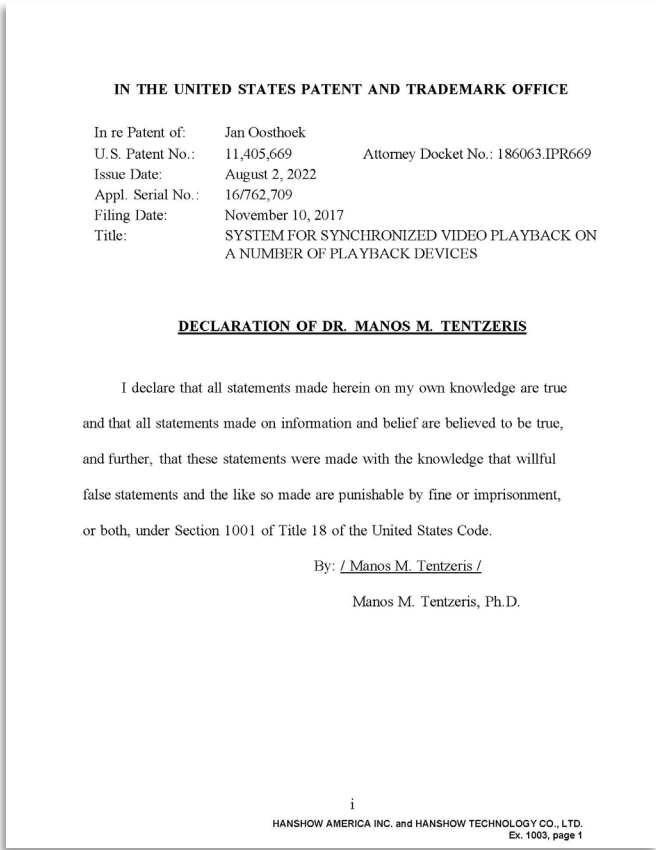
Takashi, Fig. 14 (annotated)

【 0 0 2 0 】

As shown in FIG. 5, the image display terminal 80 is provided with a display area D that is larger than the display portion 70a of the shelf tag terminal 70 (note, however, that this comparison is of the projection planes generally from a customer's perspective), and this display area D displays images P relating to the merchandise. FIG. 5 illustrates a case in which the display device is configured as a display device which displays a three-dimensional image (the image P) showing the appearance of the merchandise. The display device displaying the three-dimensional image can be configured by, for example, applying the known techniques disclosed in JP 2009-145855 A, JP 2007-199427 A, JP 2005-234240, and the like. It is also possible to configure the image display terminal 80 as a known display device (e.g., a cathode ray tube (CRT) or liquid crystal display (LCD)) that displays two-dimensional images of the merchandise. In such cases, the display area D is flat.

Takashi, [0020]

# Takashi Does Not Teach 1.4: Petitioner's Misleading Colorization



# “*Could Be Overlapping*” Is Insufficient

Therefore, Takashi, in [0051], discloses two display portions 70aA and D without limiting the location relationship between them. *EWP Corp.*, 755 F.2d 898, 907; *In re Applied Materials, Inc.*, 692 F.3d 1289, 1298. In other words, a POSITA, after reading [0051], would understand the two display portions 70aA and D could be overlapping. Ex.1003, ¶180. And “the structure has to be integrated so it can not be a part one from the other.” Ex.2002, 169:24-170:10.

Reply, 25

# Petitioner Fails To Carry Its Burden

- **No disclosure of limitations 1.3(b) and (c)**
  - Masumoto does not disclose limitations 1.3(b) and (c)
- **No disclosure of limitation 1.4**
  - Swafford does not disclose limitation 1.4
  - Takashi does not disclose limitation 1.4
- **No disclosure of dependent claim 7 or 11**
  - Masumoto does not disclose the broadcast limitation of Claim 7
  - Masumoto does not disclose the UDP multicast limitation of Claim 11
- **Failed to carry burden as to all claims: “communication stage”**
- **No motivation to combine**

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  - Masumoto does not disclose the UDP multicast limitation of Claim 11
- **Failed to carry burden as to all claims: “communication stage”**
- **No motivation to combine**

# Masumoto Does Not Teach “Broadcast”

7. The system (1) according to claim 1, wherein each device is designed to broadcast adjustment data for adjusting the playback progress of the devices (6A, 6B) over its communication stage if it detects an asynchronous playback progress.

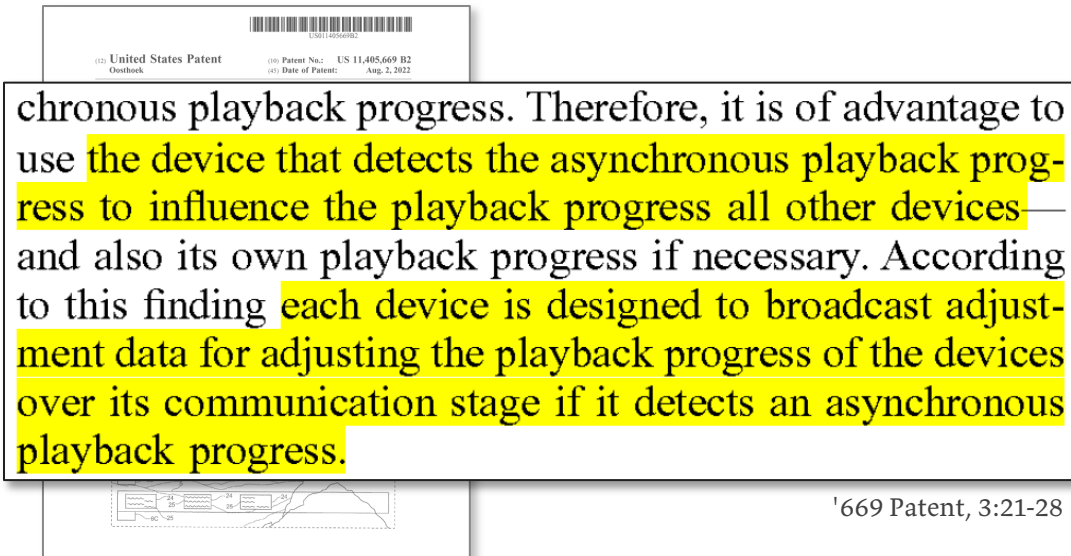
'669 Patent, Claim 7

## 42



Masumoto, [0117]-[0118]

# Broadcasting Does Not Discriminate by Recipient



162. Petitioner ignores the “broadcasting” requirement and focuses only on the fact that, according to it, Masumoto transmits adjustment data. Petition, 41-43. In my view, however, Masumoto does not disclose broadcasting adjustment data.

“Broadcast systems usually also allow the possibility of addressing a packet to *all* destinations by using a special code in the address field. When a packet with this code is transmitted, it is received and processed by every machine on the network. This mode of operation is called **broadcasting**.” Ex. 2001, 17 (emphasis in original). Instead, Masumoto discloses sending a notification of the frame correction quantity that is calculated for, and transmitted to, a particular device. Ex. 1005, [0117]-[0119], Fig. 9. “In Step S26, display A210 receiving the frame correction quantity

Hart, ¶162

# On Reply, Petitioners Contend that “Transmitting” and “Broadcasting” Are the Same, and Rely on New Embodiments

SES argues Masumoto does not disclose broadcasting because it is “the sending of data to multiple recipients.” Paper 23, 39. However, the ’669 Patent specification of the defines “broadcast” as “transmit” and uses the two terms interchangeably. Ex.1001, 1:50-54 (“wherein the devices are designed to **transmit (broadcast)** video playback progress-data via the communication stage to the other device”). *Phillips v. AWH Corp.*, 415 F.3d 1303, 1321 (Fed. Cir. 2005) (*en banc*)

Regardless, Masumoto explicitly discloses sending adjustment data for adjusting the devices’ playback progress to multiple recipients. Ex.1005, [0079] (“A display frame rate determined based on comparison result in Step S7 is notified from display D240, which is the master display, to other display A210 to display C230 (Step S8).”)

# Claims Use Broadcasting and Transmitting Differently

1. A video playback system (1), comprising a number of playback devices (6A, 6B) to playback a video on their screens (5), each playback device (6A, 6B) comprises a memory to store video data (9) representing said video, and a communication stage to communicate data with each other, wherein the devices (6A, 6B) are designed:

to transmit video playback progress-data via the communication stage to the other device (6B, 6A); and, to determine based on the received progress data whether it is in a synchronous or asynchronous playback progress with the other devices (6B, 6A);

wherein the display devices (6A, 6B) are designed to display product information or product price related information by means of virtual electronic shelf labels displayed within a section of a screen's (5) display area overlapping with a video content or substituting a video content of said section.

'669 Patent, Claim 1

7. The system (1) according to claim 1, wherein each device is designed to broadcast adjustment data for adjusting the playback progress of the devices (6A, 6B) over its communication stage if it detects an asynchronous playback progress.

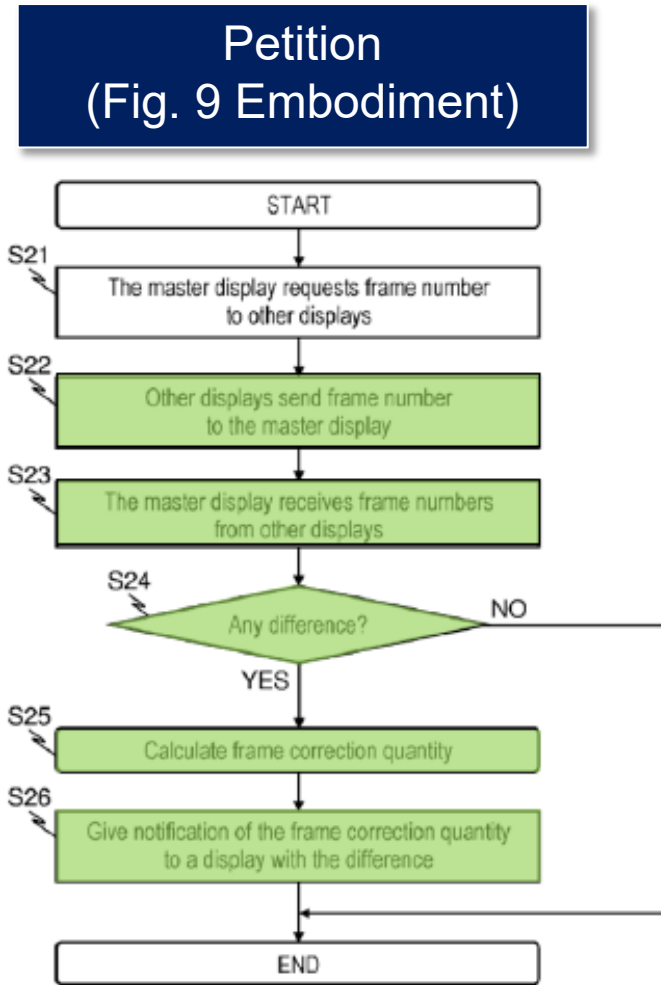
'669 Patent, Claim 7

# Claims Use Broadcasting and Transmitting Differently

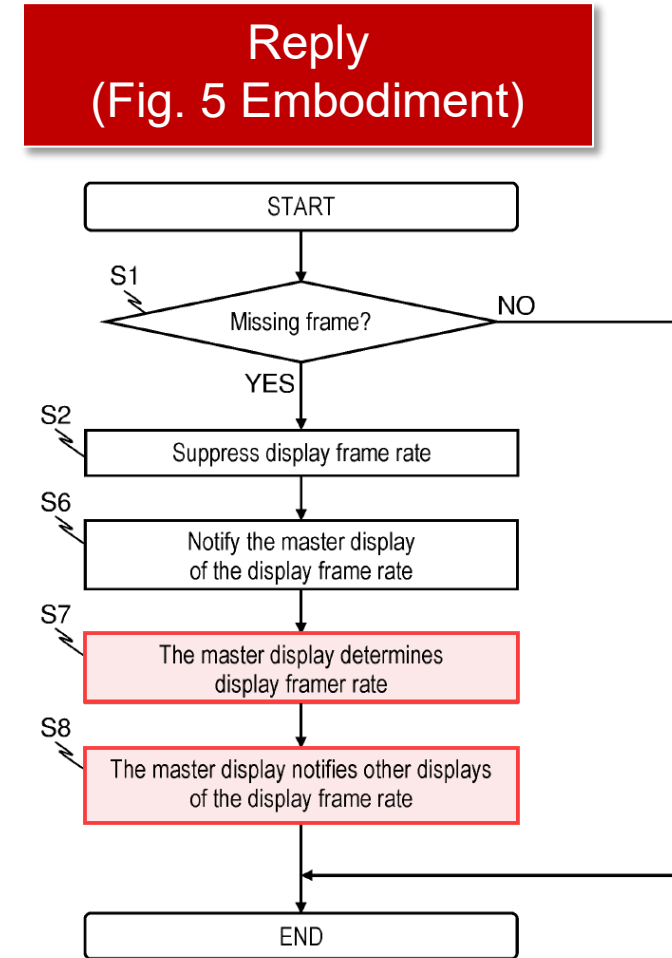
This object is achieved by a system according to claim 1. Therefore, the subject matter of the invention is a video playback system, comprising a number of playback devices to playback a video on their screens, each playback device comprises a memory to store video data representing said video, and a communication stage to communicate data with each other, wherein the devices are designed to transmit (broadcast) video playback progress-data via the communication stage to the other device and to determine based on the received progress-data whether it is in a synchronous or asynchronous playback progress with the other devices.

'669 Patent, 1:44-54

# Petitioner's New Argument Should Be Disregarded and Fails



Petition, 43  
(citing Masumoto, Fig. 9)



Reply, 19  
(citing Masumoto, [0079] (describing Steps S7, S8))

# Petitioners' New Reliance on Figure 5 Is Untimely



*Henny Penny Corp. v. Frymaster LLC*, 938 F.3d 1324, 1330-31 (Fed. Cir. 2019) (cleaned up)

“[A]n IPR petitioner may not raise in reply an entirely new rationale for why a claim would have been obvious.”

# Petitioner Fails To Carry Its Burden

- **No disclosure of limitations 1.3(b) and (c)**
  - Masumoto does not disclose limitations 1.3(b) and (c)
- **No disclosure of limitation 1.4**
  - Swafford does not disclose limitation 1.4
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- **No motivation to combine**

# Claim 11 Requires the Use of UDP Multicast

US011405669B2

(12) United States Patent  
Oosthoek

(10) Patent No.: US 11,405,669 B2  
(45) Date of Patent: Aug. 2, 2022

(54) SYSTEM FOR SYNCHRONIZED VIDEO  
PLAYBACK ON A NUMBER OF PLAYBACK  
DEVICES

(58) Field of Classification Search  
CPC ..... H04N 21/231; H04N  
21/242; H04N 21/430; H04N 21/4305;  
H04N 21/4307; H04N 21/4788; H04N  
21/8547; G06F 3/1423  
See application file for complete search history.

(71) Applicant: SES-Imagotag GmbH, Fernitz-Mellach  
(AT)

(72) Inventor: Jan Oosthoek, Landmeer (NL)

(73) Assignee: SES-IMAGOTAG GMBH,  
Fernitz-Mellach (AT)

(\*) Notice: Subject to any disclaimer, the term of this  
patent is extended or adjusted under 35  
U.S.C. 154(b) by 0 days.

(21) Appl. No.: 16/762,709

(22) PCT Filed: Nov. 10, 2017

(86) PCT No.: PCT/EP2017/078844  
§ 371 (c)(1),  
(2) Date: May 8, 2020

(87) PCT Pub. No.: WO2019/091565  
PCT Pub. Date: May 16, 2019

(65) Prior Publication Data  
US 2021/0176505 A1 Jun. 10, 2021

(51) Int. Cl.  
H04N 21/237 (2011.01)  
G06F 3/14 (2006.01)  
H04N 21/231 (2011.01)  
H04N 21/43 (2011.01)  
H04N 21/4402 (2011.01)

(52) U.S. Cl.  
CPC ..... H04N 21/237 (2013.01); G06F 3/1423  
(2013.01); H04N 21/231 (2013.01); H04N  
21/4302 (2013.01); H04N 21/4402 (2013.01)

(56) U.S. P.  
6,946,709 A \*  
9,086,838 B2 \*  
10,643,609 B1 \*  
10,713,908 B2 \*  
2002/0129290 A1 \*

(74) Attorney, Agent,  
Associates, LLC

(57) ABSTRACT  
A video playback system, comprising a number of playback  
devices to playback a video on their screens, each playback  
device comprises a memory to store video data representing  
said video, and a communication stage to communicate data  
with each other, wherein the devices are designed to transmit  
video playback progress-data via the communication stage  
to the other device and to determine based on the received  
progress-data whether it is in a synchronous or asynchro-  
nous playback progress with the other devices.

15 Claims, 4 Drawing Sheets

11. The system (1) according to claim 1, wherein the communication stage is designed to use UDP multicast data packets for the communication.

'669 Patent, Claim 11

# Petitioners First Focus on UDP (Not Multicast), and then Conflate Them As Interchangeable in the '669 Patent

## Petition

UDP is a well-known communication protocol. A POSITA would understand to use UDP multicast data packets for the communication in Swafford. (Ex.1003, ¶¶136-137).

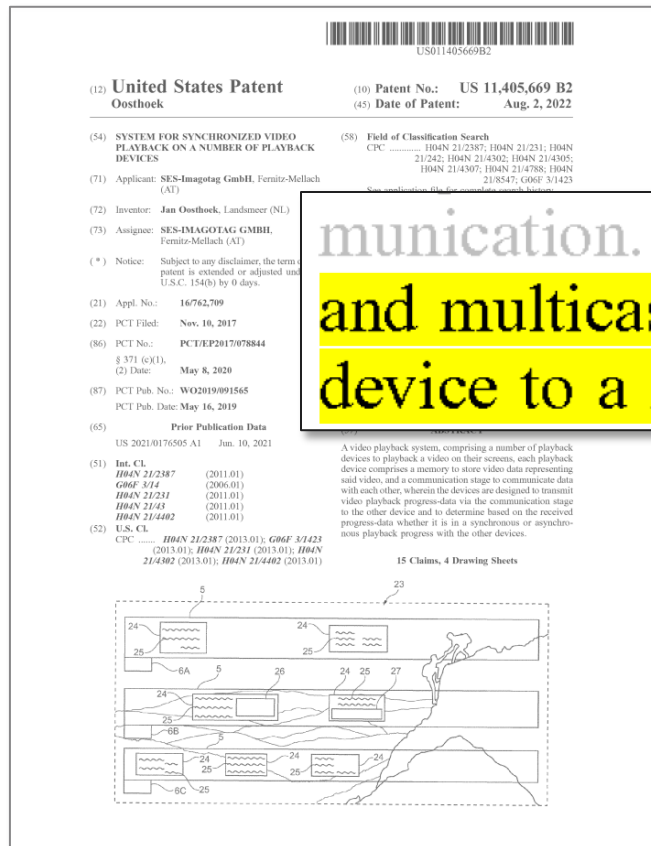
Petition, 46

## Reply

3:59-67. The '669 Patent does not distinguish UDP communication from UDP multicast data for progress data. Therefore, a POSITA would immediately recognize that he could use the well-known UDP protocol for communication. Paper 2, 46; Ex.1003, ¶137.

Reply, 20

# The '669 Patent Does Not Treat UDP and UDP Multicast as the Same



munication. Here UDP stand for “User Datagram Protocol” and multicast means a transmission of a message from one device to a number of devices.

'669 Patent, 3:65-67

# Petitioners Offer No Reason to Modify the Prior Art to Use UDP Multicast

166. For its contention that Swafford discloses UDP, Petitioner cites Swafford's disclosure that it may use a wired communication path, through a network. Petition, 46 (citing Ex. 1004, [0274]). From this limited disclosure of a wired network, Petitioner asserts that element [11.1] is met because "UDP is a well-known communication protocol." *Id.*

167. But being a well-known protocol is not enough to show that a POSITA would use UDP in Swafford (or Masumoto). Petitioner's expert relies on Kipp (a

Hart Decl., ¶¶166-67

THE WITNESS: Of some sensitive transaction, maybe some banking video or some board room meeting video, no matter whether it was downloaded or streamed, I would choose TCPIP over UDP because of security purposes.

Ex. 2002, Tentzeris Deposition, 68:19-22

# Petitioner Fails To Carry Its Burden

- No disclosure of limitations 1.3(b) and (c)
  - Masumoto does not disclose limitations 1.3(b) and (c)
- No disclosure of limitation 1.4
  - Swafford does not disclose limitation 1.4
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  - Masumoto does not disclose the UDP multicast limitation of Claim 11
- **Failed to carry burden as to all claims: “communication stage”**
- No motivation to combine

# “Communication stage”

1. A video playback system (1), comprising a number of playback devices (6A, 6B) to playback a video on their screens (5), each playback device (6A, 6B) comprises a memory to store video data (9) representing said video

a communication stage to communicate data with other, wherein the devices (6A, 6B) are designed:

to transmit video playback progress-data via the communication stage to the other device (6B, 6A); and, to determine based on the received progress data whether it is in a synchronous or asynchronous playback progress with the other devices (6B, 6A);

wherein the display devices (6A, 6B) are designed

to display product information or product price related information by means of virtual electronic shelf labels displayed within a section of a screen's (5) display area overlapping with a video content or substituting a video content of said section.

The first potential issue is whether “communication stage to communicate data with each other” as recited in claim 1 is a means-plus-function limitation that invokes 35 U.S.C. § 112 (f). Neither party has contended that this is a means-plus-function limitation even though it recites a means, “communication stage,” plus a function, “to communicate data with each other.” We appreciate that, because the word “means” is not recited,

DI, 11

'669 Patent, Claim 1

# Functional Analysis Not Permitted

Claim 1 recites a function without reciting sufficient structure to perform the function, which overcomes the rebuttable presumption that the identified phrase is not a means-plus-function limitation. Claim 1 recites each playback device comprises “a communication stage to communicate with each other.” “Communication stage,” by itself, denotes no particular structure or even a class of structure, instead, it encompasses any structure(s) performing the communication functions. The

Further, the specification discloses no specific structure for the communication stage other than it being part of each playback device that performs the communication function. Ex. 1001, 1: 49-54, 2: 18-20, 3: 24-28, 3: 60-65. The ’669

Reply, 11-12

# Functional Analysis Not Permitted

(3) How the challenged claim is to be construed. Where the claim to be construed contains a means-plus-function or step-plus-function limitation as permitted under 35 U.S.C. 112(f), the construction of the claim must identify the specific portions of the specification that describe the structure, material, or acts corresponding to each claimed function

37 C.F.R. §42.104(b)(3)

# Functional Analysis Not Permitted

1288

582 FEDERAL REPORTER, 3d SERIES

1519–20. The phrase “clearly established Federal law” “refers to the [Court’s] holdings,” not dicta. *Id.* at 412, 120 S.Ct. at 1523.

[31] The state habeas court’s decision here is not contrary to clearly established U.S. Supreme Court precedent because Rhode’s case is not materially indistinguishable from *Williams* and *Rompilla*. Unlike counsel in those two cases, Rhode’s counsel did not, as explained above, perform deficiently. Unlike *Williams*’ counsel, who did not adequately investigate for mitigating evidence, Rhode’s counsel strategically decided not to present certain mitigating evidence after a thorough investigation. *Cf. Williams*, 529 U.S. at 396, 120 S.Ct. at 1514 (“[T]he failure to introduce the comparatively voluminous amount of evidence that did speak in *Williams*’ favor was not justified by a tactical decision to focus on *Williams*’ voluntary confession.”). And, unlike *Rompilla*’s counsel, Rhode’s counsel did not fail to examine any file that the prosecutor warned would be used at trial. *Cf. Rompilla*, 545 U.S. at 377, 125 S.Ct. at 2460 (“hold[ing] that . . . [a capital defendant’s] lawyer is bound to make reasonable efforts to obtain and review materials that counsel knows the prosecutor will probably rely on as evidence of aggravation at the sentencing phase of trial”).

The state habeas court’s decision is not contrary to clearly established U.S. Supreme Court precedent.

#### IV. CONCLUSION

The district court did not err by denying federal habeas relief as to Rhode’s claim that counsel rendered ineffective penalty phase investigation and presentation. Rhode has failed to show that the state habeas court’s decision is contrary to, or an unreasonable application of, clearly established Federal law, or resulted in a decision based on an unreasonable determina-

tion of the facts in light of the evidence presented.

AFFIRMED.



FRESENIUS USA, INC. and Fresenius Medical Care Holdings, Inc.,  
Plaintiffs–Appellants,

v.

BAXTER INTERNATIONAL, INC. and  
Baxter Healthcare Corporation,  
Defendants–Cross Appellants.

Nos. 2008–1306, 2008–1331.

United States Court of Appeals,  
Federal Circuit.

Sept. 10, 2009.

Rehearing En Banc Denied  
Nov. 18, 2009.

**Background:** Competitor brought declaratory judgment action against patentee, seeking declaration that patents for a kidney dialysis machine with a touch screen user interface were invalid as anticipated, and patentee filed counterclaim for infringement. The United States District Court for the Northern District of California, Sandra Brown Armstrong, J., entered judgment in favor of patentee, 2007 WL 518804, 2008 WL 928496, and parties appealed.

**Holdings:** The Court of Appeals, Gajarsa, Circuit Judge, held that:

- (1) expert testimony was sufficient to establish that claim limitation requiring the touch screen to display a “plurality of indicia” existed in prior art;
- (2) evidence was insufficient to establish that claim requiring a “means for delivering the dialysate to a dialysate

[13, 14] It is firmly established in our

precedent that a structural analysis is re-

quired when means-plus-function limita-

tions are at issue; a functional analysis

alone will not suffice. *See, e.g., CytoLogix*

*Corp. v. Ventana Med. Sys.*, 424 F.3d 1168,

1178 (Fed.Cir.2005) (“To establish in-

fringement under § 112, ¶ 6, it is insuffi-

cient for the patent holder to present testi-

*Fresenius USA, Inc. v. Baxter Int’l, Inc.*, 582  
F.3d 1288, 1299 (Fed. Cir. 2009)

# Petitioner Fails To Carry Its Burden

- **No disclosure of limitations 1.3(b) and (c)**
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- **No motivation to combine**

# Petitioner Presents Two Grounds

| Ground | Prior Art                 |
|--------|---------------------------|
| 1      | Swafford + Masumoto       |
| 2      | Masumoto + Kipp + Takashi |

Petition, 2-3

# Petitioner Must Prove the Combinations are Obvious



*Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016)

“In an IPR, the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable.” (citing 35 U.S.C. § 312(a)(3))

*35 U.S.C. § 312(a)(3)*

IPR petitions must identify “with particularity...the evidence that supports the grounds for the challenge to each claim.”

# The Board Was Skeptical of the Combinations

[Trials@uspto.gov](mailto:Trials@uspto.gov)  
571-272-7822

Paper 11  
Date: May 20, 2024

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

HANSHOW AMERICA INC. and  
HANSHOW TECHNOLOGY CO., LTD.,  
Petitioner,

v.

SES-IMAGOTAG GMBH,  
Patent Owner.

IPR2024-00188  
Patent 11,405,669 B2

Before JAMES P. CALVE, BRIAN J. McNAMARA, and  
TERRENCE W. McMILLIN, *Administrative Patent Judges*.

McMILLIN, *Administrative Patent Judge*.

DECISION  
Granting Institution of *Inter Partes* Review  
35 U.S.C. § 314

having different widths and heights.” *Id.* Although it is true that the video playback displays in Swafford and Masumoto are quite different and require different considerations, at least at this stage, we determine that does not

DI, 40

# The Board Was Skeptical of the Combinations

[Trials@uspto.gov](mailto:Trials@uspto.gov)  
571-272-7822

Paper 11  
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UNITED STATES PATENT AND TRADEMARK OFFICE

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35 U.S.C. § 314

However, we do agree with Patent Owner that Petitioner's contention that the cited combination of teachings is supported "because of the structural similarity between Swafford's and Masumoto's devices" (Pet. 54–55) does not provide a motivation to combine. Prelim. Resp. 35–36. The only structural similarity relied on by Petitioner in support of this argument is that Swafford and Masumoto both disclose use of LCDs. *See* Pet. 54–55. Petitioner provides an inadequate explanation as to how or why the use of LCDs which are a common form of video displays would motivate the combination of the relied-upon teachings. But, this deficiency does not

DI, 41

# The Board Instituted Without Competing Testimony

[Trials@uspto.gov](mailto:Trials@uspto.gov)  
571-272-7822

Paper 11  
Date: May 20, 2024

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

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IPR2024-00188  
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TERRENCE W. McMILLIN, *Administrative Patent Judges*.

McMILLIN, *Administrative Patent Judge*.

DECISION  
Granting Institution of *Inter Partes* Review  
35 U.S.C. § 314

Petitioner filed a Declaration of Dr. Manos M. Tentzeris. (Ex. 1003) in support of its Petition. Patent Owner did not submit any testimony in support of its arguments, so the testimony of Dr. Tentzeris is un rebutted by any contrary testimony at this stage.

DI, 7

Patent Owner argues that all of the articulated rationales in the Petition for combining Masumoto, Kipp, and Takashi “are flawed.” Prelim. Resp. 37. We have considered Patent Owner’s arguments that are unsupported by any expert testimony (*see id.* at 37–41), but give more weight to the showing in the Petition that is supported by expert declaration testimony (*see* Pet. 82–87 (citing Ex. 1003 ¶¶ 218, 224–232)).

DI, 60

# Patent Owner Provided Dr. Hart's Testimony, Which Petitioner Did Not Rebut

IPR2024-00188  
Declaration of John Hart, Ph.D.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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HANSHOW AMERICA INC. and HANSHOW TECHNOLOGY CO., LTD.  
Petitioner,

v.

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Patent Owner.

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Case No. IPR2024-00188  
U.S. Patent No. 11,405,669

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DECLARATION OF JOHN HART, PH.D.

59. Notably, while Petitioner's expert, Dr. Tentzeris, may meet his specific definition of a POSITA, I believe that he is not an expert in the relevant subject matter of the '669 Patent. Dr. Tentzeris has experience with "antennas, fractal RF structures and circuit design...." Ex. 1003, ¶ 2. Based on my review, Dr. Tentzeris does not describe any experience with or expertise in digital video, let alone video synchronization between multiple playback devices. I reviewed Dr. Tentzeris's CV, as well as the discussion of experience in his deposition, and I found no expertise in any of the '669 Patent's subject matter areas of pictorial communication, television,

Hart, ¶ 59

# Dr. Hart's Testimony is Determinative

8. I am a tenured full Professor of Computer Science in the Siebel School of Computing and Data Science at the University of Illinois at Urbana-Champaign, a program consistently ranked in the top five by U.S. News & World Report. As an educator for the past three decades, I have taught courses to thousands of students on a variety of topics in visual computing, including computer graphics, data visualization, virtual reality and multimedia systems. I also strive to provide opportuni-

10. I am an internationally recognized leader in the field of visual computing. The Association for Computing Machinery (ACM) is the main worldwide or-

11. This report is on the subject of multimedia systems for synchronizing the display of video. I have worked on a variety of methods and multimedia systems for the processing and display of video. This work has included multimedia systems

15. I have also worked on the synchronization of multiple video streams across networks between multiple clients for applications in virtual reality.

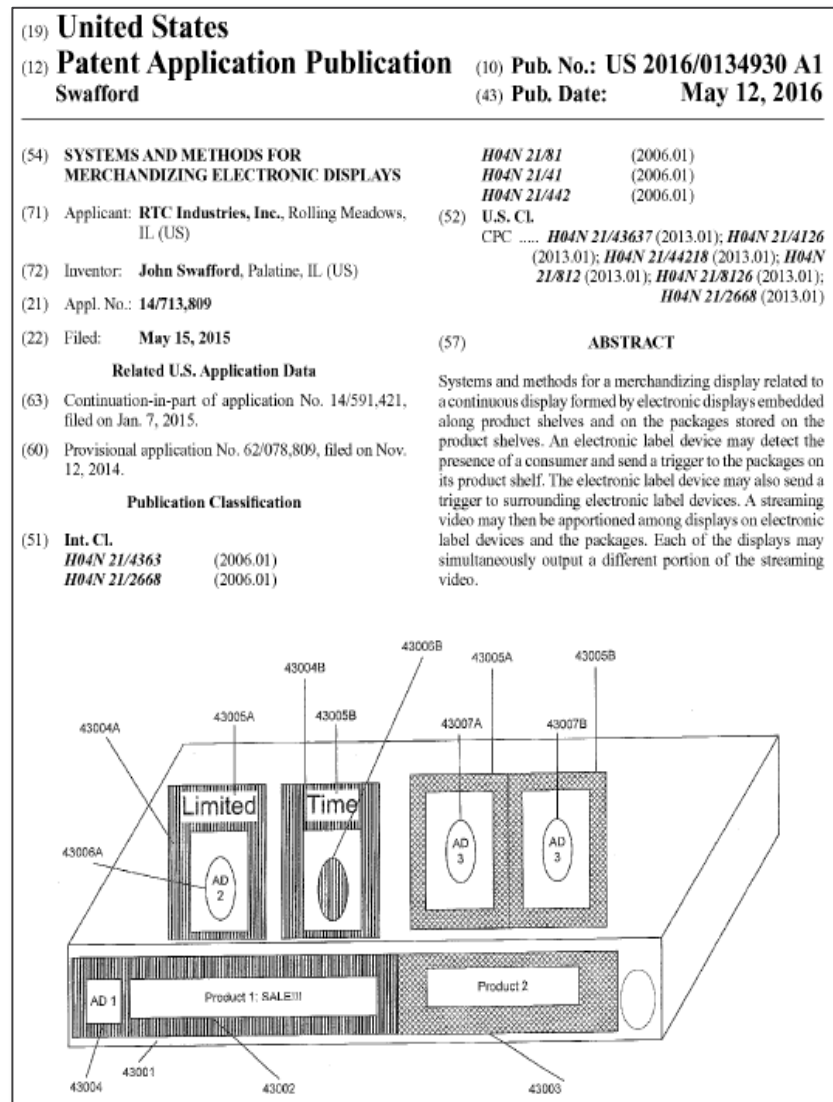
Hart, ¶¶ 8, 10, 11, 15

2. As described in my curriculum vitae, I have more than 30 years of industry and academic experience. I have experience with antennas, fractal RF structures and circuit design for these systems. As a professor of Electrical and Computer Engineering, I have taught courses relating to antenna and electromagnetic technologies. A complete list of my teaching positions, honors, and classes taught

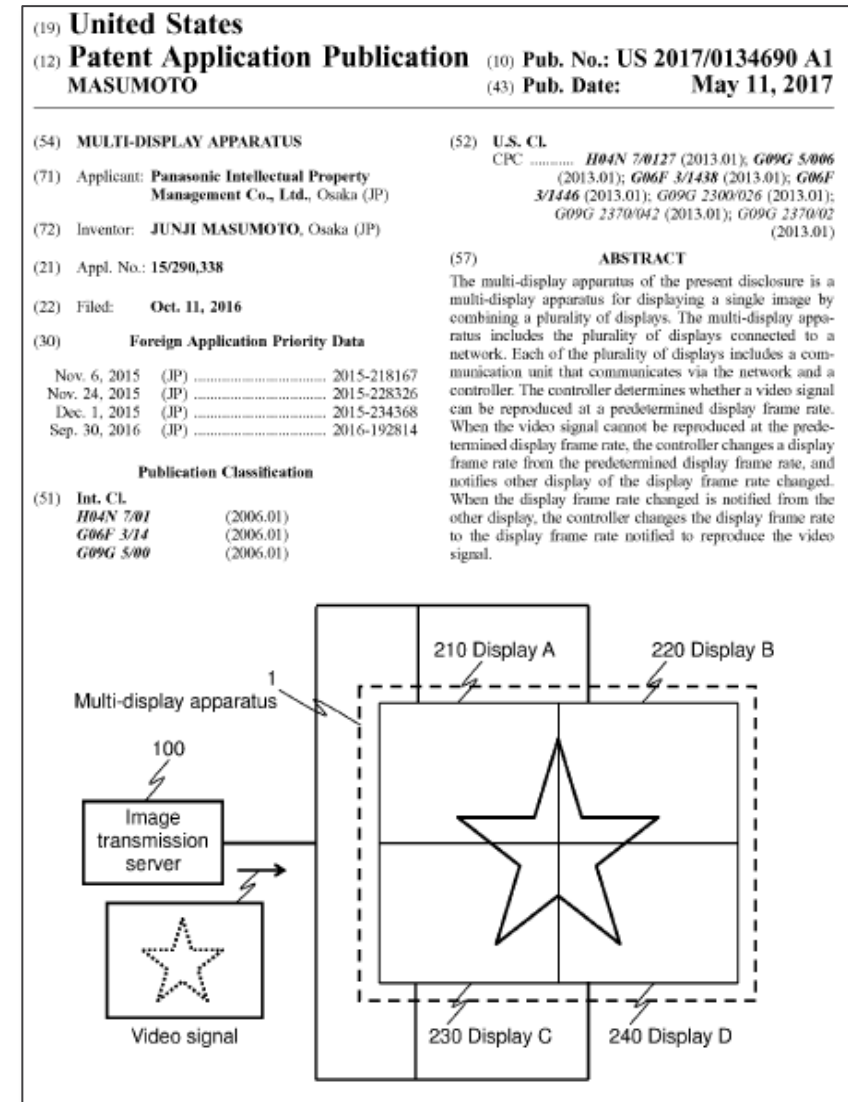
8. I have authored or contributed to over 30 books and 850 refereed journal and conference papers; spoke in over 140 presentations, many of which relate to antennas, antenna arrays, RFID systems, and other modes of wireless communication and electronics design. A complete list of my publications and conference presentations is included in my *curriculum vitae*.

Tentzeris, ¶¶ 2, 8

# Ground 1: Swafford and Masumoto Differ Fundamentally



Swafford, Cover (with Fig. 43)



Masumoto, Cover (with Fig. 1)

Ex. 1004, Ex. 1005

IPR2024-00188 DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

# Ground 1: Swafford and Masumoto Differ Fundamentally

plates displaying video “on the packages” themselves. Ex. 1004, Abstract. In my view, the packages shown in Fig. 43 have a completely different aspect ratio than the shelf labels and include a different number of pixels per screen.

Hart, ¶173

Masumoto involves simple video processing using uniform displays and a network server to expand the size of a streaming video from covering one screen to covering four, whereas Swafford pieces together streaming video segments having different widths and heights. It is my opinion that Dr. Tentzeris has not shown that a POSITA would have had any motivation to use Masumoto to improve upon Swafford, as they are directed to fundamentally different problems.

Hart, ¶176

# Ground 1: Swafford's Displays Present No Problem for Masumoto to Fix

177. Dr. Tentzeris also claims that Swafford’s “express objective” was to “simultaneously output a different portion of the streaming video,” and that satisfying that objective would have motivated a POSITA to combine Swafford and Masumoto. Ex. 1003, ¶ 154 (citing Ex. 1004, [0423]). In my opinion, this is also incorrect. Indeed, Swafford already satisfies this objective by providing “a system for forming a continuous display along” electronic label devices positioned along product shelves. Ex. 1004, [0423]. Dr. Tentzeris never explains why a POSITA would be motivated to look outside Swafford to solve a problem Swafford expressly solves.

Hart, ¶177

178. Dr. Tentzeris says that there was “a well-recognized need in synchronizing video displays—a need for low bandwidth and simple, inexpensive hardware.” Ex. 1003, ¶ 155. But even if true, Swafford expressly discloses that his systems can be implemented with “off-the-shelf” components. Ex. 1004, [0257]. Thus, I find that Swafford itself belies Petitioner’s supposed well-recognized need.

Hart, ¶178

# Ground 1: LCD Displays Are Not a Routine Reason for Combination

180. It does not matter that both Swafford and Masumoto discuss LCD displays. Ex. 1003, ¶ 156 (citing Ex. 1004, [0330]; Ex. 1005, [0040]). I find that is irrelevant; none of the purported examples offered by Dr. Tentzeris for ways to improve the LCD screens have anything to do with the LCD screens themselves. For

stitute motivations to improve Swafford's LCD with Masumoto's LCD. Furthermore, the LCD display disclosed by Swafford is used in its central hub, not in its electronic shelf labels. *See* Ex. 1004, [0303]. Also, a Google Patents search for "LCD display" for priority dates from May 15, 2015 (Swafford) to Oct. 11, 2016 (Masumoto) reveals that over 100,000 other options could have been selected under this criteria.

Hart, ¶180

# Ground 1: A Swafford-Masumoto Combination is Unnecessary, and Creates Problems

Dr. Tentzeris does not provide any details of how Masumoto's display processors and memory would be integrated into Swafford's shelf displays. Swafford's system is designed to operate from a central processing hub, allowing the displays to be inexpensive additions to the shelf systems. A POSITA would have understood that incorporating Masumoto's additional per-display processors and memories would greatly increase the power usage, heat generation and cost of each shelf display. These drawbacks would not be justified, as there would be no need for shelf displays to determine which is the master since there is already a well-defined hub processor connected to all of the shelves in Swafford's design.

Hart, ¶181

# Fundamentally

(19) **United States**  
 (12) **Patent Application Publication** (10) **Pub. No.: US 2017/0134690 A1**  
**MASUMOTO** (43) **Pub. Date: May 11, 2017**

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(54) **MULTI-DISPLAY APPARATUS**  
 (71) Applicant: **Panasonic Intellectual Property Management Co., Ltd., Osaka (JP)**  
 (72) Inventor: **JUNJI MASUMOTO, Osaka (JP)**  
 (21) Appl. No.: **15/290,338**  
 (22) Filed: **Oct. 11, 2016**  
 (30) **Foreign Application Priority Data**

|                    |             |
|--------------------|-------------|
| Nov. 6, 2015 (JP)  | 2015-218167 |
| Nov. 24, 2015 (JP) | 2015-228326 |
| Dec. 1, 2015 (JP)  | 2015-234368 |
| Sep. 30, 2016 (JP) | 2016-192814 |

**Publication Classification**

|                      |           |
|----------------------|-----------|
| (51) <b>Int. Cl.</b> |           |
| <b>H04N 7/01</b>     | (2006.01) |
| <b>G06F 3/14</b>     | (2006.01) |
| <b>G09G 5/00</b>     | (2006.01) |

(52) **U.S. CL**  
 CPC ..... **H04N 7/0127** (2013.01); **G09G 5/006** (2013.01); **G06F 3/1438** (2013.01); **G06F 3/1446** (2013.01); **G09G 2300/026** (2013.01); **G09G 2370/042** (2013.01); **G09G 2370/02** (2013.01)

(57) **ABSTRACT**  
 The multi-display apparatus of the present disclosure is a multi-display apparatus for displaying a single image by combining a plurality of displays. The multi-display apparatus includes the plurality of displays connected to a network. Each of the plurality of displays includes a communication unit that communicates via the network and a controller. The controller determines whether a video signal can be reproduced at a predetermined display frame rate. When the video signal cannot be reproduced at the predetermined display frame rate, the controller changes a display frame rate from the predetermined display frame rate, and notifies other display of the display frame rate changed. When the display frame rate changed is notified from the other display, the controller changes the display frame rate to the display frame rate notified to reproduce the video signal.

Masumoto

(19) **United States**  
 (12) **Patent Application Publication** (10) **Pub. No.: US 2017/0171577 A1**  
**Kipp** (43) **Pub. Date:** **Jun. 15, 2017**

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(54) **SYNCHRONIZING PLAYBACK OF SEGMENTED VIDEO CONTENT ACROSS MULTIPLE VIDEO PLAYBACK DEVICES**  
 (71) Applicant: **Comcast Cable Communications, LLC**, Philadelphia, PA (US)  
 (72) Inventor: **Neill Kipp**, Centennial, CO (US)  
 (21) Appl. No.: **14/963,883**  
 (22) Filed: **Dec. 9, 2015**

**Publication Classification**  
 (51) **Int. Cl.**  
*H04N 21/2387* (2006.01)  
*H04L 29/08* (2006.01)  
*H04L 29/12* (2006.01)  
*H04N 21/845* (2006.01)  
*G11B 27/10* (2006.01)  
*H04N 21/2187* (2006.01)  
*H04N 21/262* (2006.01)  
*H04N 21/242* (2006.01)  
*H04N 21/43* (2006.01)  
*H04N 21/458* (2006.01)  
*H04N 21/24* (2006.01)  
*H04L 29/06* (2006.01)  
*H04N 21/482* (2006.01)

(57) **ABSTRACT**  
 Systems, methods, and devices for synchronizing playback of segmented video content across multiple video playback devices are described herein. In example implementations, a video server provides, to one or more playback devices, an age of a playlist for the video content. A particular playback device receives fragments of the video content from the video server and schedules the video fragments for playback. If the actual playback time of a video fragment is not aligned with its scheduled playback time, then video fragment is modified, e.g., by adding video frames to or removing video frames from the video fragment. Modification of the video fragments continues until the actual playback times of the video fragments synchronize with their respective scheduled playback times.

Kipp

| (12) Japanese Unexamined Patent Application Publication (A)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |                                                                                                                                                                                                                                                                                                                                                                                                |                   | (11) Japanese Unexamined Patent Application Publication Number |                        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|----------------------------------------------------------------|------------------------|
| (19) Japan Patent Office (JP)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  | (43) Publication date                                                                                                                                                                                                                                                                                                                                                                          |                   | 2011-76222<br>(P2011-76222A)<br>April 24, 2011 (14.14.2011)    |                        |
| (51) Int.Cl.<br><b>G06Q 50/00 (2006.01)</b><br><b>G09G 5/00 (2006.01)</b><br><b>G09F 19/00 (2006.01)</b><br><b>G09G 5/36 (2006.01)</b><br><b>A47F 5/00 (2006.01)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  | F1<br><b>G06F 17/60 118</b><br><b>G09G 5/00 51OV</b><br><b>G09F 19/00 Z</b><br><b>G09G 5/36 51OV</b><br><b>G09G 5/00 555D</b>                                                                                                                                                                                                                                                                  |                   | Theme codes (Reference)<br><b>3B118</b><br><b>5C082</b>        |                        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  | Request for examination                                                                                                                                                                                                                                                                                                                                                                        | Not yet requested | Number of claims 6OL                                           | (Total of 14 pages)    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |                                                                                                                                                                                                                                                                                                                                                                                                |                   |                                                                | Continued on last page |
| (21) Application Number 224811 (P2009-224811)<br>(22) Date of application September 29, 2009 (9.29.2009)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  | (71) Applicant 000003562<br>Toshiba Tech Co., Ltd.<br>2-17-2 Higashi Gotanda, Shinagawa-ku, Tokyo<br><br>(74) Agent 100089118<br>Patent attorney Hiroaki Sakai<br>Takashi Koide<br>(72) Inventor 2-17-2 Higashi Gotanda, Shinagawa-ku, Tokyo<br>Toshiba Tech Co., Ltd.<br><br>F-terms (reference) FA11<br>3B118 5C082 AA03 AA34 AA37 BA02 BA12<br>BA41 BA46 BB01 BD02 BD06<br>CB05 MD005 MD009 |                   |                                                                |                        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |                                                                                                                                                                                                                                                                                                                                                                                                |                   |                                                                |                        |
| (54) [Title of the invention] Merchandise Information Display System                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |                                                                                                                                                                                                                                                                                                                                                                                                |                   |                                                                |                        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |                                                                                                                                                                                                                                                                                                                                                                                                |                   |                                                                |                        |
| (57) [Abstract]<br>[Problem] To obtain merchandise information display system that can reduce the amount of preparation work at a point of sale in a store when displaying images of merchandise at the point of sale.<br>[Means for Solving] A merchandise information display system 1 is provided with a shelf tag terminal 70 as merchandise information display terminal that displays text information about merchandise, and an image display terminal 80 that displays images relating to the merchandise, having a larger display area than the shelf tag terminal 70, wherein the images relating to the merchandise can be displayed based on data received from an ESL server 30 using the image display terminal 80. Therefore, it is possible to reduce the amount of preparation work when displaying images of merchandise at a point of sale in a store, compared to cases where standalone video equipment or display devices are installed. |  |                                                                                                                                                                                                                                                                                                                                                                                                |                   |                                                                |                        |

Takashi

Ex. 1005, Ex. 1006, Ex. 1008

# Ground 2: Masumoto, Kipp, and Takashi Differ Fundamentally

have been “routine.” Ex. 1003, ¶ 187. But in my opinion, Dr. Tentzeris fails to explain how combining Masumoto’s big-screen video synchronization techniques with Takashi’s electronic shelf tag system and Kipp’s multi-premise streaming system would have been routine or would come with an expectation of success. Dr.

content in the existing video playback art.” Ex. 1003, ¶ 187. This conclusion ignores the details of how video content gets to each of these playback devices, and how each of these playback devices coordinates its operation. Masumoto relies on a local master display to coordinate the other playback displays, Kipp relies on a remote video server to deliver video but then relies on each of the playback devices to manage its own synchronization in isolation, and Takashi relies on a complicated network with multiple servers, a database connected (wired or wirelessly) to multiple devices. If A POSITA were to find these three heterogeneous configurations truly

Hart, ¶224

POR, 61-66; Sur-Reply, 29

IPR2024-00188 DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

# Ground 2: A Masumoto/Kipp Combination Creates Problems

tems,” such as what one might see in a conference room. Ex. 1005, [0148]. Masumoto is directed toward a “multi-display apparatus for displaying a single image by combining a plurality of displays.” Ex. 1005, Abstract, [0148]. By contrast, Kipp is directed to “reproduction of video content” for synchronized playback at “multiple premises,” such as when people at different households want to watch a live sporting event on Amazon Prime. Ex. 1006, [0004], [0028]. “Such networks 100 use a series

Hart, ¶221

different locations. A POSITA would have understood that errors would be more disruptive in Masumoto’s co-located displays than in Kipp’s isolated displays. Kipp teaches a robust technique designed for slow and laggy Internet connections where “the playback device ... calculates an estimated live-point ... time” and synchronizes its playback to this time in isolation, without any communication. Masumoto instead teaches a crisper synchronization that relies on local, reliable network connections where synchronization of all displays can be managed by a single master.

Hart, ¶221

would result in the electronic shelf labels described in the ’669 Patent. Kipp’s discloses video playback devices that synchronize in isolation based on estimated calculations to avoid internet delays. A POSITA would have understood that using these isolated estimated calculations for synchronizing Masumoto’s playback displays would result in visible and distracting synchronization errors in a multiple-display videowall.

Hart, ¶223

# Ground 2: Masumoto/Kipp/Takashi Creates a Technical Incongruency Unmotivated By A Business Premise

225. Fifth, Dr. Tentzeris opines a “POSITA reading Masumoto and Kipp naturally would have looked to Takashi for additional details regarding how to display advertisement contents in a business premise such as a retail store” due to a “universal, obvious goal of all such systems to display promotion content related to the premise where the systems are located.” Ex. 1003, ¶ 188. But in my opinion, Dr. Tentzeris fails to offer factual support or evidence. Dr. Tentzeris’s argument is just that: argument. Based on my understanding of the legal standard, it is my opinion

any particular combination of the prior art. I find that the explanation of the Petitioner’s expert is flawed because it is generic. Furthermore, Masumoto and Kipp disclose systems for playback of standard video content, such as television shows or broadcast sports, which already embed promotion content in the standard video content as commercial breaks and embedded banners.

Hart, ¶225

# Conclusion