

UNITED STATES PATENT AND TRADEMAKR OFFICE
BEFORE THE PATENT TRIAL AND APPEAL BOARD

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

v.

**SES-IMAGOTAG GMBH
IPR2024-00189**

Patent No. 10,674,340

Petitioners Hanshow's Demonstratives

February 18, 2025

ROADMAP

Alleged Invention

Instituted Grounds

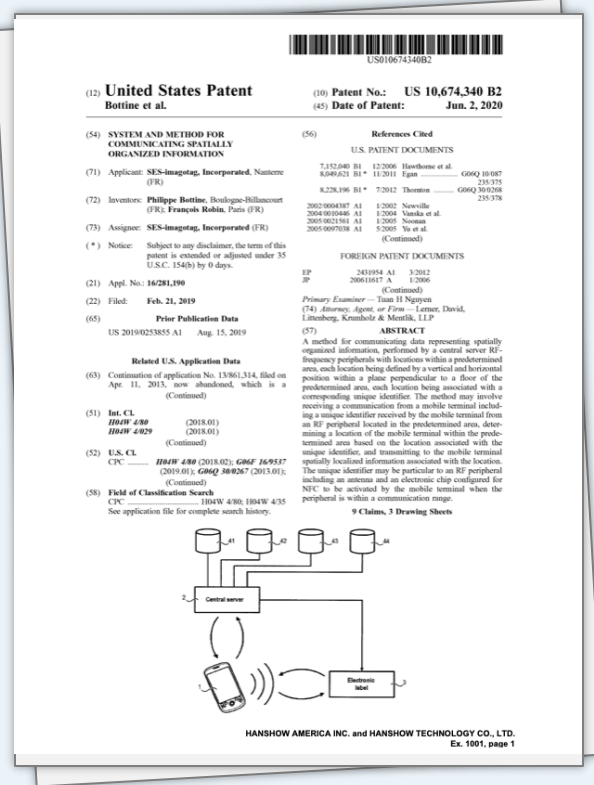
Claim Construction

Grounds 1 & 2– Fujiwara (and Arntzen)

Grounds 3 & 4 – Bandy, Fowler (and Arntzen)

Motion to Exclude Evidence

U.S. Patent No. 10,674,340



(10) Patent No.: US 10,674,340 B2
(45) Date of Patent: Jun. 2, 2020

(54) SYSTEM AND METHOD FOR
COMMUNICATING SPATIALLY
ORGANIZED INFORMATION

(22) Filed: Feb. 21, 2019

(65) Prior Publication Data

US 2019/0253855 A1 Aug. 15, 2019

Overview of the '340

FIG. 1

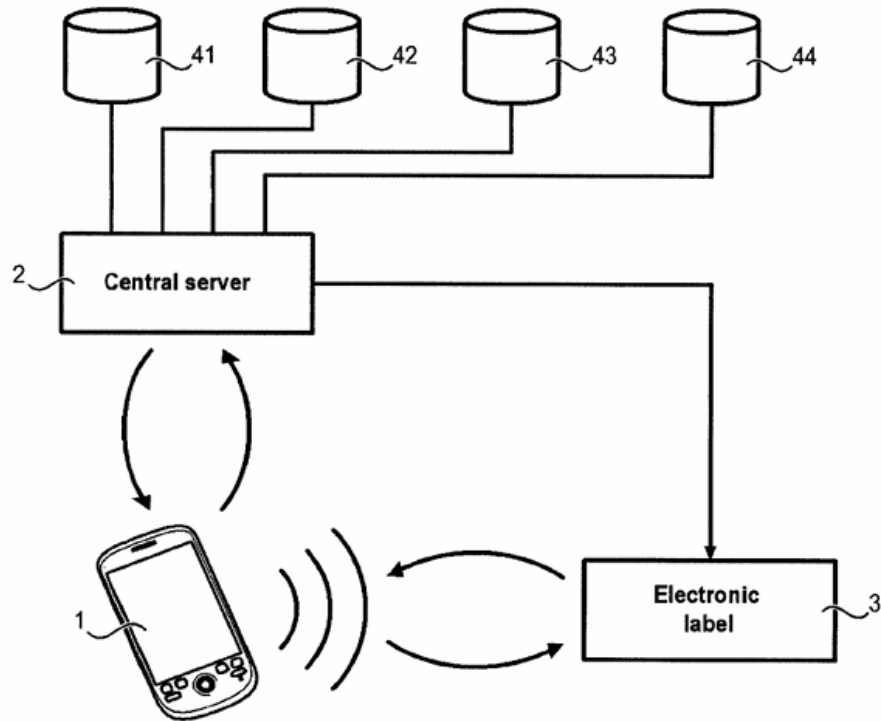


FIG. 2

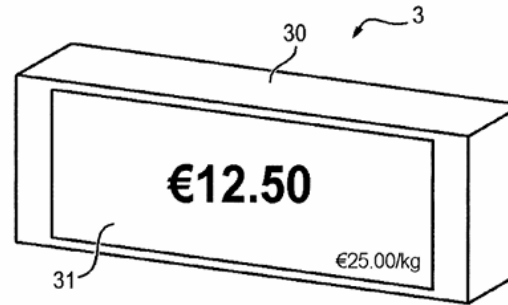


FIG. 3

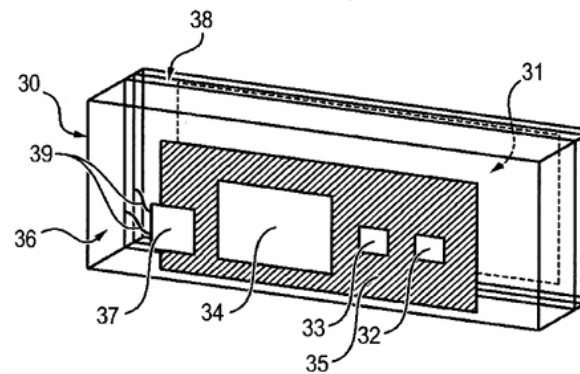
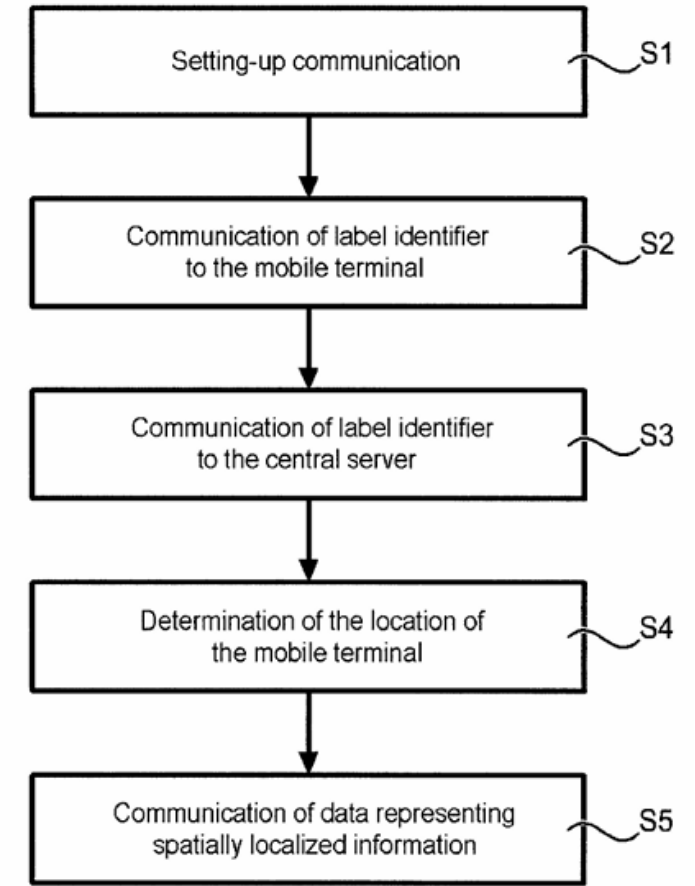


FIG. 4



Claim 1 of the '340 Patent

1. A method for communicating spatially localized information to a mobile terminal, the method being performed by a central server configured to access a planogram associating a plurality of unique identifiers of radio-frequency peripherals with a plurality of locations within a predetermined area, each of the plurality of locations being defined by a vertical and horizontal position within a plane perpendicular to a floor of the predetermined area, and each of the plurality of locations being associated one-to-one with a corresponding unique identifier, the method comprising:

receiving a communication from a mobile terminal, the communication comprising a unique identifier received by the mobile terminal from a radio-frequency peripheral located in the predetermined area, the unique identifier being particular to the radio-frequency peripheral, wherein the radio-frequency peripheral includes an antenna and an electronic chip configured for near-field communication, and is configured to be activated by the mobile terminal when the radio-frequency communication peripheral is within a communication range of the mobile terminal, wherein the communication range is less than twenty centimeters;

determining a location of the mobile terminal within the predetermined area based on the location associated with the unique identifier of the received communication in the planogram, the location of the mobile terminal comprising the vertical and horizontal position of said location; and

transmitting to the mobile terminal spatially localized information associated with the location of the mobile terminal.

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Motion to Exclude Evidence

Instituted Grounds

Fujiwara

JP 2008-77131 A 2008.4.3

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				平成20年4月3日(2008.4.3)	
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(22) 出願日		平成18年9月19日(2006.9.19)		大日本印刷株式会社	
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				S672 CC21 CC24	

(54) 【発明の名称】 位置認識システム、電子棚札・移動体情報端末連動システム、店舗サーバ、電子棚札、商品陳列棚、移動体情報端末、プログラム及び記録媒体

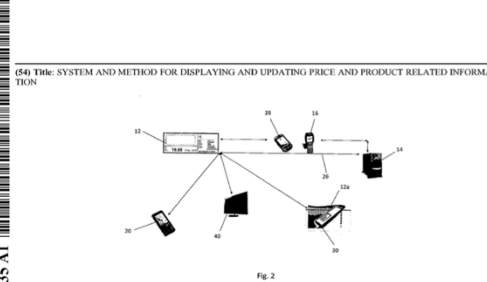
(57) 【要約】
【課題】 ICタグ、発光手段を備える電子棚札と移動体情報端末を用いて、商品の店舗内での位置の特定、及び商品の位置の表示機能を提供する電子棚札・移動体情報端末連動システム等を提供する。
【解決手段】 商品陳列棚20にICタグ10を備える電子棚札103とICタグリーダ104が設置され、ICタグリーダ104はICタグ10の棚札IDの読取手段131と、棚札IDと送信元IDを店舗サーバ101へ送信する読取情報送信手段132を備え、店舗サーバ101は、送信元IDから特定した位置情報と棚札IDを対応付けた棚札位置情報320を電子棚札データベース301に保持する位置情報認識手段111と、移動体情報端末105への情報伝達手段112と、商品に対応する電子棚札103へ発光指示手段113を備えることにより、商品の位置を特定し位置を表示する。
【選択項】 図1

Ground 1

Arntzen

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)
(19) World Intellectual Property Organization
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22 July 2010 (22.07.2010)
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(51) International Patent Classification:
G06Q 38/00 (2008.01)
(21) International Application Number:
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TIME NORWAY AS (NONO); Fjellhaugen 3, N-5155
Bosnes (NO)
(72) Inventor; and
(73) Inventor/Applicant (for US only): ARNTZEN, Øyvind
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(NO)
(74) Agent: ACAPO AS; P.O. Box 1880 Nordnes, N-5817
Bergen (NO)
(54) Title: SYSTEM AND METHOD FOR DISPLAYING AND UPDATING PRICE AND PRODUCT RELATED INFORMATION



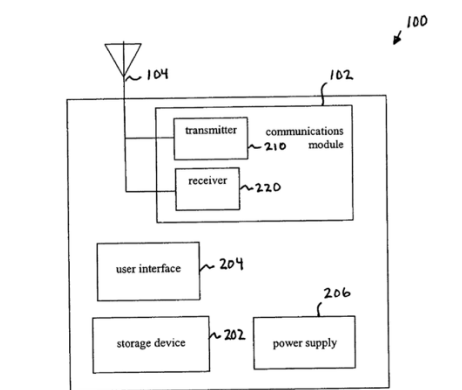
(57) Abstract: Described is a system for displaying price and product related information for sales articles and other types of merchandise, comprising a number of price labels in the form of an electronic display (12), for display of relevant information, and at least one network (20) for communication with and between said numbers of electronic displays (12). The network (20) is a wireless mesh network for internal communication between said number of electronic displays (12) and at least one data unit (14) containing price and product related information, and said electronic display (12) comprises equipment for remote, cordless, near field communication with handheld units (16, 18, 20). The invention also relates to a method for updating price and product related information for sales items.

Ground 2

Bandy

(19) United States
(12) Patent Application Publication
(10) Pub. No.: US 2007/0024436 A1
(43) Pub. Date: Feb. 1, 2007

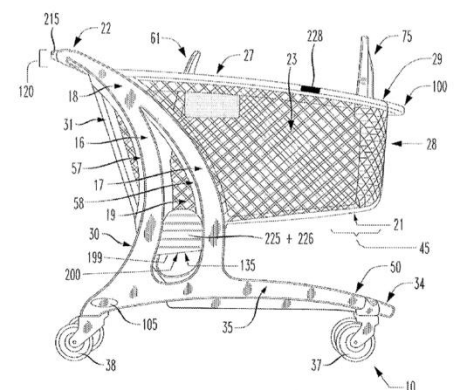
(54) METHOD AND APPARATUS FOR A
PRODUCT INFORMATION INTERFACE
UTILIZING RADIO FREQUENCY
IDENTIFICATION (RFID) TECHNOLOGY
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(21) Appl. No.: 11/190,882
(22) Filed: Jul. 28, 2005



Fowler

(19) United States
(12) Patent Application Publication
(10) Pub. No.: US 2008/0231228 A1
(43) Pub. Date: Sep. 25, 2008

(54) BI-DIRECTIONAL CHARGING/INTEGRATED
POWER MANAGEMENT UNIT
(75) Inventors: Doug Fowler, Plano, TX (US); Dan
McQuitty, Plano, TX (US); Chris
Hartwell, Plano, TX (US); James
E. Gibbons, Plano, TX (US)
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PLANO, TX 75024 (US)
(73) Assignee: Media Cart Holdings, Inc., Plano,
TX (US)
(21) Appl. No.: 11/698,839
(22) Filed: Mar. 25, 2007



ROADMAP

Alleged Invention

Instituted Grounds

Claim Construction

Grounds 1 & 2– Fujiwara (and Arntzen)

Grounds 3 & 4 – Bandy, Fowler (and Arntzen)

Motion to Exclude Evidence

Claim Construction - “Planogram”

Board’s Construction

- “The Specification of the ’340 patent states that ‘[a] **planogram** lists the locations of all the electronic labels 3 and of the items on sale in a sales area.’ Ex. 1001, 6:35–37. Thus, **the planogram of the ’340 patent is merely a list of locations of labels and associated locations and the items on sale.**” Paper 11, at 27.
- The Board’s construction is based on and supported by intrinsic evidence.

PO’s Construction

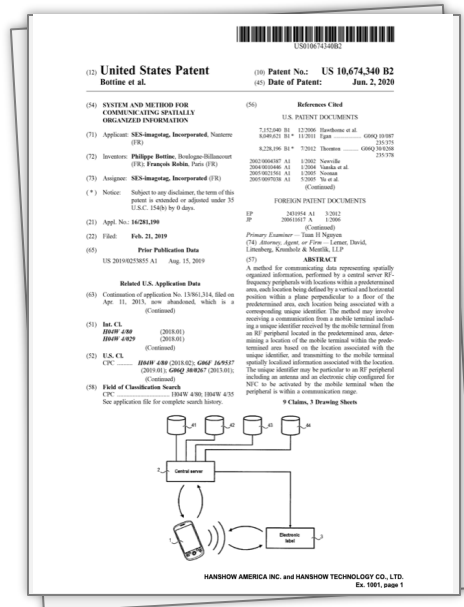
- “‘planogram’ is more than a list of label locations”

Petitioner’s Construction

- plain and ordinary meaning

“Planogram” – Specification

- “The central server determines the location of said mobile terminal from the identifier of said electronic label by means of data from a **planogram** associating a location with the label identifier.”
- “The central server 2 determines the location of said mobile terminal 1 from the identifier of said electronic label 3 using the data of a **planogram** associating a location with the label identifier. A **planogram** lists the locations of all the electronic labels 3 and of the items on sale in a sales area.”



“Other databases 42, 43 can be used and may in particular comprise the planogram, information relating to items, relating to the sales area, etc.”

“Planogram” – PO’s Proposed “Construction”

- The term “planogram” is a well-known and often-used term in the art. Ex 2001, ¶¶71-79. It is generally understood to refer to some form of dataset, map, diagram, schematic, or the like, that allows retailers to accurately plan out the placement of products in a retail store in an effort to maximize sales. (citing and discussing examples)
- In particular, “planograms” generally include information regarding: (1) how similar products are grouped together and where these groups of products are placed; (2) where each product is placed on a shelf-segment, including relative to other products (e.g., how high off the ground, how prominent a position, which products are nearby, etc.); and (3) how much shelf space is dedicated to each product. (citing and discussing examples)
- A “planogram” may take the form of a top-down map depicting the various groupings of products by type. . . Or a “planogram” could be a depiction of a shelf segment intended to reflect reality. (including exemplary pictures)
- “Planograms” at a minimum include information about how products are grouped, where they are placed, and how much space they are provided so that retailers can plan, track, and make decisions about their product placements to ensure each product is positioned in a way that will generate the most sales. (citing and discussing examples)
- When the ’340 Patent uses the term “planogram,” it does so consistent with its understood meaning in the art and nowhere suggests the term has taken on a different meaning. EX-2001, ¶¶77, 79. Specifically, in the ’340 Patent, the claimed “planogram” is at a minimum directed to a shelf-segment-type planogram (as shown above) because the planogram defines locations “by a vertical and horizontal position within a plane perpendicular to a floor plan” (e.g., parallel to shelf faces) with each location “being associated one-to-one with a corresponding unique identifier” of an ESL. Ex-1001, cls. 1, 5; Ex-2001, ¶77.

“Planogram” – PO’s Proposed “Construction” is Inconsistent

- Differently worded “general understandings” and “basic features”, and conflicting citations

- Is product grouping information a required component?

- Is shelf space measurement a required component?

- Patent Owner’s own expert equivocate on whether certain information falls within the “minimum requirement” of the proposed “construction”

- Product space amount
 - Third dimension
 - Price information

Q: But is the attribution of a defined amount of space to each product a requirement to meet your definition of planogram or just something that could in a planogram?

A: I mean, I think as long as it comports with this idea making decisions about the placement of products through a retail store in an effort to maximize sales, which space can be a function of, then, sure.

Ex. 1012, 96:10-20

Q: So location information in a third dimension is a requirement to meet your definition of planogram?

A: Like I said: in other words, the ‘340 patent’s use of the term planogram requires knowing the relationship between location of items throughout the entire retail area.

Ex. 1012, 99:9-17

Q: is it your opinion that price information is required in order to meet your definition of planogram?

A: I’m not sure it is, but I can understand why price and size might help you understand the value of an item if you’re trying to maximize store profits. So, for example...

Ex. 1012, 100:2-10

“Planogram” – PO’s Proposed “Construction” is Confusing

.9 I think that Figure 1 certainly represents
:0 that notion and it's a part of creating a
:1 planogram, I would agree with that, but as to
:2 whether it's a planogram under the '340 patent's

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HANSHOW-Ex. 1012
Hanshow Am. Inc. v. SES-Imagotag Inc.
IPR2024-00189

Transcript of Rajeev Surati, Ph.D.
Conducted on November 22, 2024

106

. construction that I had, I don't think it is
: because it doesn't -- just the figure itself
: doesn't talk about products.

Ex. 1012, 105:19-106:3

Patent Owner’s own expert could not determine whether its own examples are “planograms” under the proposed “construction”

- Figure 1 of Ex. 2015 (Ex. 1012, 102:7-106:3)
- Figures on p.210 of Ex. 2023 (Ex. 1012,

Q: Are the two figures shown in Exhibit 2023 at page 210 planograms as you have defined the term?

A: So this isn’t a particular example that I considered, so it’s going to take me some time to figure it out and I’m bit sure I want to offer an off-the-cuff opinion without putting the proper amount of time in. And my report’s considered – I am not sure I can answer that in the time that’s available.

Ex. 1012, 107:5-16

“Planogram” – PO’s Proposed Construction is Unclear in its Application

- Is the “planogram” for ’340 Patent limited to a subtype?
- Is three-dimensional information a required component in the “planogram” for ’340 Patent?

ferent meaning. EX-2001, ¶¶77, 79. Specifically, in the ’340 Patent, the claimed “planogram” is *at a minimum* directed to a shelf-segment-type planogram (as shown above) because the planogram defines locations “by a vertical and horizontal position within a plane perpendicular to a floor plan” (e.g., parallel to shelf faces) with each location “being associated one-to-one with a corresponding unique identifier” of an ESL. Ex-1001, cls. 1, 5; Ex-2001, ¶77.

Paper 21, at 23

Accordingly, the term “planogram” should be understood as having its plain meaning in the relevant art, and applied consistent with how the term is generally used throughout the art. If so applied, then for the reasons discussed in further detail

Paper 21, at 24

9 Q So location information in a third
10 dimension is a requirement to meet your definition
11 of planogram?
12 MR. MOFFA: Objection. Form.
13 BY THE WITNESS:
14 A Like I said: In other words, the '340
15 patent's use of the term planogram requires
16 knowing the relationship between locations of
17 items throughout the entire retail area.
--

Ex. 1012, 99:9-17

“Planogram” – PO’s Proposed “Construction” ignores Intrinsic Evidence and Picks and Chooses from Extrinsic Evidence

15 Q Did you find any other references to
16 planograms that are not identified in your
17 declaration?
18 MR. MOFFA: Objection. Form. Objection.
19 Relevance.
20 BY THE WITNESS:
21 A Yeah, I may have, but I thought what I
22 provided was extensive enough to provide a notion

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HANSHOW-Ex. 1012
Hanshow Am. Inc. v. SES-Imagotag Inc.
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Conducted on November 22, 2024

94

1 of what people generally thought of planograms to
2 include.

Ex. 1012, 93:15-94:2

It is the practice of some retailers to formulate and execute
custom product assortment and product placement plans, or
planograms, for individual retail facilities. A planogram indi-

Ex. 2003 (Egan), 1:15-17 (annotated)

■ “If the meaning of a claim term is clear from the intrinsic evidence, there is no reason to resort to extrinsic evidence.” Seabed Geosolutions (US) Inc. v. Magseis FF LLC, 8 F.4th 1285, 1287 (Fed. Cir. 2021).

■ Patent Owner’s expert admits to selectively considering pieces of extrinsic evidence. Ex. 1012, 93:15-94:2, 107:5-16.

■ *Egan* does not support Patent Owner’s proposed “construction.”

5 Q Are the two figures shown in Exhibit 2023
6 at Page 210 planograms as you have defined the
7 term?

8 MR. MOFFA: Objection. Form.

9 BY THE WITNESS:

10 A So this isn't a particular example that I
11 considered, so it's going to take me some time to

Ex. 1012, 107:5-11

Claim Construction - “Activated”

PO’s Construction

- “In the context of the claimed invention, which is directed to passive ‘near-field communication’ or NFC-type radio-frequency peripherals, the terms ‘activated’ and ‘activating’ should be construed to mean ‘powered’ or ‘powering.’”
- “POSITAs would have understood that, when using NFC and passive tags, the tags are ‘activated’ when they are powered by the magnetic field.”

Petitioner’s Construction

- plain and ordinary meaning, which is “to put into action.”

“Activated” – PO’s Proposed Construction is Improperly Imported from an Embodiment

- “[I]t is improper to read limitations from a preferred embodiment described in the specification -- even if it is the only embodiment -- into the claims absent a clear indication in the intrinsic record that the patentee intended the claims to be so limited.” Liebel-Flarsheim Co. v. Medrad, Inc., 358 F.3d 898, 913 (Fed. Cir. 2004).

The system for communication data representing spatially localized information within a sales area is configured to implement the method according to the first aspect of the invention, of which one possible embodiment will be described.

...

The radio-frequency peripheral **36** is then activated by the energy of the electromagnetic waves emitted by the mobile terminal **1** to set up communication via radio-frequency with the radio-frequency peripheral **36** of the electronic label **3**

Ex .1001, 5:54-58, 6:6-9

“Activated” – PO’s Proposed Construction is Inconsistent with Prosecution History

- Rasband discloses the “activated” limitation.
- Rasband’s tags can be active.

communication (fig. 1, page 2 [0023]), and is configured to be activated by the mobile terminal when the radio-frequency communication peripheral is within a communication range of the mobile terminal (fig. 1, page 3 [0031]); and transmitting to the mobile

Ex. 1002, at 42

[0031] Moreover, tag 14 may be an **active**, passive, semi-active tag, among other types of tags. For example, an active tag may include tags that use batteries to power their respective circuitry throughout the tag interrogation process. Semi-active tags may include tags that use batteries to power their respective circuitry through part of the tag interrogation process. For example, the batteries may provide the power needed to transmit an encoded data signal to the scanner or reader in response to receiving an interrogation signal. A passive tag may rely entirely on the scanner’s or reader’s interrogation signal to power its circuitry, e.g., relies on the signal transmitted by NFC transceiver 26 to power its respective circuitry.

Ex. 1011, [0031]

“Activated” – PO’s Proposed Construction is Inconsistent with Specification

- The radio-frequency peripheral is not limited to NFC-type.
- The radio-frequency peripheral is not limited to passive tags.

50 The radio-frequency peripheral 36 of the electronic label 3 comprises an antenna 38 and an electronic chip 37 of NFC type (Near Field Communication) or RFID type (Radio-Frequency Identification).

Ex. 1001, 4:50-53

57. RFID tags are small, electronic devices that store and transmit information and can be attached to objects like products or assets. Ex-2006 at R101 (Kumar) (“Tags are available in many different shapes, sizes, and protective housing.”). They are either active tags with a “battery to power up its microchip” or passive tags powered by the reader. *Id.* Active tags also transmit the same way as

Ex. 2001, ¶57

“Activated” – PO’s Proposed Construction Renders Claim 2 Superfluous

50 -----
2. The method according to claim 1, further comprising:
when the mobile terminal is positioned relative to the
radio-frequency communication peripheral within the
communication range, energy of electromagnetic
55 waves emitted by the mobile terminal activating the
radio-frequency communication peripheral, thereby
setting-up a radio-frequency communication between
the mobile terminal and the radio-frequency peripheral,
wherein the communication range is a range of the
electromagnetic waves emitted by the mobile terminal.

Ex. 1001, 8:50-59 (claim 2) (annotated)

- There is no other way to “activate” the radio-frequency communication peripheral except by “energy of electromagnetic waves emitted by the mobile terminal” of Claim 2.

- Patent Owner’s proposed construction essentially construes two terms “activated by the mobile terminal” (claim 1) and “energy of electromagnetic waves emitted by the mobile terminal activating the radio-frequency communication peripheral” (claim 2) to have no difference in meaning.

“Activated” -- PO Misquotes and Mischaracterizes Petitioner’s Statements

- Patent Owner selectively misquotes Petitioner’s statements out of context.

- Patent Owner mischaracterizes Petitioner’s expert’s testimony.

Petitioners appear to agree with this interpretation. *See* Petition, 39 (“NFC tags are activated passive RFID tags powered and activated by electromagnetic waves”), 54 (“NFC communication...employs the claimed electromagnetic wave

Paper 21, at 25 (the misquote)

18. I further understand that the Patent Owner argues that my deposition testimony supports Dr. Surati’s opinion. Paper 21, at 25¹. However, in that sentence, I was only discussing a typical configuration of NFC tags and NFC readers. Ex. 2024, 13:24 (“Typically, that’s the configuration.”) I was not stating that this is the only possible configuration or that this is the only possible way of activating the radio-frequency peripheral of the ’340 Patent. Therefore, I disagree with the Patent Owner’s interpretation of my deposition testimony.

Ex. 1032, ¶18

as ISO 14443. *See also* Ex. 1009, ¶113. A POSITA would further know that ISO 14443-conformant NFC tags are activated passive RFID tags powered and activated by electromagnetic waves received by the tags, in the way claimed by Claim 2. *Id.*

Paper 1 (Petition), at 39 (the actual statement)

“Activated” – PO’s Extrinsic Evidence is Not Persuasive

- Patent Owner points to the statement of a related entity of Petitioners.
- The statement concerns a different patent with different claim language.
- The statement has no estoppel effect.

communication and activate it energetically. This is particularly clear from the original claim 3 (parent application) and claim 6 (application in dispute/divisional application):

"the radio frequency device (36) is activated by the energy of the electromagnetic waves emitted from the mobile terminal device (1) to establish the radio frequency communication [...]"

Ex. 2025, at 26

ROADMAP

Alleged Invention

Instituted Grounds

Claim Construction

Grounds 1 & 2– Fujiwara (and Arntzen)

Grounds 3 & 4 – Bandy, Fowler (and Arntzen)

Motion to Exclude Evidence

Instituted Grounds 1 and 2 – Disputed Limitations

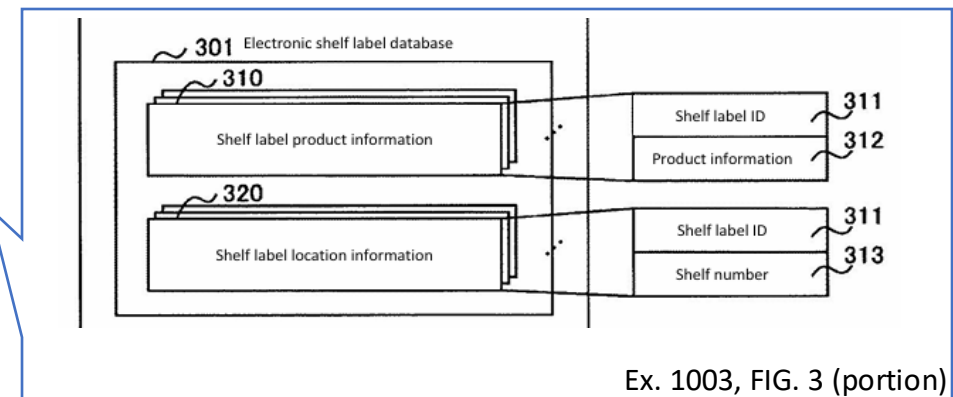
Claims	Disputed limitation
1 & 5	“planogram”
	“horizontal position” and “associated one-to-one”
	“activated”
	“communication range is less than twenty centimeters”
	“an antenna and an electronic chip configured for near field communication”
6	“an electronic label which comprises: a radio-frequency communication module configured to receive data representing information relating to an item from a central server”
7	“the mobile terminal is adapted to transmit data to the electronic label via the radio-frequency communication module of said electronic label”

Fujiwara Discloses “Planogram”

- Fujiwara discloses that the store server possesses “an electronic shelf label database storing the shelf label product information associating the electronic shelf label information with the product information, and storing the shelf label location information identifying the location of the electronic shelf label.” Paper 2, at 19; Ex. 1003, [0015].
- Fujiwara’s electronic shelf label database 301 stores “the shelf label product information associating the electronic shelf label information with the product information, as well as storing the shelf label location information identifying the location of the electronic shelf label,” Paper 26, at 9-10; Ex. 1003, [0013].
- As the Board recognized, this electronic shelf label database 301 is the claimed “planogram”.

Id. Although Fujiwara does not use the term “planogram,” Fujiwara discloses such a list. *See* Ex. 1003 ¶ 13 (disclosing a store server with an electronic shelf label database that stores shelf label product information as well as the shelf label location information identifying the location of the electronic shelf label); *see also id.* ¶¶ 15, 42–44, 62.

Paper 11, at 27.



Ex. 1003, FIG. 3 (portion)

Fujiwara Discloses “Horizontal Position”

Petitioner’s Arguments

- Patent Owner’s arguments are based on its erroneous “construction” of “planogram”.
- Patent Owner introduces irrelevant arguments based on other disclosures from different embodiments and different patents.

wara never uses the term “planogram.” But the Fujiwara applicant, at least, was aware of this term, as it filed another patent application around the same time directed to a “planogram information generation device.” *See, e.g.*, Ex-2026, Cover. Paper 21, at 31.

SES refers to a different patent (Ex. 2026) as somehow negating Fujiwara’s disclosure of “planogram.” Paper 21, at 31. But SES failed to offer a certified translation as required by 37 CFR §42.63(b) and, regardless, the use of a term in a different patent, without overlapping inventors, is irrelevant to Fujiwara’s disclosure. Paper 26, at 10.

Fujiwara Discloses “Horizontal Position”

Paper 11, at 27-28

defining the location of an electronic tag, we agree with Petitioner that, based on Fujiwara’s illustrations of uniquely numbered electronic tags positioned at spaced locations along vertically separated shelves, an ordinarily skilled artisan would have understood that listing the vertical and

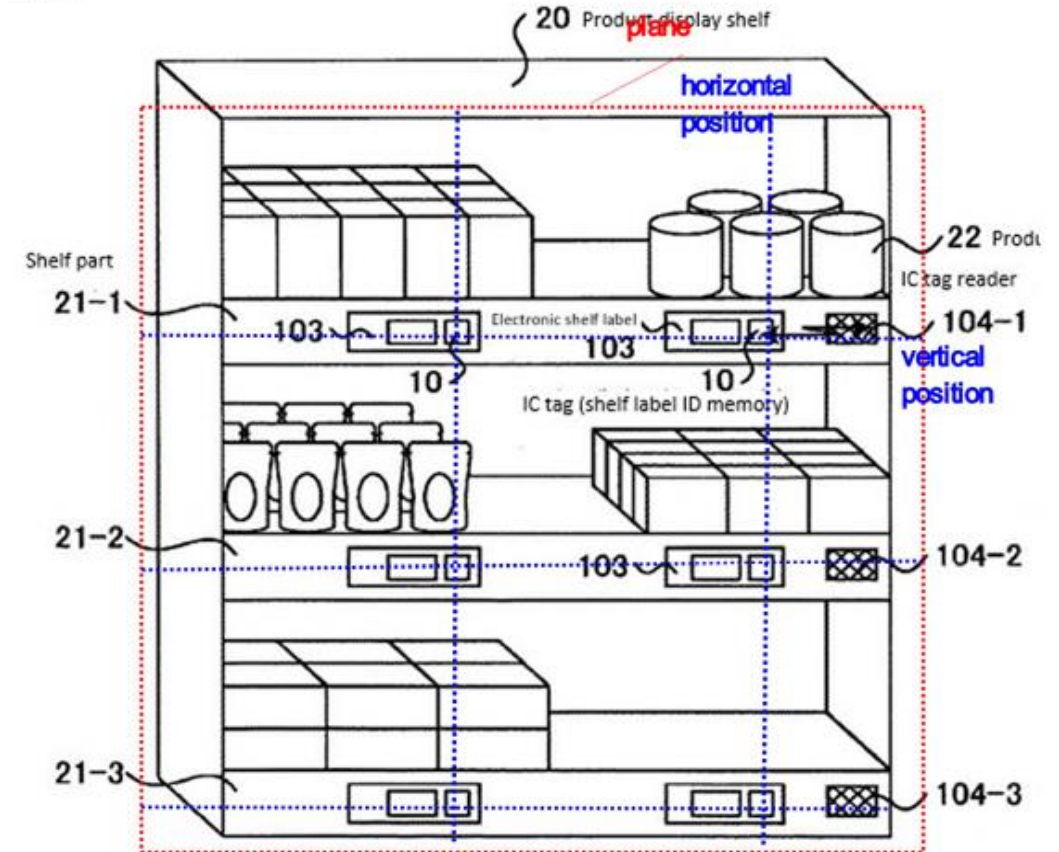
27

IPR2024-00189
Patent 10,674,340 B2

horizontal position of each tag in the database would define the position of the tag as claimed. As Figure 4 of Fujiwara illustrates, the tags are positioned at locations on the shelves in a two-dimensional plane

perpendicular to the floor. We are persuaded that an ordinarily skilled artisan would have understood that, because defining a location in a two-dimensional plane requires specifying at least two coordinates, e.g., a Y coordinate (vertical position) and an X coordinate (horizontal position), listing the horizontal and vertical position of each of Fujiwara’s uniquely numbered tags in a database would define the location of each such tag.

[FIG. 4]



Ex. 1003, FIG. 4 (annotated)

Fujiwara Discloses “Horizontal Position”

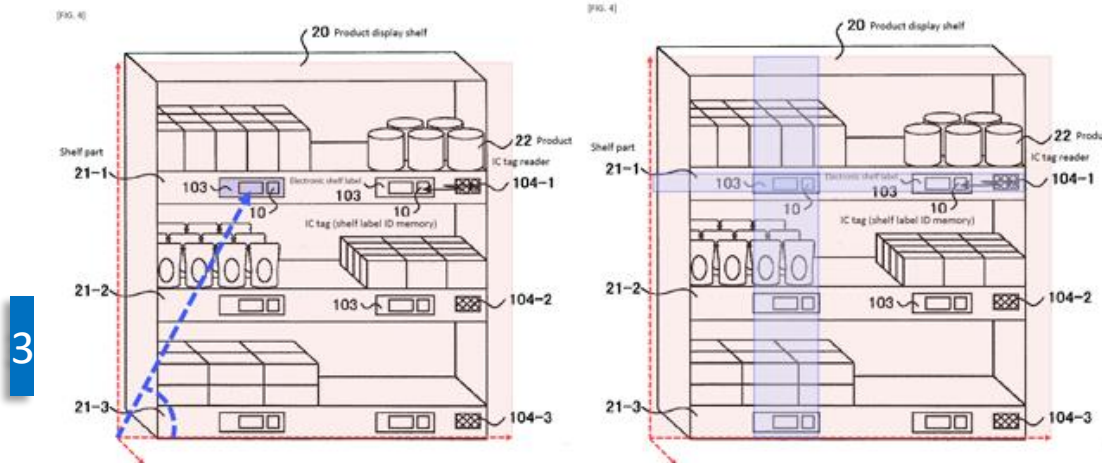
Petitioner’s Arguments

- Patent Owner cites inapposite case against disclosures in FIG. 4
- Patent Owner would have a POSITA deliberately forego the simplest representation of regular lattice positions for no reason
- Patent Owner defies common sense in arguing that a POSITA would not find it obvious that display shelves can be placed side by side in an aisle.

Alternatively, a POSITA, familiar with the typical layout of a retail store, would find it obvious that multiple product display shelves 20 can be placed side by side within an aisle, and thus the horizontal position of a product display shelf 20 within the aisle is the claimed **horizontal position**, while the shelf number 313 has already been disclosed as the **vertical position**, and the **plane** is the front plane of the whole aisle. Ex. 1009, ¶7

Paper 2, at 22

As to Petitioner’s alternative theory, we agree with Petitioner that a person of ordinary skill would have understood that a plurality of shelf units can be placed side-by-side in an aisle, and that each shelf unit is at a location within the aisle that defines its horizontal position. Paper 11, at 28



Ex. 2001, ¶111

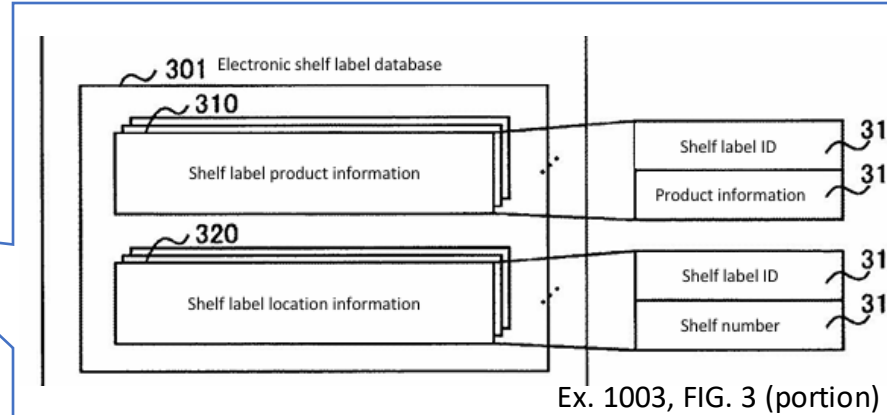
Fujiwara Renders Obvious “Associated One-to-One”

Petitioner’s Arguments

- Patent Owner ignores Fujiwara’s clear disclosure of the content of “shelf label location information 320”, and focuses on irrelevant disclosure of a different “location information”.
- Patent Owner downplays the disclosure of Fujiwara’s FIG. 4 even while acknowledging FIG. 4 to be a “diagram”, which Patent Owner agrees to be a kind of planogram. A POSITA would look to the disclosures of FIG. 4 to supplement the understanding of Fujiwara’s planogram embodied in electronic shelf label database 301.

an electronic shelf label database storing the shelf label product information associating the electronic shelf label information with the product information, as well as storing the shelf label location information identifying the location of the electronic shelf label,

Ex. 1003, [0013] (portion)



2001, ¶¶71-79. It is generally understood to refer to some form of dataset, map, dia-
gram, schematic, or the like, that allows retailers to accurately plan out the placement
Paper 21, at 20 (annotated)

- Fujiwara’s shelf label location information is more than just shelf number 313.
- A POSITA would find it obvious that Fujiwara’s shelf label location information is associated one-to-one with the shelf label ID.

Fujiwara

[0062]

The electronic shelf label database 301 includes a plurality of shelf label product information 310 and shelf label location information 320. The shelf label product information 310 has shelf label ID 311, product information 312, and the like. The shelf label ID 311 is the identification information of the electronic shelf label 103. The product information 313 is information related to the product to be displayed on the electronic shelf label 103 (product ID, product price, and the like). The shelf label location information 320 includes shelf label ID 311, shelf number 313, and the like. The shelf number 313 is the location information for each shelf part 21 of the product display shelf 20.

Ex. 1003, [0013] (portion)

reader 104 will be described. FIG. 4 is a diagram depicting the appearance configuration of the electronic shelf label 103 and IC tag reader 104.

Ex. 1003, [0066] (annotated)

Fujiwara and Arntzen Disclose “Activated”

Petitioner’s Arguments

- Patent Owner relies on its erroneous proposed construction to argue against Fujiwara’s disclosure.
- Even Patent Owner’s own expert agrees that Fujiwara’s sequence establishes a communication channel between the reader and the label. Thus, Fujiwara’s sequence “activates” the label for communication.
- Even under Patent Owner’s erroneous proposed construction, Arntzen still discloses “activated”.
- Patent Owner erroneously argues that Arntzen only discloses active tags. Arntzen discloses a powered *display* that works with an NFC component, just like the ’340 patent claims labels equipped with a display screen and an NFC-type radio frequency peripheral.

▪ Fujiwara discloses a resonant call-up signal/response signal sequence for establishing communication between a reader and an electronic shelf label.

▪ Arntzen discloses standard-compliant NFC communication protocol, including NFC activation.

[0103]

As depicted in FIG. 14, the customer pushes the shopping cart 106 to make a purchase in the store. When acquiring the location of a product while moving, the handheld type IC tag reader 506 of the mobile information terminal 105 provided on the shopping cart 106 is held over the product display shelf 20 (step S1401).

The IC tag reader 506 of the mobile information terminal 105 transmits a resonant call-up signal to the IC tag 10 (step S1402).

[0104]

The IC tag 10 of the electronic shelf label 103 receives the call-up signal and transmits a response signal (step S1403).

The IC tag reader 506 receives a response signal from the IC tags 10 of the surrounding electronic shelf labels 103 (step S1404), and collectively reads the shelf label IDs 311 stored in the memories of the IC tags 10 (step S1405). The IC tag reader 506 normally enables reading of the IC tags 10 in the range of a one-third part of the product display shelf 20.

The control unit 501 of the mobile information terminal 105 transmits the 1 or more shelf label IDs 311 that were read to the store server 101 (step S1406).

Ex. 1003, [0103]-[0104]

technologies such as Bluetooth or Wi-Fi. The underlying layer of NFC technology follows universally implemented ISO, ECMA and ETSI standards. Because the range is so

Ex. 1005, 6:6-8

15 An essential feature of the present invention is that the electronic displays 12 shall also be able to communicate externally with other handheld units, such as a mobile phone 20. This is primarily intended to be carried out using the so-called Near Field Communication (NFC), as
20 described earlier. Alternatively or in addition, Bluetooth

Ex. 1005, 12:15-20

Demonstrative Exhibit – Not Evidence

Fujiwara and Arntzen Disclose “communication range is within twenty centimeters”

■Fujiwara discloses a communication distance of “several to several tens of centimeters.”

- “A prima facie case of obviousness typically exists when the ranges of a claimed composition overlap the ranges disclosed in the prior art.”
In re Peterson, 315 F.3d 1325, 1329 (Fed. Cir. 2003)

[0082]

The IC tag reader 506 transmits a call-up signal resonant with respect to the IC tags 10, 11, reads the response signal from the IC tags 10, 11 at a distance of several to several tens of centimeters, and reads the shelf label IDs, shelf numbers, and the like, which are the information recorded in the IC tags 10, 11.

Ex. 1003, [0082] (portion) (annotated)

■Arntzen discloses the communication range of NFC to be within a radius of four centimeters.

NFC is both a “read” and “write” technology. Communication between two NFC-compatible units occurs when they are within a radius of four centimetres of one another: a

Ex. 1005, 6:1-3 (annotated)

A POSITA would find it obvious to implement Fujiwara’s IC tags with NFC tags conformant to standards such as ISO 14443 that has a communication range of less than twenty centimeters.

Fujiwara and Arntzen Disclose “communication range is within twenty centimeters”

- Patent Owner never showed how the claimed cutoff point of twenty centimeters is critical, and did not show any “unexpected advantages” of the claimed cutoff point of twenty centimeters.

- Patent Owner erroneously argues that Fujiwara is intended to read more than one label at a time, and that Fujiwara cannot work with a range of less than twenty centimeters.

- “When an applicant seeks to overcome a prima facie case of obviousness by showing improved performance in a range that is within or overlaps with a range disclosed in the prior art, the applicant must ‘show that the [claimed] range is critical, generally by showing that the claimed range achieves unexpected results relative to the prior art range.’” In re Geisler, 116 F.3d 1465, 1469-70 (Fed. Cir. 1997)

- Fujiwara repeatedly discloses reading “one or more electronic shelf labels.”
- Patent Owner incorrectly argues that a range of less than twenty centimeters will not allow Fujiwara to read more than one label at a time.
- In any case, Fujiwara does not teach away from the shorter range disclosed in Arntzen.

Fujiwara and Arntzen Disclose “an antenna and an electronic chip configured for near field communication”

■Fujiwara discloses a coil-shaped antenna and an IC chip suitable for a communication range of several to several tens of centimeters.

[0071]

The IC tag 10 is a non-contact IC tag, which is usually formed by forming a coil-shaped antenna by photo-etching or etching after resist printing of a metal foil such as laminated aluminum foil on a substrate such as paper or various other materials such as PET, polypropylene, polyethylene, polystyrene, nylon, or the like, laminated with a metal layer, and then connecting an IC chip. The IC chip is connected to both end parts of the antenna.

Ex. 1003, [0071] (portion)

interconnection technologies. Products with built-in NFC simplify the way units communicate with each other.

Ex. 1005, 5:31-32

technologies such as Bluetooth or Wi-Fi. The underlying layer of NFC technology follows universally implemented ISO, ECMA and ETSI standards. Because the range is so

Ex. 1005, 6:6-8

■Arntzen discloses built-in standard-conforming NFC

■A POSITA would find it obvious to implement Fujiwara's IC tags with NFC tags conformant to standards such as ISO 14443.

■Patent Owner erroneously argues that NFC tags are incompatible with Fujiwara's so-called “intended use”

Demonstrative Exhibit – Not Evidence

Fujiwara and Arntzen Disclose “an antenna and an electronic chip configured for near field communication”

A POSITA has a reasonable likelihood of success in modifying Fujiwara’s IC tags to use NFC tags of standards such as ISO 14443 or NFC tags of Arntzen, and Patent Owner failed to negate this likelihood.

Arntzen

Arntzen discloses NFC communication capability in electronic displays in shops.

PO

- Patent Owner’s own expert admits NFC was known in 2012
- Patent Owner’s expert could not rule out the use of off-the-shelf parts to implement the modification.

15 An essential feature of the present invention is that the
electronic displays 12 shall also be able to communicate
externally with other handheld units, such as a mobile
phone 20. This is primarily intended to be carried out
using the so-called Near Field Communication (NFC), as
20 described earlier. Alternatively or in addition, Bluetooth

Ex. 1005, 12:15-20

4 Q Would a person of skill in the art be
5 capable of making such a substitution?

6 MR. MOFFA: Objection. Form.

7 BY THE WITNESS:

8 A So, technically, they could make such a
9 substitution but, again, it wouldn't have the

18 Q And near-field communication was known in
19 2012, right?

20 A I think that's fair.

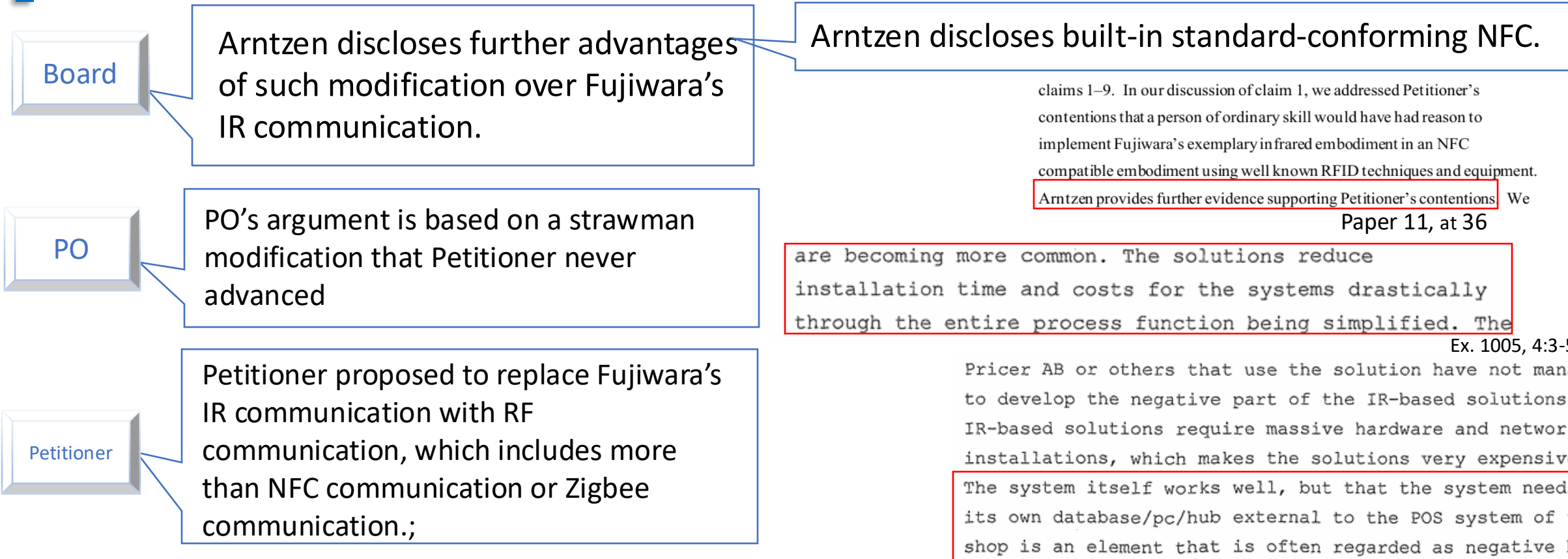
Ex. 1012, 46:18-20

Ex. 1012, 125:4-9

Demonstrative Exhibit – Not Evidence

Fujiwara and Arntzen Render Obvious “an electronic label which comprises: a radio-frequency communication module configured to receive data representing information relating to an item from a central server”

A POSITA would find it obvious to substitute Fujiwara’s infrared communication with well-known and conventional radio frequency communication, thus simplifying the design of the electronic shelf label by utilizing mature and conventional component, and saving costs, and further harmonizing the internal design of two different components of Fujiwara’s electronic shelf label 103 by employing one single communication method for both, instead of two methods.



Fujiwara and Arntzen Render Obvious “the mobile terminal is adapted to transmit data to the electronic label via the radio-frequency communication module of said electronic label”

A POSITA would find it obvious that the IC tag 10, after the obvious modification of implementing it as an NFC tag (as discussed for claim 6), forms a part of the radio-frequency communication module.

▪ Thus, a POSITA would understand that the mobile terminal is adapted to transmit data (resonant call-up signal) to the electronic label via the radio-frequency communication module (taught in part by the modified IC tag 10).

Patent Owner’s argument is based on the same strawman modifications (for claim 6) that Petitioner never advanced.

ROADMAP

Alleged Invention

Instituted Grounds

Claim Construction

Grounds 1 & 2– Fujiwara (and Arntzen)

Grounds 3 & 4 – Bandy, Fowler (and Arntzen)

Motion to Exclude Evidence

Instituted Grounds

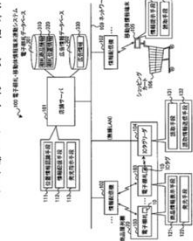
Fujiwara

JP 2008-77131 A 2008.4.3

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				G06F 17/00 118	
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				SS05 TT17	
				UU22 VV21 XX24	

(54) 【発明の名称】 位置認識システム、電子棚札・移動体情報端末連動システム、店舗サーバ、電子棚札、商品陳列棚、移動体情報端末、プログラム及び記憶媒体

(57) 【要約】
【課題】 ICタグ、発光手段を備える電子棚札と移動体情報端末を用いて、商品の店舗内での位置の特定、及び商品の位置の表示機能を提供する電子棚札・移動体情報端末連動システム等を提供する。
【解決手段】 商品陳列棚20にICタグ10を備える電子棚札103とICタグリーダ104が設置され、ICタグリーダ104はICタグ10の棚札IDの読取手段131と、棚札IDと送信元IDを店舗サーバ101へ送信する読取情報送信手段132を備え、店舗サーバ101は、送信元IDから特定した位置情報と棚札IDを対応付けた棚札位置情報320を電子棚札データベース301に保持する位置情報認識手段111と、移動体情報端末105への情報伝達手段112と、商品に対応する電子棚札103へ発光指示手段113を備えることにより、商品の位置を特定し位置を表示する。
【選択項】 図1

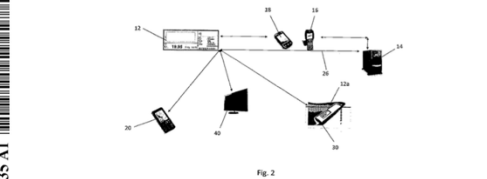


Arntzen

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(74) Agent: ACAPO AS; P.O. Box 1880 Nordnes, N-5817 Bergen (NO)
(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EG, ES, FI, GB, GR, GU, HK, HN, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.
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Published: with international search report (Art. 21(3))

(54) Title: SYSTEM AND METHOD FOR DISPLAYING AND UPDATING PRICE AND PRODUCT RELATED INFORMATION

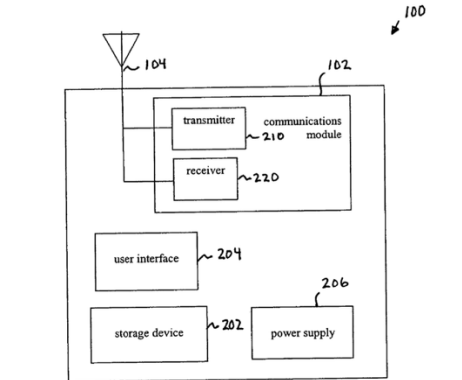


(57) Abstract: Described is a system for displaying price and product related information for sales articles and other types of merchandise, comprising a number of price labels in the form of an electronic display (12), for display of relevant information, and at least one network (26) for communication with and between said numbers of electronic displays (12). The network (26) is a wireless mesh network for internal communication between said number of electronic displays (12) and at least one data unit (14) containing price and product related information, and said electronic display (12) comprises equipment for remote, wireless, near field communication with handheld units (16, 18, 20). The invention also relates to a method for updating price and product related information for sales items.

Bandy

(19) United States
(12) Patent Application Publication
(10) Pub. No.: US 2007/0024436 A1
(43) Pub. Date: Feb. 1, 2007

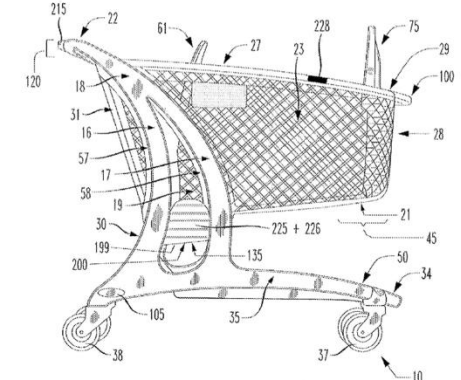
(54) METHOD AND APPARATUS FOR A PRODUCT INFORMATION INTERFACE UTILIZING RADIO FREQUENCY IDENTIFICATION (RFID) TECHNOLOGY
(75) Inventor: William R. Bandy, Gambrell, MD (US)
Correspondence Address: STERNE, KESSLER, GOLDSTEIN & FOX PLLC
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WASHINGTON, DC 20005 (US)
(73) Assignee: Symbol Technologies, Inc., Holtsville, NY
(21) Appl. No.: 11/190,882
(22) Filed: Jul. 28, 2005



Fowler

(19) United States
(12) Patent Application Publication
(10) Pub. No.: US 2008/0231228 A1
(43) Pub. Date: Sep. 25, 2008

(54) BI-DIRECTIONAL CHARGING/INTEGRATED POWER MANAGEMENT UNIT
(75) Inventors: Doug Fowler, Plano, TX (US); Dan McQuitty, Plano, TX (US); Chris Harwood, Plano, TX (US); James E. Gibbons, Plano, TX (US)
Correspondence Address: CONLEY ROSE, P.C.
5601 GRANITE PARKWAY, SUITE 750
PLANO, TX 75024 (US)
(73) Assignee: Media Cart Holdings, Inc., Plano, TX (US)
(21) Appl. No.: 11/698,839
(22) Filed: Mar. 25, 2007



Ground 3

Ground 4

Instituted Grounds 3 and 4 – Disputed Limitations

Claims	Disputed limitation
1 & 5	“vertical and horizontal positions”
	“an antenna and an electronic chip configured for near field communication”
6	Motivation to combine Bandy with Fowler

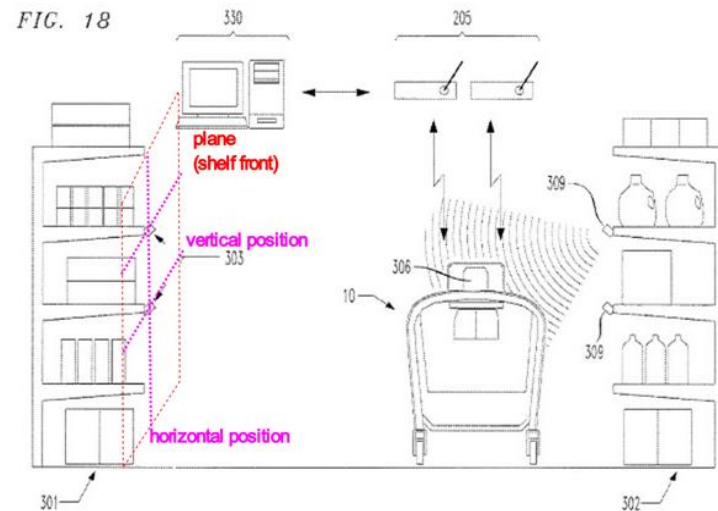
Fowler Discloses “vertical and horizontal positions”

Fowler

- Fowler discloses “RFID tags located at various heights and locations along the shelves.”
- Fowler discloses that RFID tags may be attached at a product level, with a tag on each individual product or package.

Fowler explicitly discloses (1) “RFID tags located at various heights and locations along shelves” and (2) “RFID tags 303 and 304 may be attached at a shelf or fixture level, which refers to placement of tags at about regularly spaced intervals along a shelf or other product display areas.” Ex. 1007 ¶¶ 137, 141. Based on this disclosure in Fowler, we agree with Petitioner that a person of ordinary skill would recognize that Fowler discloses RFID tags located at different vertical and horizontal positions in a planogram. Pet. 68 (citing Ex. 1009, Tentzeris Decl. ¶ 190). Paper 11, at 45

Patent Owner attacks Fowler’s need of a vertical position, but cannot negate Fowler’s disclosure of a vertical position.



Ex. 1007, FIG. 18 (annotated)

The correct inquiry is whether a POSITA would be motivated to modify Bandy to incorporate Fowler’s disclosure.

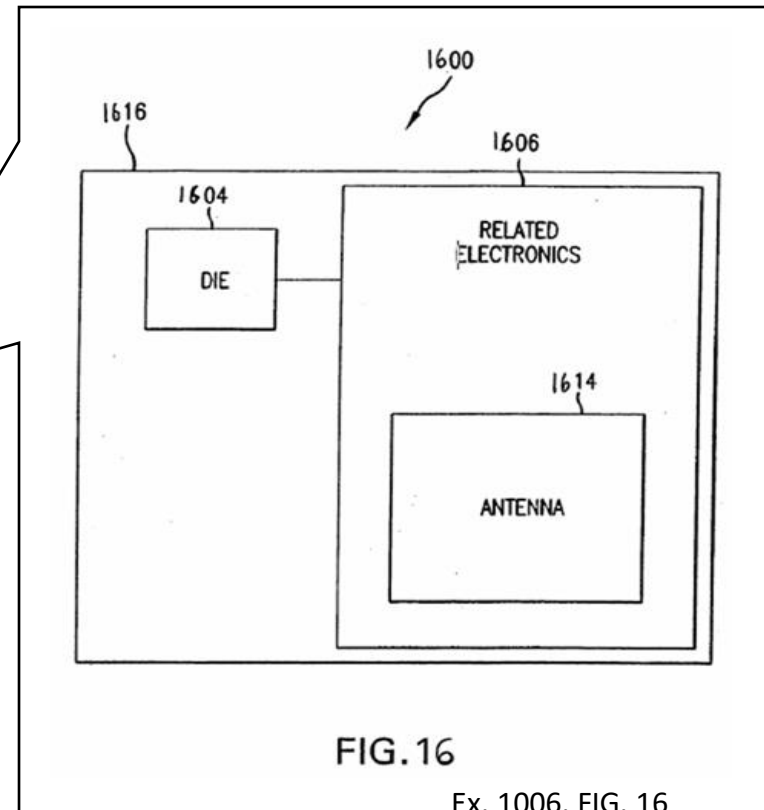
- A POSITA would be motivated to modify Bandy such that the location data of the item that is transmitted to and displayed on the mobile device further includes vertical and horizontal position of the item, and such that routing information based on the present location of the mobile device be provided to and displayed by the mobile communications device to make it easier for the customer to find products.

Bandy Renders Obvious “an antenna and an electronic chip configured for near field communication”

Bandy

- Bandy discloses that an RFID tag 1600 includes a die 1604 and related electronics 1606 located on a tag substrate 1616.
- Bandy discloses that die 1604 is an integrated circuit (electronic chip) that performs RFID operations, such as communicating with one or more tag readers (not shown) according to various interrogation protocols.
- Bandy discloses that related electronics 1606 includes an antenna 1614.

Patent Owner erroneously argues that Bandy disclosed nothing but UHF RFID protocols therefore a POSITA would not look to use NFC protocols with Bandy’s RFID tag.



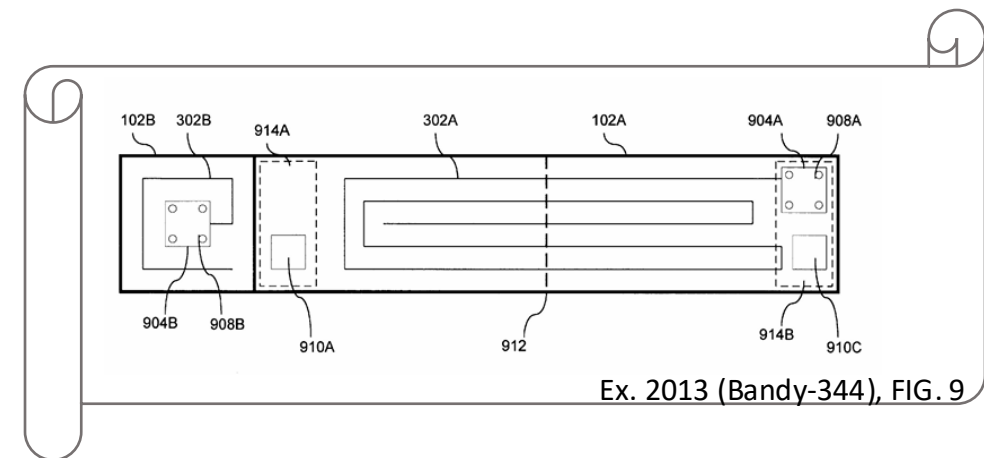
The argument, even if true (it isn't), does not mean Bandy teaches away from NFC protocols, so it will not prevent a POSITA to look to use NFC protocols with Bandy's RFID tag.

- Bandy discloses “interrogation/read protocols” that *are* compatible with NFC.
- Bandy is directed all types of RFID devices, which are not limited to the UHF RFID tags in preferred embodiments.

Demonstrative Exhibit – Not Evidence

Bandy Renders Obvious “an antenna and an electronic chip configured for near field communication”

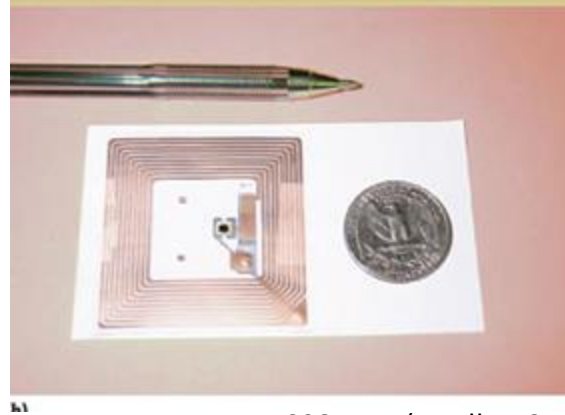
- Patent Owner erroneously argues that the antennas shown in a single exemplary illustration of Bandy-344 (incorporated into Bandy) are not compatible with NFC.
- Patent Owner improperly seeks to limit the claimed antenna to a single exemplary illustration (without textual support) in the '340 specification.
- Patent Owner erroneously claims that the single exemplary illustration in '340 specification represents the only possible antenna for NFC.
- Patent Owner erroneously claims that the single exemplary illustration in Bandy-344 represents the only antennas compatible with Bandy.
- Contrary to Patent Owner's assertions, the antennas shown on the exemplary illustration in Bandy-344 *are* suitable for NFC.



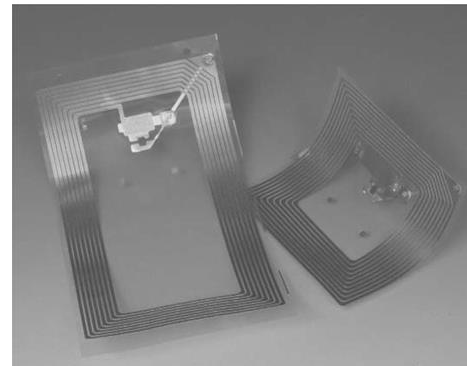
Ex. 2013 (Bandy-344), FIG. 9

Bandy Renders Obvious “an antenna and an electronic chip configured for near field communication”

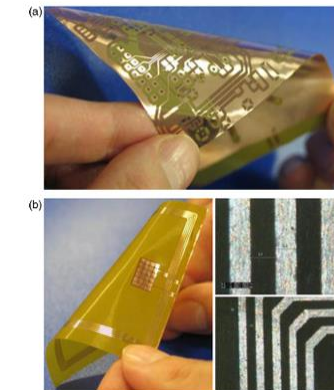
- Patent Owner erroneously argues that modifying Bandy to use NFC antennas would have increased the size and stiffened the tag, making it unsuitable for Bandy’s purpose.
- The Bandy-344 antennas *are* suitable for NFC.
- It is well within a POSITA’s knowledge to implement NFC antennas on small and flexible tags.



Ex. 1028, at 4 (small NFC tag)



Ex. 1029, at 40 and Ex. 1030, at 2 (flexible tags compatible with HF RFID/NFC)



Bandy Renders Obvious “an antenna and an electronic chip configured for near field communication”

- Patent Owner erroneously argues that modifying Bandy to use NFC antennas would have been impractical because NFC tags cannot work in the vicinity of metal or liquid.
- Bandy does not require the tags to be attached directly to the items
- Patent Owner misquotes Petitioner’s expert’s testimony.
- A POSITA would know that NFC tags can be used in the vicinity of metal or liquid.

their origin. This RFID system consists of 3 components. The 1st component is a 13.56 MHz semiactive RFID tag placed inside each case of wine. This semiactive tag enables wine producers and distributors to monitor and log ambient temperatures in each case of wine 3 times a day. The 2nd component is a 13.56 MHz passive RFID tag with a unique code attached to the base of each bottle for tracking and inventory management. The 3rd component is a

Ex. 2006, at R104 (using NFC in the vicinity of liquid)

Note: The equivalent circuit (see Fig 2) must be determined under final environmental conditions especially if the antenna will be operated in metal environment or a ferrite will be used for shielding.

Ex. 1031, at 8 (using NFC in metal environment)

19 THE WITNESS: So in general -- in general, most
20 of these systems -- most of these NFC transponders, they
21 utilize enclosures. And the enclosures they utilize are
22 most of the time realizing this spacing.

Ex. 2024, 32:19-22 (spacing allows NFC to work in vicinity of metal)

6 Q You state in part in Paragraph 67: Thus,
7 special materials or distance between the antenna
8 and the metal or liquid is required to read an NFC
9 tag.

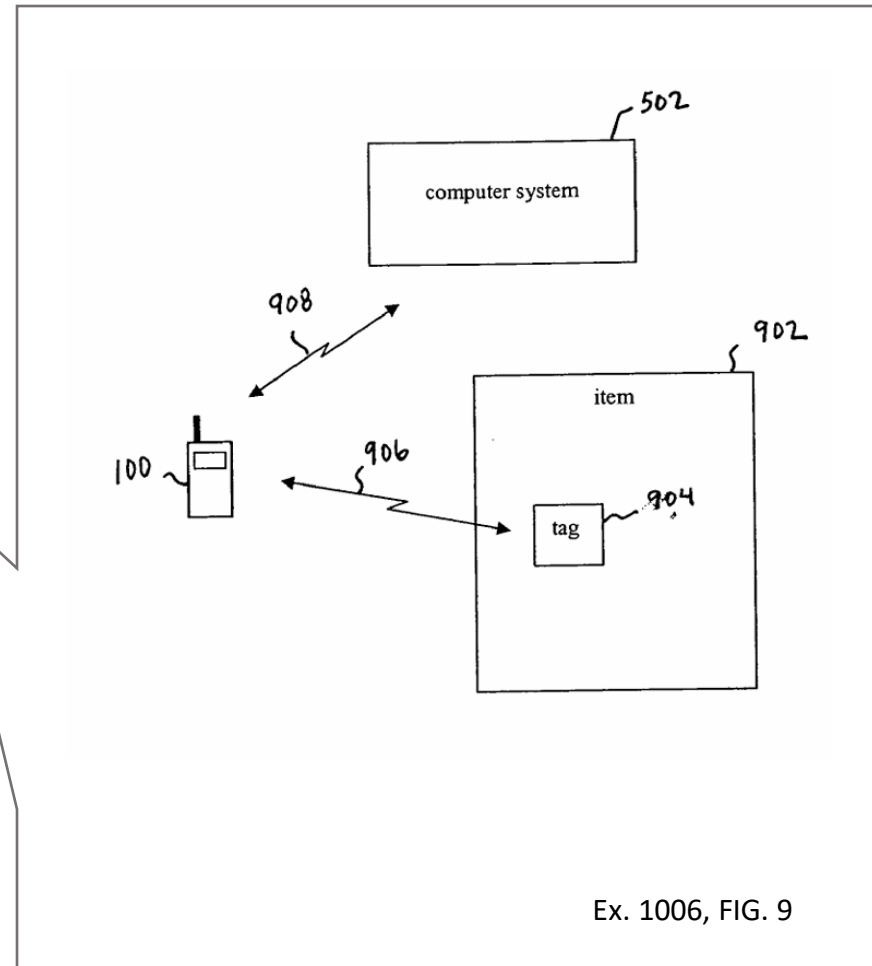
10 Do you see that?

11 A Uh-huh.

Ex. 1012, 77:6-11

Bandy Renders Obvious “an antenna and an electronic chip configured for near field communication”

- Patent Owner erroneously argues that modifying Bandy to use NFC antennas would have been impractical because limited ranges of NFC tags require a reader to be “brought close.”
- Bandy specifically discloses the use of a mobile device to read tags.
- There is nothing wrong to require a reader to be “brought close” in light of Bandy’s disclosure.



- Patent Owner erroneously and irrelevantly argues that NFC is incompatible with Fowler.
- Fowler is directly to implementing a proximity scan of the shopping cart.
- Fowler discloses the use of passive RFID tags.
- Nothing in Fowler discourages or criticizes the use of NFC tags in locations close to the trajectory of Fowler’s cart.

A POSITA Would Have Been Motivated to Combine Bandy with Fowler

POSITA

- A POSITA would have been motivated and able to combine Fowler's disclosures of route finding and vertical positioning with Bandy to implement Bandy's expressly taught objectives of "improv[ing] an interface between customers and products in warehouse, shopping, and additional environments, including an improved interface with items associated with RFID tags".
- A POSITA would have been motivated and able to use the command and background knowledge of NFC standards such as ISO 14443, as well as Fowler's passive RFID tags, to implement Bandy's RFID tags.

- Bandy and Fowler disclose similar techniques.
- Bandy and Fowler *are* physically compatible in their use of mobile (or "hand-operated") devices.

Bandy and Fowler disclose similar techniques for storing data that associates product and location information in a physical space, such as a retail store. That Fowler may not require the user to physically remove the mobile device from the cart to scan the RFID tag is not the subject matter of claim 1. We further note that, at this stage of the proceeding, there is no evidence

Patent Owner erroneously based its argument against motivation to combine on strawman combinations that Petitioner never advanced. The Board already rejected this argument in its institution decision.

- Physical compatibility is not required for combining arts.
- "it is not necessary that the inventions of the references be physically combinable to render obvious the invention under review." *In re Sneed*, 710 F.2d 1544, 1550 (Fed. Cir. 1983)



A POSITA Would Have Been Motivated to Combine Bandy with Fowler

Board

- a POSITA would have reason to modify Bandy-Fowler and implement Arntzen's NFC technology for communication with mobile terminal in Bandy-Fowler's RFID tag.

PO

- relies on inapposite cases to criticize Petitioner's references to earlier discussions of Arntzen.
- erroneously argue that the NFC technology of Arntzen is incompatible with Bandy and Fowler.

Petitioner

- Contrary to Patent Owner's assertion, Petitioner amply showed the motivation to combine Bandy-Fowler with Arntzen, as recognized by the Board.

the technology disclosed in Arntzen. Thus, we find that Petitioner has demonstrated that an ordinarily skilled artisan would have had reason to combine the teachings of Bandy, Fowler, and Arntzen, and that their combined teachings would have disclosed or suggested all the limitations of claims 1–5 and 8–9.

Paper 11, at 51

- This represents nothing more than the combination of known elements to achieve predictable results, and is well within the skills of a POSITA.

- Petitioner pointed to teachings in the references themselves for motivation to combine.
- Petitioner relied on references cited by its expert, for example, the ISO standards, for certain NFC advantages.
- Petitioner is justified to rely upon the '340 Patent's admissions about the scope and content of the prior art.
- “a patentee's admissions about the scope and content of the prior art provide a factual foundation as to what a skilled artisan would have known at the time of invention.”

Qualcomm Inc. v. Apple Inc., 24 F.4th 1367, 1376 (Fed. Cir. 2022).



ROADMAP

Alleged Invention

Instituted Grounds

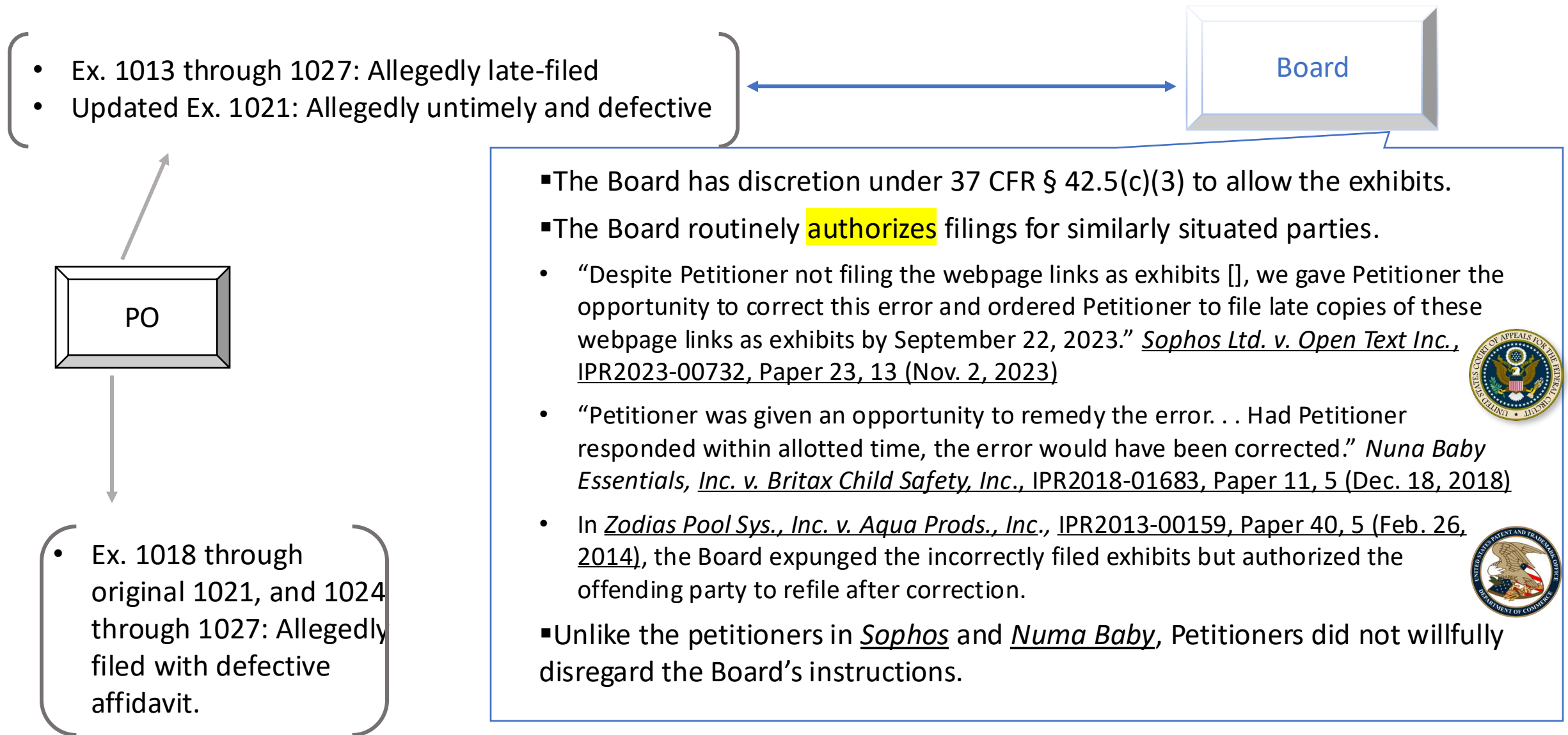
Claim Construction

Grounds 1 & 2– Fujiwara (and Arntzen)

Grounds 3 & 4 – Bandy, Fowler (and Arntzen)

Motion to Exclude Evidence

The Exhibits In Question



Patent Owner Was Not Prejudiced By The Filings

47. In particular, the use of NFC technology, including the claimed communication range of less than twenty centimeters, was well established in the retail industry by the Critical Date. *See id.*, [0015]; U.S. Patent App. Pub. No. 2010/0161434 A1 (publication date Jun. 24, 2010), [0083] (relating to a retail checkout system and disclosing that “[t]ypically, the NFC tag 106 emits and receives electromagnetic radiation at 13.56 MHz with a 2.0 MHz bandwidth and usually supports data rates of 106 Kbps–1 using modified Miller coding with 100%

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HANSHOW AMERICA INC. and HANSHOW TECHNOLOGY CO., LTD.
Ex. 1009, page 29

modulation, or 212 or 424 Kbps–1 using Manchester coding with a 10% modulation ratio. A typical effective range of an NFC tag is between 5 and 20 cm, usually 15 cm or less.”); U.S. Patent App. Pub. No. 2008/0255947 A1 (publication date Oct. 16, 2008), [0025] (relating to a payment system and disclosing that “‘Near Field Communication’ (NFC) refers to short range (20 cm or less) wireless technology used to facilitate communication between electronic devices in close proximity as defined, for example, by the ISO 14443 standard. For example, embodiments of the

Ex. 1009, ¶147

Petitioner’s expert used the documents in conjunction with other unchallenged exhibits to form opinions about a POSITA’s background knowledge.

46. Furthermore, the claimed use of NFC technology is well established in the art at the time of the claimed invention. In particular, the standard ISO/IEC 14443 for proximity cards that operate within a communication range of less than twenty centimeters was well established before the Critical Date. *See* U.S. Patent App. Pub.

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No. 2012/059741 A1 (publication date Mar. 8, 2012), [0006] (describing the availability of the standard); *see also generally* U.S. Patent App. Pub. No. 2014/0195925 A1 (filing date Aug. 24, 2011), [0002] (describing NFC technology with a communication range of less than 20 centimeters as well-known background as of the filing date); U.S. Patent No. 7,937,107 B2 (granted May 3, 2011), [1:62-

Ex. 1009, ¶146

49. The advantages of NFC technology in electronic shelf labels are also well known before the Critical Date. As International Patent Application Publication No. WO 2010/082835 A1 by Arntzen (“Arntzen”), one of the prior art references used

in this petition, describes more than two years before the Critical Date, “[t]he

Ex. 1009, ¶149

Patent Owner Was Not Prejudiced By the Filings

- Rule 403 does not call for the automatic exclusion of cumulative evidence, and Patent Owner failed to carry out the balancing test under Rule 403.

13 | anything. It just added some more information to
14 | corroborate my opinion expressed in my original declaration.

Ex. 2028, 73:13-14

20 | Q. Would you ever cite to a document in a declaration
21 | that you have signed if you did not review it?

22 | A. No.

Ex. 2028, 87:20-22

11 | difference, but just for the record, I compared the
12 | unofficial translation and the official translation after it
13 | came out. And it was identical, except from the first page.

Ex. 2028, 82:11-13

- Patent Owner had access to the original translations (Ex. 1019 and original 1021), because they were filed as exhibits in a related proceeding. There was no change in the translations.
- Patent Owner did not challenge substantively the opinions by Petitioner's expert formed from these translations.

The Translation Affidavits Are Compliant



- ✓ “Rule 42.63 does not specify which individuals may provide such an affidavit.” *Uber Technologies, Inc. v. X One, Inc.*, IPR2017-01264, Paper 48, 36 (October 12, 2018).
- ✓ “Evidence to prove personal knowledge may consist of the witness’s own testimony.” *Id.*
- ✓ “sufficient indicia to support the admissibility of the affidavit” exists in similar affidavits. *Id.*
- ✓ Lack of personal knowledge in this context pertains to credibility rather than admissibility. *Id.* at 36-37.

Patent Owner's Forfeited Argument vs. Petitioners' Willingness to Refile

Patent Owner Forfeited its Argument Against the Translation Affidavits

PO

- Patent Owner failed to “identify the grounds for the objection with sufficient particularity to allow correction in the form of supplemental evidence” as required by 37 CFR § 42.64(b)(1).
- Patent Owner’s boilerplate language in its objection is insufficient.

Patent Owner further objects to Exhibit 1027 under F.R.E. 602, 603, and 604 because the declaration does not appear to be signed by someone with personal knowledge and is thus irrelevant and not admissible (F.R.E. 401, 402) or its

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probative value is substantially outweighed by other considerations under F.R.E. 403, including unfair prejudice, confusion of the issues, and waste of time. *See also* Paper 27, 13-14

“[the] boilerplate objection is woefully insufficient to show that [the party] objected with sufficiently particularity to allow correction in the form of supplemental information, as our Rule requires.” Abbott Diabetes Care Inc. f/k/a TheraSense, Inc. v. DexCom, Inc., IPR2022-00922, Paper 42, 31 (Nov. 2, 2023)

Board

The Board may exercise its discretion under 37 CFR § 42.5(b) and allow Petitioners to correct the filings.

- The Board has not automatically applied exclusion in cases where translation affidavits were defective.
 - The Board refused to exclude purported translation unaccompanied by any affidavit in Liquidia Technologies, Inc. v. United Therapeutics Corporation, IPR2020-00770, Paper 45, 58 (October 8, 2021).
 - The Board accepted later filings of compliant affidavits that remedied alleged deficiencies in the earlier ones in Uber Technologies, Paper 48, at 37-38.

with the rule. Given the circumstances, we conditionally exercise our discretion to waive requirements under 37 C.F.R. Part 42. *See* 37 C.F.R. 42.5(b).

Paper 11, 14

