

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

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

**v.**

**SES-IMAGOTAG GMBH**

**IPR2024-00208**

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Petitioner Hanshow's Demonstratives

February 18, 2025

# ROADMAP

## The '709 Patent

Claim Construction

Instituted Grounds

Ground 1 - Wu

Ground 2 – Wu, Chaves

Ground 3 – Wu, Itou, Auclair

Ground 4 – Wu, Fujiwara

# U.S. Patent No. 11,010,709

(10) **Patent No.:**      **US 11,010,709 B2**  
(45) **Date of Patent:**      **May 18, 2021**

(54) **METHOD FOR UPDATING ASSOCIATION  
DATA BETWEEN ARTICLES AND  
LOCATIONS**

(22) **PCT Filed:**      **Jul. 25, 2016**

(86) **PCT No.:**      **PCT/FR2016/051930**

§ 371 (c)(1),  
(2) **Date:**      **Jan. 25, 2018**

(30)      **Foreign Application Priority Data**

Jul. 27, 2015      (FR) ..... 1557153



US011010709B2

(12) **United States Patent**  
**Bottine et al.**

(10) **Patent No.:**      **US 11,010,709 B2**  
(45) **Date of Patent:**      **May 18, 2021**

(54) **METHOD FOR UPDATING ASSOCIATION  
DATA BETWEEN ARTICLES AND  
LOCATIONS**

(56)      **References Cited**

U.S. PATENT DOCUMENTS

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Primary Examiner — A. Hunter Wilder

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(74) Attorney, Agent, or Firm — Lerner, David,

Littenberg, Krumholz & Mentlik, LLP

(57)      **ABSTRACT**

The invention concerns a method for updating association

data between articles in a retail area and locations of said

retail area, said method comprising the steps according to

which, —a reading device acquires a sequence of tag

identifiers comprising at least two tag identifiers of which

the electronic shelf tags are adjacent, one of said adjacent

electronic shelf tags being said electronic shelf tag to be

located, and another of said adjacent electronic shelf tags

being an electronic shelf tag of which the location is known,

the reading device transmits the sequence of identifiers to a

computer system that updates the association data from the

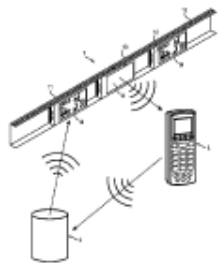
sequence of tag identifiers, by determining the articles

associated with the tags of the sequence of tags, the respec-

tive locations of said articles from the order of the tags in the

sequence of tags.

20 Claims, 3 Drawing Sheets



(21) **App. No.:**      **15/747,550**

(22) **PCT Filed:**      **Jul. 25, 2016**

(86) **PCT No.:**      **PCT/FR2016/051930**

§ 371 (c)(1),

(2) **Date:**      **Jan. 25, 2018**

(87) **PCT Pub. No.:**      **WO2017017366**

PCT Pub. Date: Feb. 2, 2017

(65)      **Prior Publication Data**

US 2018/0218316 A1      Aug. 2, 2018

(30)      **Foreign Application Priority Data**

Jul. 27, 2015      (FR) ..... 1557153

(51) **Int. Cl.**

G06Q 10/08      (2012.01)

G06F 16/23      (2019.01)

G06K 19/07      (2006.01)

(52) **U.S. Cl.**

CPC ..... G06Q 10/087 (2013.01); G06F 16/2379

(2019.01); G06K 19/0723 (2013.01); G06Q

10/08 (2013.01)

(58) **Field of Classification Search**

CPC .. G06Q 10/087; G06Q 10/08; G06F 16/2379;

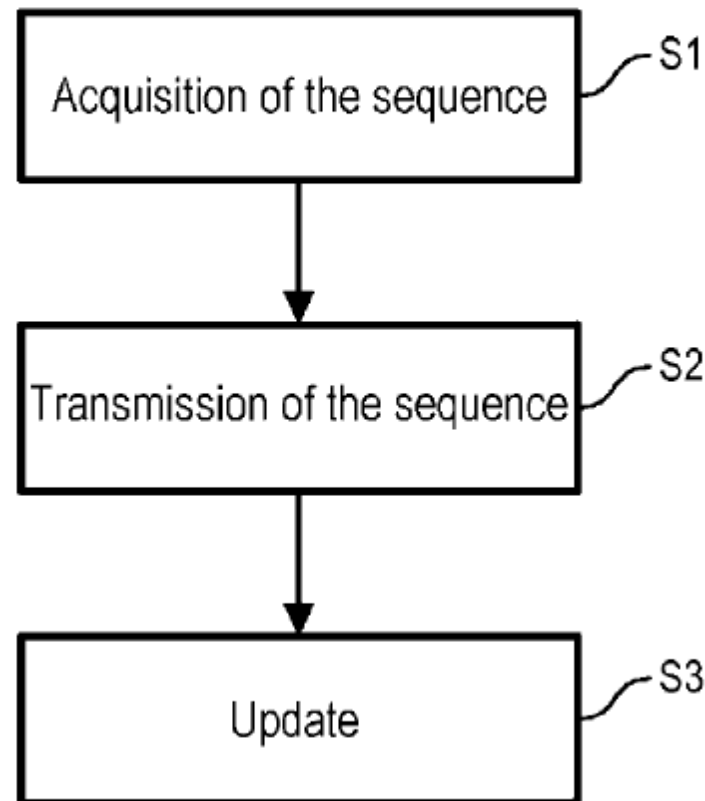
G06K 19/0723

See application file for complete search history.

# Overview of the '709 Patent



FIG. 5



# Claim 1 of the '709 Patent

The invention claimed is:

1. A method for updating a planogram registered in a computer system, to reflect an addition of a shelf label in a shelf of a retail area, wherein the planogram comprises association data between articles of the retail area and locations of the retail area, the method comprising:

**acquiring**, by a reading device, a sequence of label identifiers comprising a label identifier of an added shelf label reflecting an addition of the shelf label in the shelf of the retail area, and also comprising a label identifier of an adjacent shelf label which is adjacent to the added shelf label according to a scrolling direction of the locations of the retail area,

the retail area having a plurality of shelf labels distributed in the retail area, each of the shelf labels being associated with a respective article and being disposed near a respective location associated with the article, each of the shelf labels being associated with a label identifier of its own,

wherein the adjacent shelf label is either the preceding shelf label or the following shelf label in the shelf according to the scrolling direction and in relation to the added shelf label,

wherein a location of the adjacent shelf label is preliminarily known in the planogram;

identifying a location corresponding to the added shelf label in the shelf of the retail area, comprising:

**transmitting**, by the reading device, the sequence of label identifiers to the computer system,

**updating**, by the computer system, the planogram on the basis of the sequence of label identifiers, by determining:

articles associated with the labels of the sequence of label identifiers, and

locations of the articles, on the basis of an obtained location of the added shelf label, wherein the obtained location is a location in the planogram which is adjacent to the preliminarily known location of the adjacent shelf label.

# ROADMAP

The '709 Patent

## Claim Construction

Instituted Grounds

Ground 1 - Wu

Ground 2 – Wu, Chaves

Ground 3 – Wu, Itou, Auclair

Ground 4 – Wu, Fujiwara

# Claim Construction - “Location”

| PO’s Construction                                                                                                | Petitioner’s Construction  |
|------------------------------------------------------------------------------------------------------------------|----------------------------|
| “must be represented in units that allow distance from a point of reference in the retail area to be determined” | plain and ordinary meaning |

- PO’s construction lacks intrinsic support. Ex. 1001 (the ’709 Patent), 10:10-14:20, 8:40-50.
- In light of the specification, a POSITA would not interpret “location” as PO proposed. Ex. 1009 (Declaration of Dr. Tentzeris), ¶ 63, ¶108.
- The prior art discloses locations even under PO’s construction. Ex. 1003 (Wu), FIG 2, FIG 3B, 5:5-11, 32-36, 60-63; Ex.1004 (Itou), [0097], FIG 9.

# Wu Discloses Locations

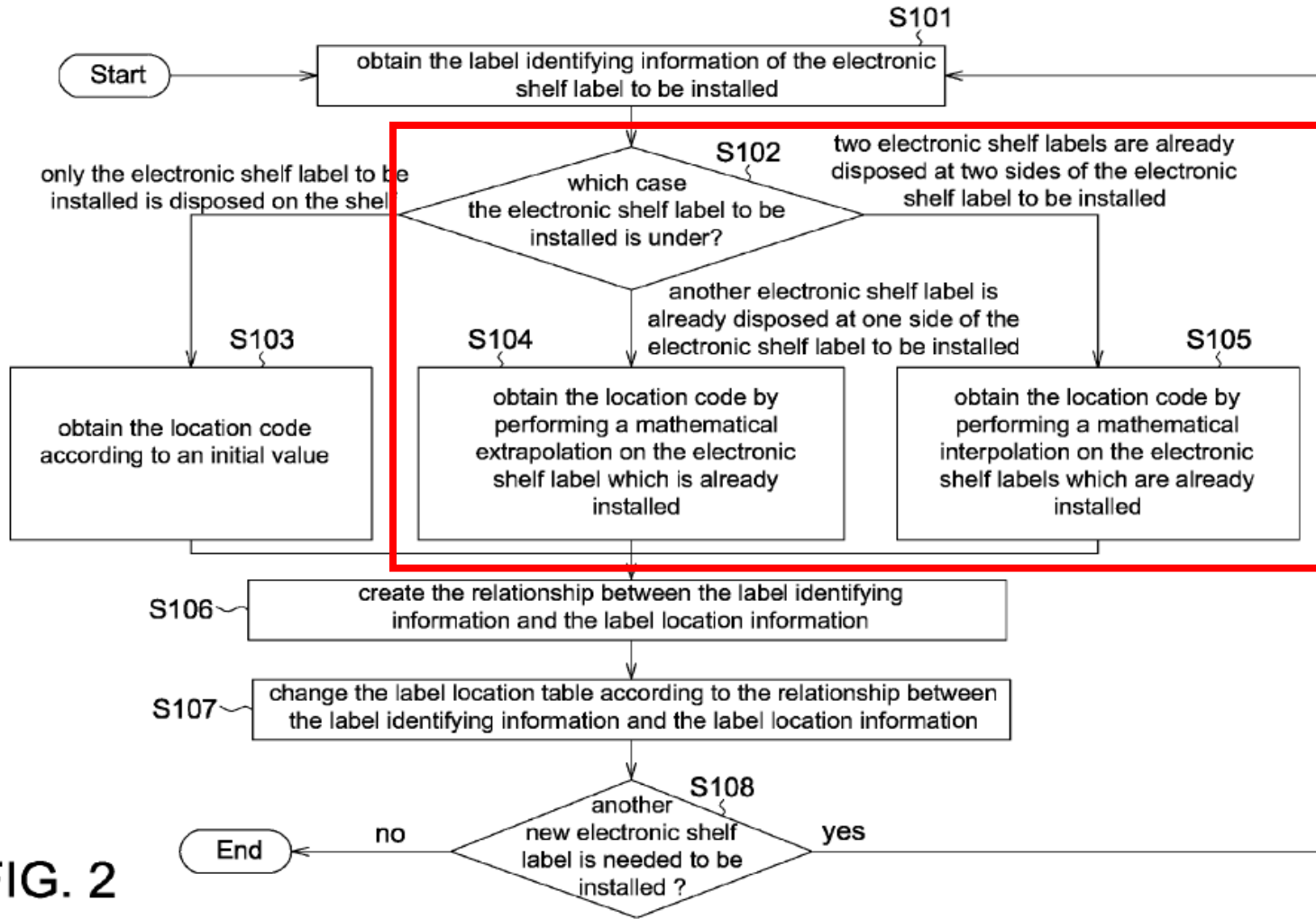


FIG. 2

“[M]athematical extrapolation has to depend on an independent variable. And given this independent variable is declared [by] saying, the location codes increment from left to right, my testimony is that the mathematical extrapolation will have to do with distance, which is the independent variable in this case.”

“[M]athematical interpolation correlates the value of a function as a value of some variable...the only variable in the location code of these shelf labels they are correlated is the position on the shelf. There is no other independent variable that could be utilized performing a mathematical interpolation in this case.”

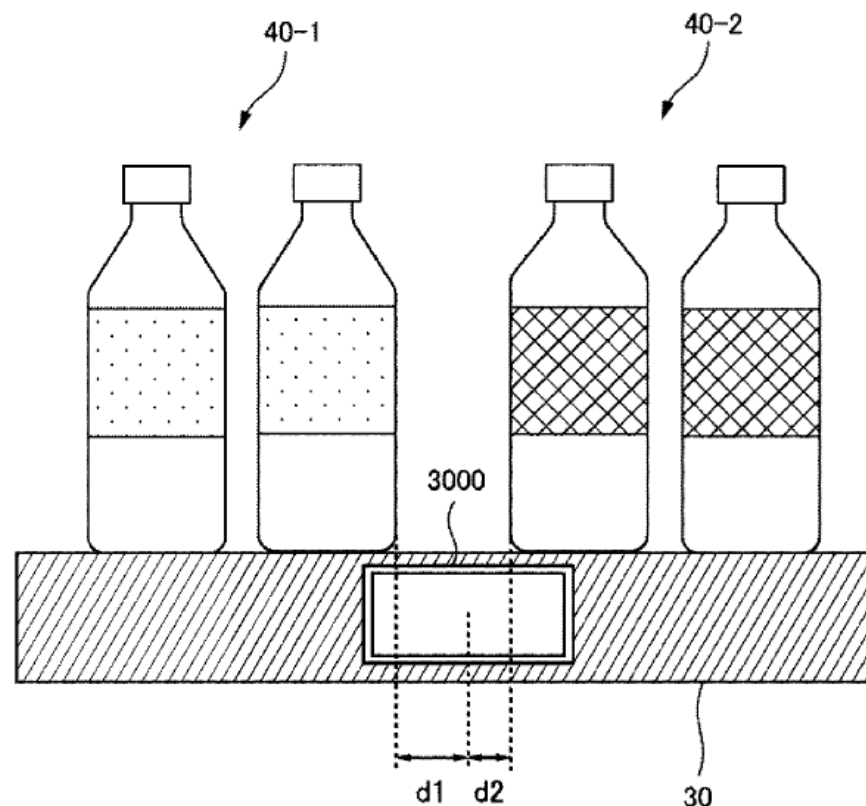
# Itou Discloses a Displacement Measuring Member

Itou

[0095] <<Method of Determining Closest Electronic Shelf Label 3000 and Product>>

[0097] For example, the determination unit 2060 calculates the distance between the product 40 and the electronic shelf label 3000, as a length between the position of the product 40 and the position of the electronic shelf label 3000. Here, in a case where the product recognition unit 2020 recognizes the plurality of positions of the product as stated above, the determination unit 2060 may cause the position of the product 40 used for calculating the distance between the product 40 and the electronic shelf label 3000 to be different based on the positional relationship between the product 40 and the electronic shelf label 3000. FIG. 9 is a diagram illustrating the distance between the product 40 and the electronic shelf label 3000. In FIG. 9, the product 40-1 is located on the left side of the electronic shelf label 3000. Thus, the determination unit 2060 calculates a distance d1 between the product 40-1 and the electronic shelf label 3000, as a distance of a coordinate of the right end of the product group area of the product 40-1 and a coordinate of the center of the electronic shelf label 3000. On the other hand, the product 40-2 is located on the right side of the electronic shelf label 3000. Thus, the determination unit 2060 calculates a distance d2 between the product group area of the product 40-2 and the electronic shelf label 3000, as a distance between a coordinate of the left end of the product group area of the product 40-2 and a coordinate of the center of the electronic shelf label 3000.

FIG. 9



# The Board Correctly Determined that PO's Position Is Not Supported

Prelim. Reply 9–10. Petitioner's position as to the “location” elements of limitations 1[i] and 1[o] is well-taken. The claims and the specification of the '709 patent do not support Patent Owner's position. We determine that the showing in the Petition as to the “location” elements of limitations 1[i] and 1[o] is more than sufficient to support institution.

# Claim Construction - “Planogram”

| PO’s Construction                                                                        | Petitioner’s Construction  |
|------------------------------------------------------------------------------------------|----------------------------|
| Patent owner raised the issue of claim construction but failed to provide a construction | plain and ordinary meaning |

- Patent Owner does not provide a definition. Paper 26 (PO’s Response), 20-29.
- The ‘709 Patent provides a clear definition. Ex. 1001 (the ‘709 Patent), 2:6-7, 5:16-20, 10:13-15.

But, locating the terminal from the ESLs supposes precise and correct knowledge of the location of said ESLs. The layout of a retail area is normally described by a planogram. A planogram is a set of association data among articles of a retail area and locations of said retail area. The planogram determines which products must be at which height, on which shelves and over how many linear meters.

# Despite Many Inquiries, PO's Expert Failed to Define "Planogram" Because "There are So Many Things People Call Planograms"

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SES-IMAGOTAG INC.  
Patent Owner.  
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Case No.: IPR2024-00208  
Patent No. 11,010,709  
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Deposition of RAJEEV SURATI, Ph.D.  
Conducted virtually via Zoom  
Friday, November 22, 2024  
12:45 p.m. CST

Job No.: 560355

Pages: 1 - 118

Reported by: THERESA A. VORKAPIC,  
CSR, RMR, CRR, RPR

A So I'm just -- I try to describe the scope of what the word planogram means in this section. I don't definitively define it like I do location and so I'm trying to give you a sense of like here are some commonalities and here are some bounds for what this notion of the a planogram means because there are so many things people call planograms and I don't want to disclude them,

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Ground 4 – Wu, Fujiwara



# Instituted Grounds

| Reference       | Publication or Filing Date   |
|-----------------|------------------------------|
| <b>Wu</b>       | published June 25, 2015      |
| <b>Chaves</b>   | published September 17, 2009 |
| <b>Itou</b>     | filed September 30, 2014     |
| <b>Auclair</b>  | published December 5, 2013   |
| <b>Fujiwara</b> | published April 3, 2008      |

# ROADMAP

The '709 Patent

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Ground 4 – Wu, Fujiwara

# Wu Discloses an Electronic Shelf Label Installing and Updating Method

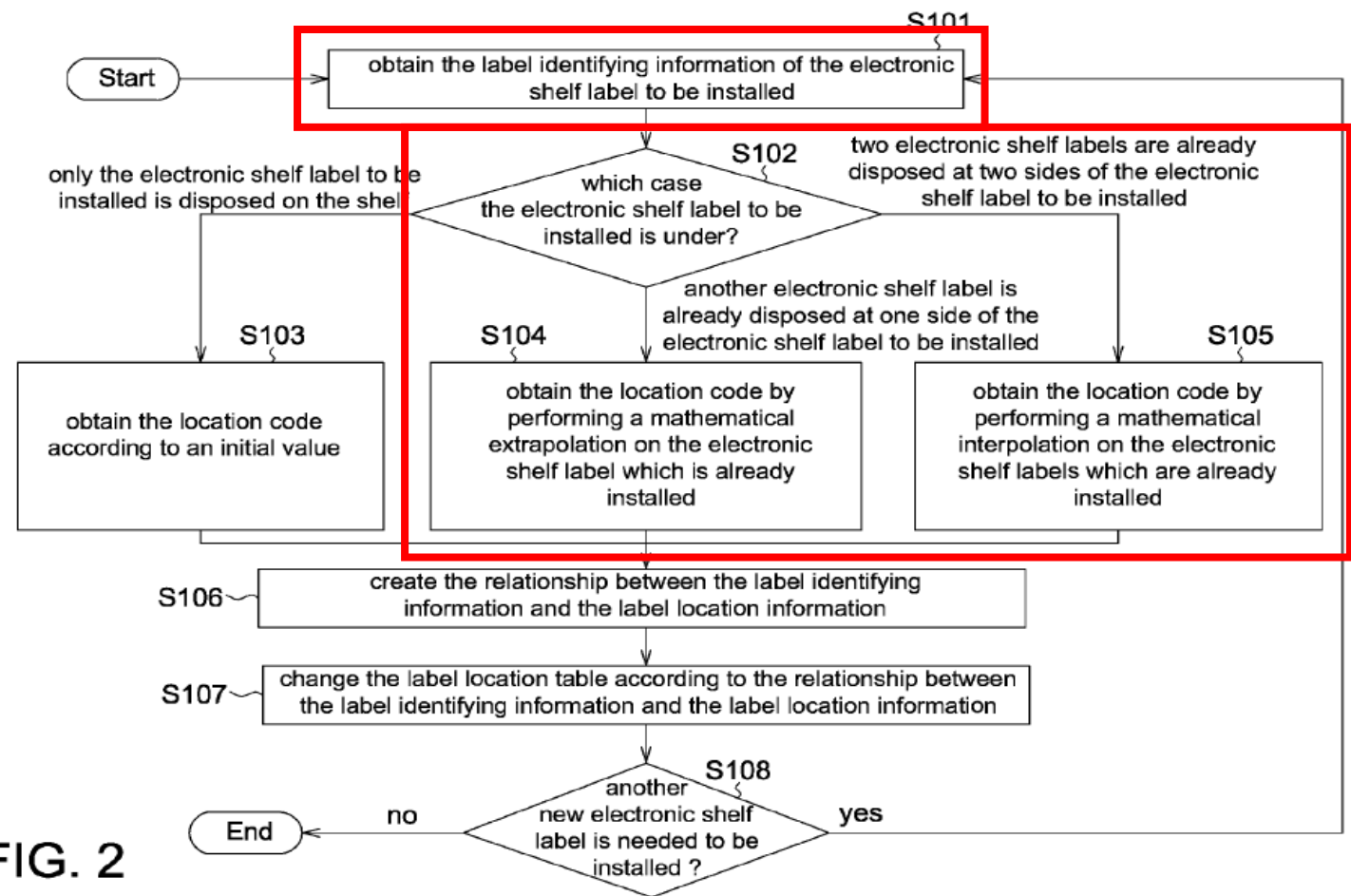
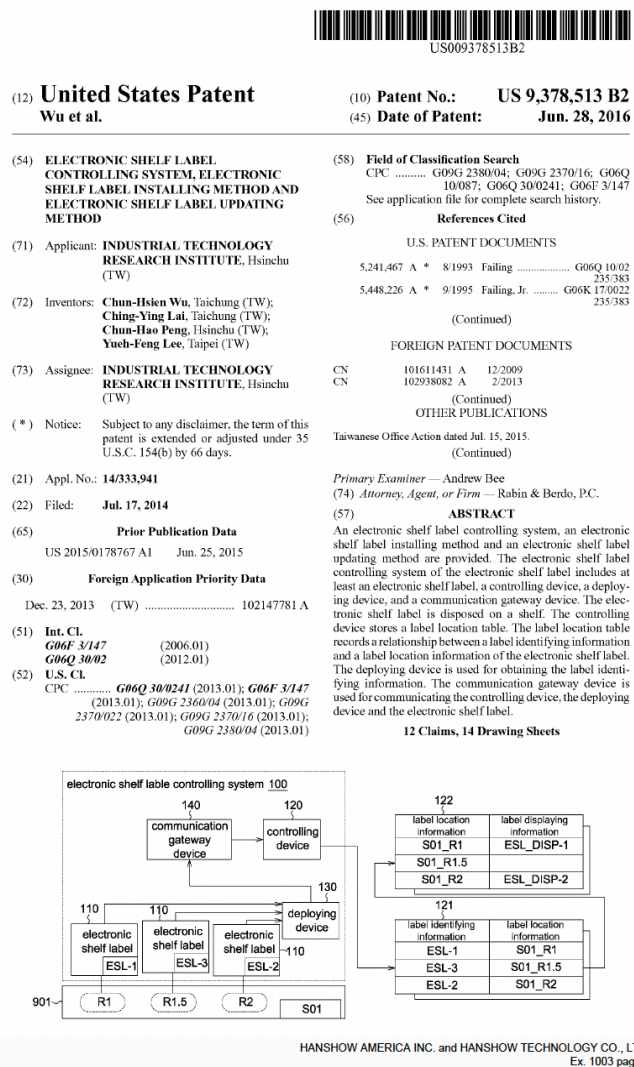
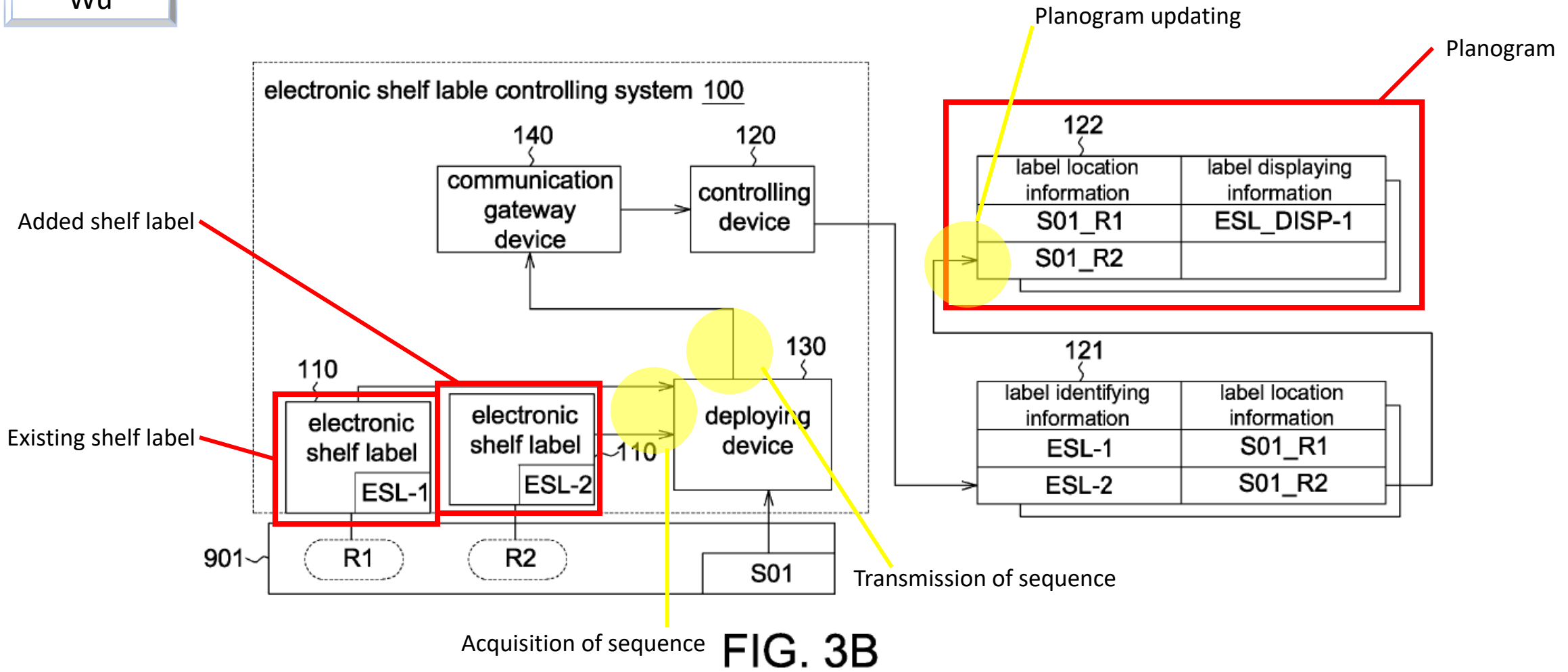


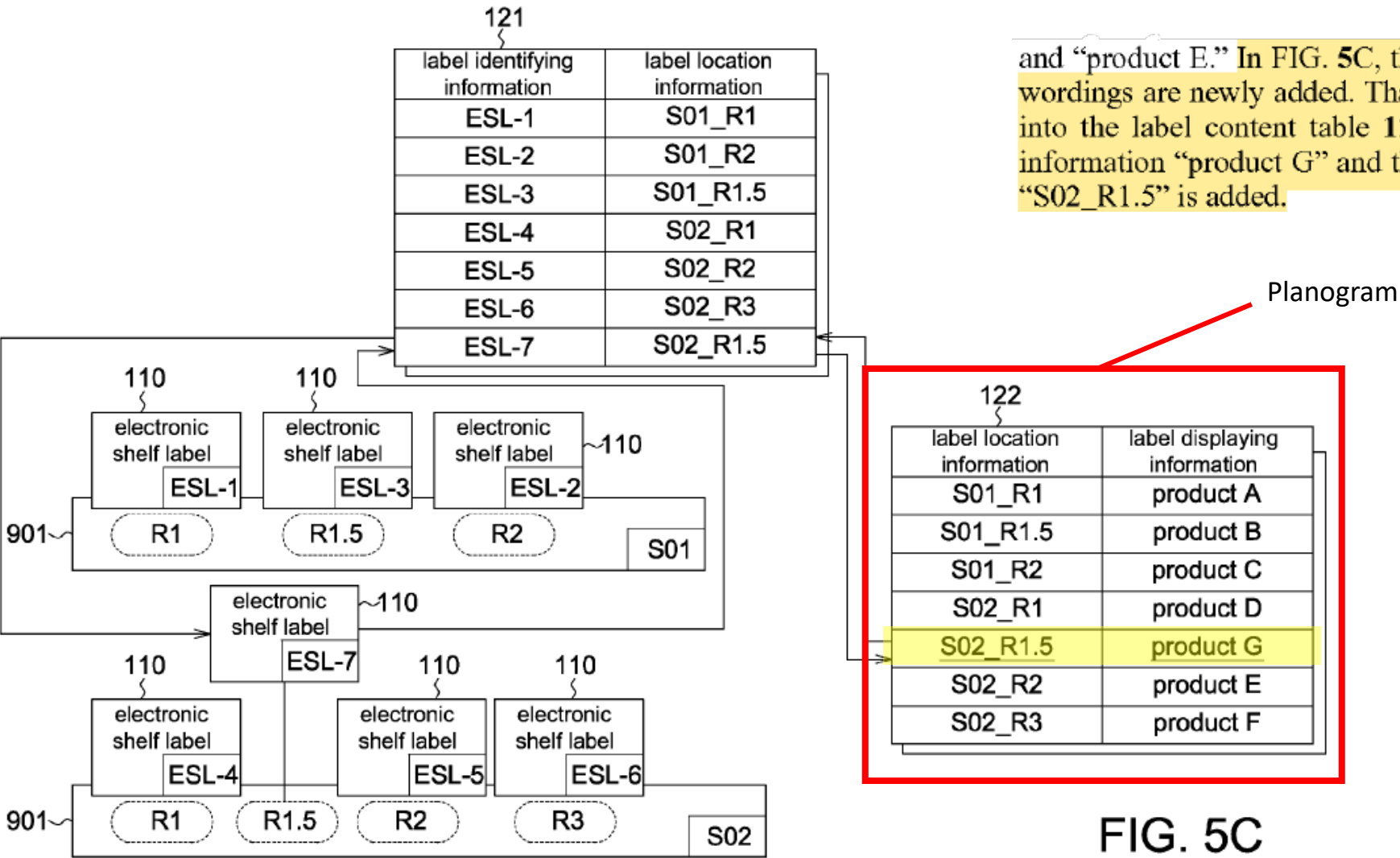
FIG. 2

# Wu Discloses Acquiring and Transmitting a Sequence of Label Identifiers to Update a Planogram

Wu



# Wu Discloses Acquiring and Transmitting a Sequence of Label Identifiers to Update a Planogram



and “product E.” In FIG. 5C, the underscore means that the wordings are newly added. That is to say, one row is added into the label content table 122, and the label displaying information “product G” and the label location information “S02\_R1.5” is added.

FIG. 5C

# Limitations in Claim 1

| Claim 1 | Text                                                                                                                                                                                                                                                                                                          | Disclosure                                                                                                                                                                                                                                                         |
|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| [1a]    | A method for updating a planogram registered in a computer system, to reflect an addition of a shelf label in a shelf of a retail area,                                                                                                                                                                       | 1:37-39: “The disclosure is directed to an electronic shelf label controlling system, and electronic shelf label installing method and an electronic shelf label updating method.”<br>3:16-17: “The controlling device stores a... label content table.”<br>FIG 3B |
| [1b]    | wherein the planogram comprises association data between articles of the retail area and locations of the retail area, the method comprising:                                                                                                                                                                 | 1:64-69: “A label content table records a relationship between a first label location information and a first label displaying information of a first electronic shelf label.”<br>FIG 3B, FIG 5C                                                                   |
| [1c]    | acquiring, by a reading device, a sequence of label identifiers comprising a label identifier of an added shelf label reflecting an addition of the shelf label in the shelf of the retail area, and also comprising a label identifier of an adjacent shelf label which is adjacent to the added shelf label | 3:10-11: “The deploying device is used for reading the information of the shelf or the electronic shelf label.”<br>3:59-61: “...the deploying device obtains the label identifying information of the electronic shelf label...”<br>FIG 2, FIG 3B                  |

# Limitations in Claim 1

| Claim 1 | Text                                                                               | Disclosure                                                                                                                                                                                                                                                                                                                                                                                        |
|---------|------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| [1d]    | according to a scrolling direction of the locations of the retail area,            | 5:5-11 and FIG. 3B: "...the location code of the electronic shelf label to be installed can be obtained by performing a mathematical extrapolation, such as addition or multiplication on the electronic shelf label which is already installed, such that the location codes are incremented from left to right. In other embodiment, the location codes can be decremented from left to right." |
| [1e]    | the retail area having a plurality of shelf labels distributed in the retail area, | 3:55-56: "...two electronic shelf labels are already disposed at two sides of the electronic shelf label to be installed..."<br>FIG 5C                                                                                                                                                                                                                                                            |

# Limitations in Claim 1

| Claim 1 | Text                                                                                                                                                                                                  | Disclosure                                                                                                                                                                                                                         |
|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| [1f]    | each of the shelf labels being associated with a respective article and being disposed near a respective location associated with the article,                                                        | 2:56-57: “The electronic shelf label is disposed on a shelf, for displaying varied product information...”<br>FIG 3B, FIG 5C                                                                                                       |
| [1g]    | each of the shelf labels being associated with a label identifier of its own,                                                                                                                         | 3:59-61: “the deploying device obtains the label identifying information of the electronic shelf label...”<br>FIG 3B, FIG 5C                                                                                                       |
| [1h]    | wherein the adjacent shelf label is either the preceding shelf label or the following shelf label in the shelf according to the scrolling direction and in relation to the added shelf label, wherein | 4:20-23: “In step S105, the location code is obtained by performing a mathematical interpolation on the electronic shelf labels which are already installed.”<br>FIG 3B                                                            |
| [1i]    | a location of the adjacent shelf label is preliminarily known in the planogram;                                                                                                                       | 3:16-17: “The controlling device stores a... label content table.”<br>3:50-53 “In a second case, another electronic shelf label is already disposed at one side of the electronic shelf label to be installed...”<br>FIG 2, FIG 3B |

# Limitations in Claim 1

| Claim 1 | Text                                                                                                                                    | Disclosure                                                                                                                                                                                                             |
|---------|-----------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| [1j]    | identifying a location corresponding to the added shelf label in the shelf of the retail area, comprising:                              | 4:16-17: “the location code is obtained by performing a mathematical extrapolation...”<br>FIG 2                                                                                                                        |
| [1k]    | transmitting, by the reading device, the sequence of label identifiers to the computer system,                                          | 3:10-11: “The deploying device is used for reading the information of the [] electronic shelf label.”<br>3:13-15: “The information read from the deploying device is transmitted to the controlling device.”<br>FIG 3B |
| [1l]    | updating, by the computer system, the planogram on the basis of the sequence of label identifiers, by determining:                      | FIG 3B                                                                                                                                                                                                                 |
| [1m]    | articles associated with the labels of the sequence of label identifiers, and                                                           | FIG 5C                                                                                                                                                                                                                 |
| [1n]    | locations of the articles, on the basis of an obtained location of the added shelf label, wherein                                       | FIG 5C                                                                                                                                                                                                                 |
| [1o]    | the obtained location is a location in the planogram which is adjacent to the preliminarily known location of the adjacent shelf label. | FIG 2, FIG 3B                                                                                                                                                                                                          |

# ROADMAP

The '709 Patent

Claim Construction

Instituted Grounds

Ground 1 - Wu

Ground 2 – Wu, Chaves

Ground 3 – Wu, Itou, Auclair

Ground 4 – Wu, Fujiwara

# Chaves Discloses a System for Determining the Locations of Items in a Retail Area

## Chaves

[0003] According to one general implementation, an RFID device is adjusted to selectively query those items known to be within range of the device, or to perform a more general query of objects within the range except for those known items. Such selective querying may be based on performing a high-level query at an enterprise resource system, for example to determine which items or products are expected at a given location.

[0020] As such, RFID data of item-level tagged goods within a retail environment, such as a grocery store or discount store, may be registered and read. For planning and control of stores or retail business processes, the enhanced approach described herein may be used to accurately identify numerous items at a given point in time. As such, RFID transponders may be integrated or attached to every item for electronic reading. By using mobile readers to selectively read specific RFID tags in predetermined locations (e.g., aisles in the store), tracking the location and quantities of inventory items may be significantly more, efficient and reliable than using high-density RFID readers. Such selective RFID reading may also be used to more efficiently solve other business and inventory-related issues, such as out-of-stock problems, shrinkage-based inventory changes, or planogram compliance.

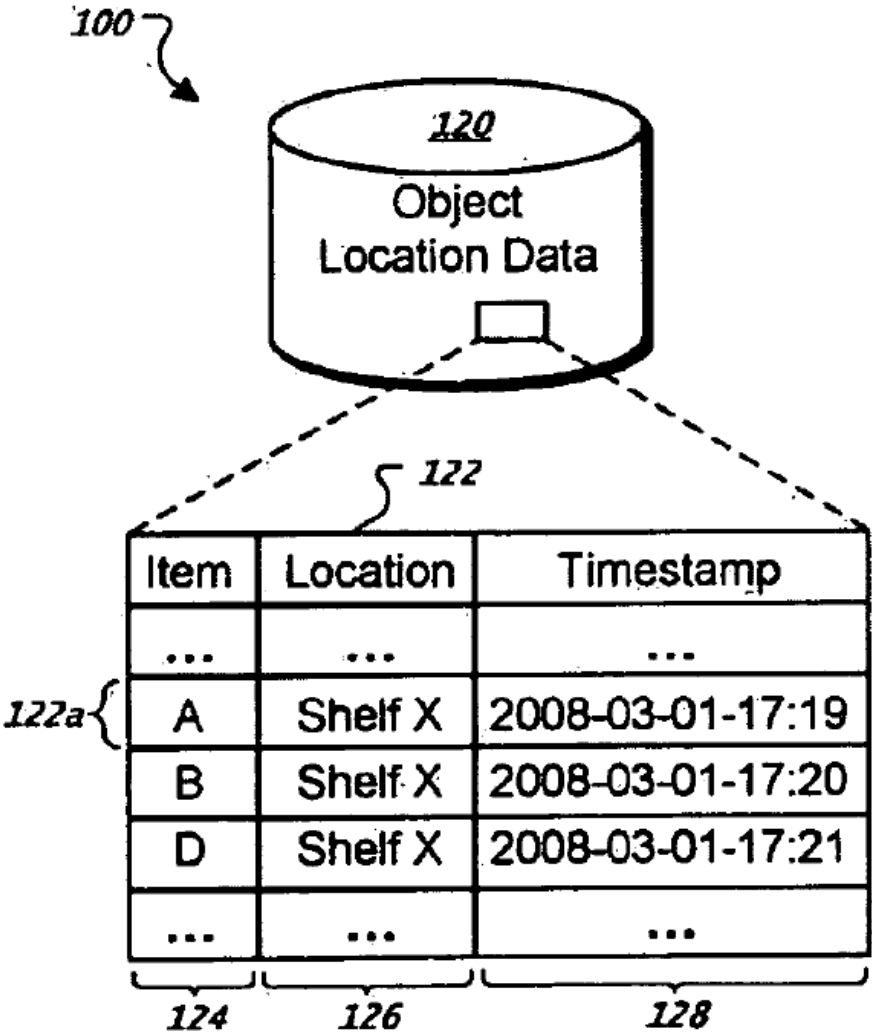


FIG. 1D

# Chaves Discloses Acquiring a Sequence of Identifiers by RF Communication and Transmitting the Sequence to a Computer System

Chaves

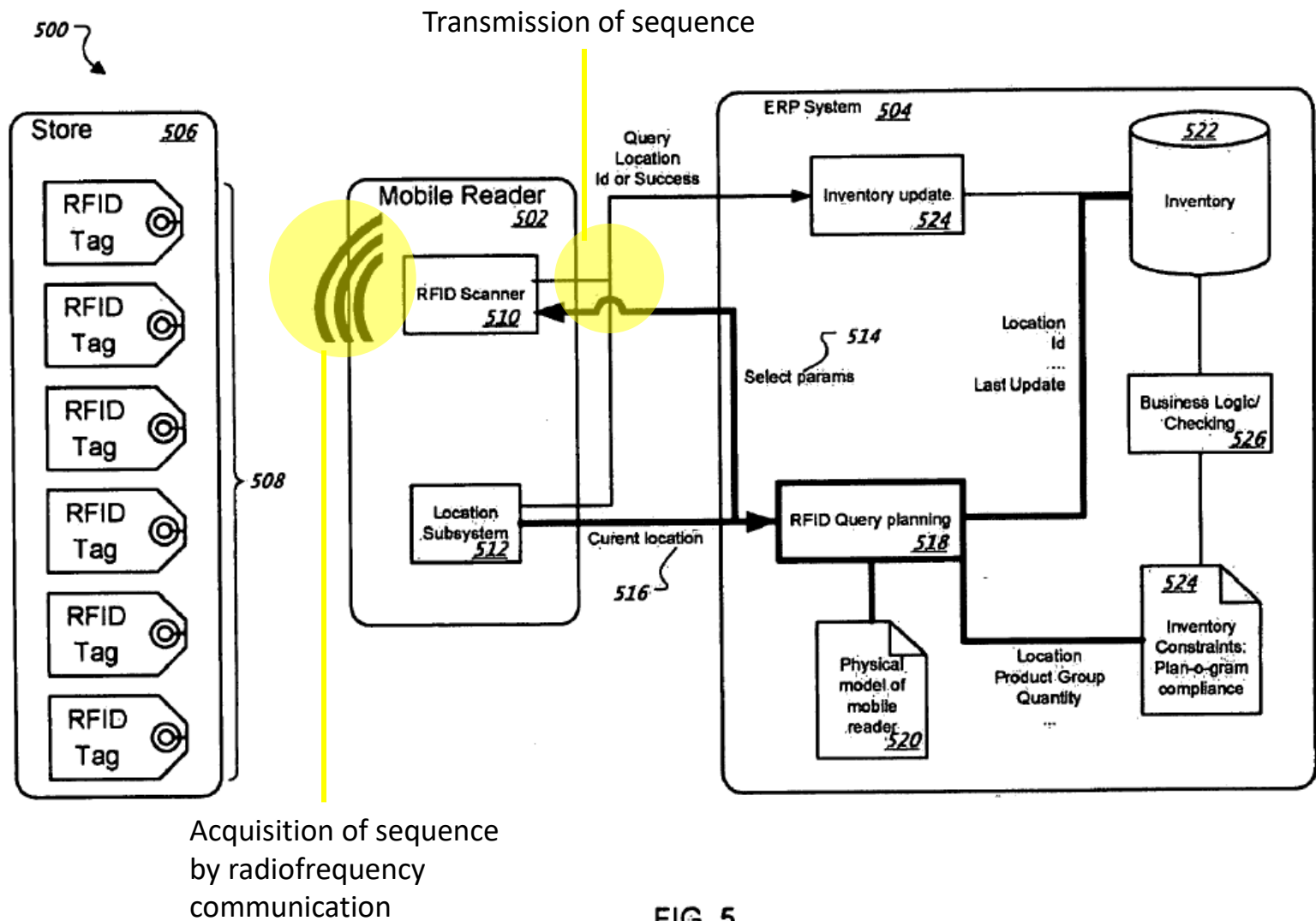


FIG. 5

# Limitations in Claim 6

| Claim 6 | Text                                                                                                                                                                                                                   | Disclosure                                                                                                                            |
|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| [6a]    | The method according to claim 5, wherein                                                                                                                                                                               |                                                                                                                                       |
| [6b]    | each electronic shelf label of the sequence is fitted with a radiofrequency peripheral, and wherein                                                                                                                    | Ex. 1006, [0002]: “Radio Frequency Identification (RFID) technology is used as an automatic identification method”<br>Ex. 1006, FIG 5 |
| [6c]    | the acquiring comprises acquiring, by the reading device, the label identifiers of the electronic shelf labels by setting up communication via radiofrequency with the electronic shelf labels and the reading device. | Ex. 1006, [0040]: “...the reader may transmit to read the RFID tags”<br>Ex. 1006, FIG 5                                               |

# ROADMAP

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Ground 2 – Wu, Chaves

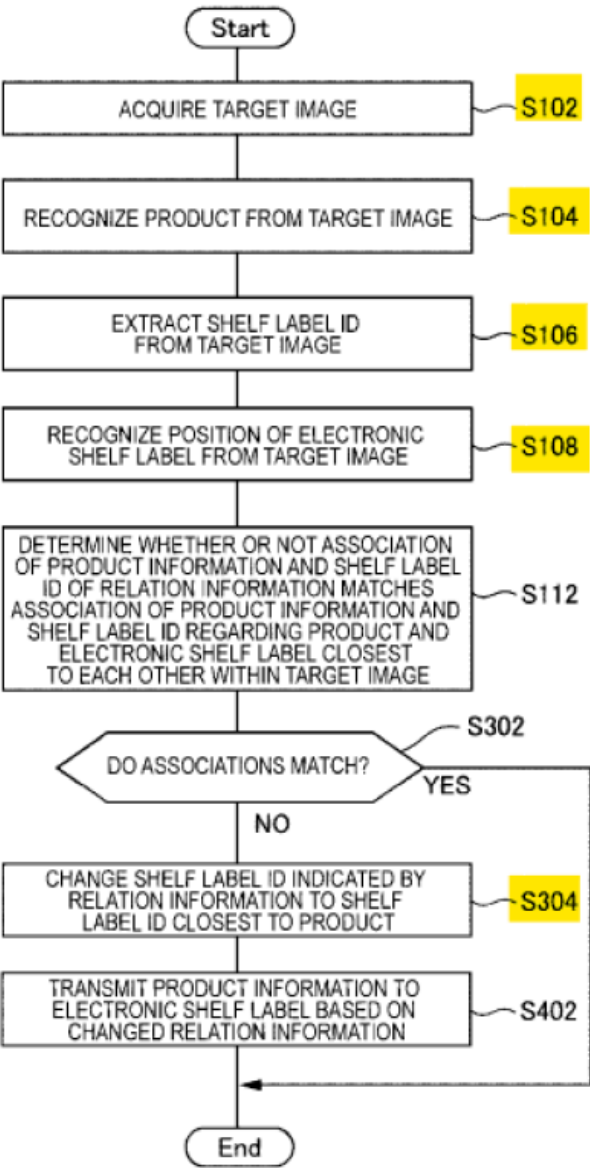
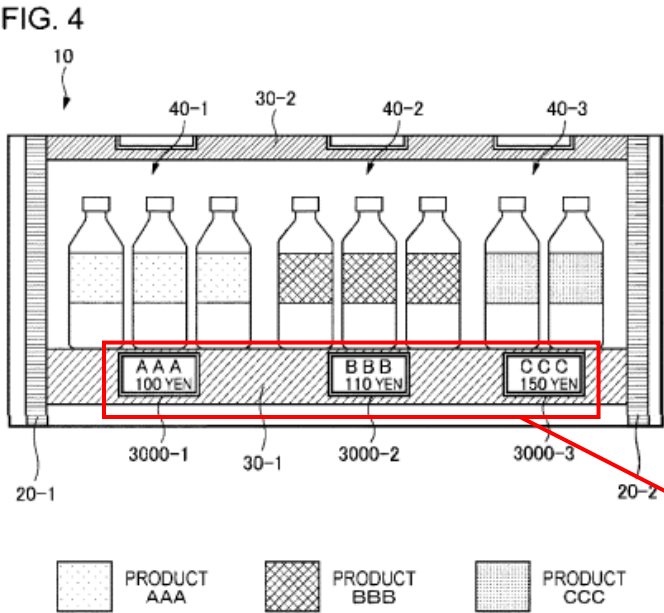
Ground 3 – Wu, Itou, Auclair

Ground 4 – Wu, Fujiwara

# Itou Discloses a System for Updating Associations between Labels and Products in a Retail Area

Itou

[0002] On a product shelving in a store, there is a shelf label near a product that describes information such as a name or price of the product (hereinafter, referred to as product information). In recent years, an electronic shelf label that displays product information on a small liquid crystal display is used. A system using the electronic shelf label is developed.



Paper 2 (Petition), 64-68; Paper 31 (Petitioner’s Response) 19-20; Ex.1004 (Itou), [0002] (annotated), FIG 4 (annotated); FIG 17 (annotated)

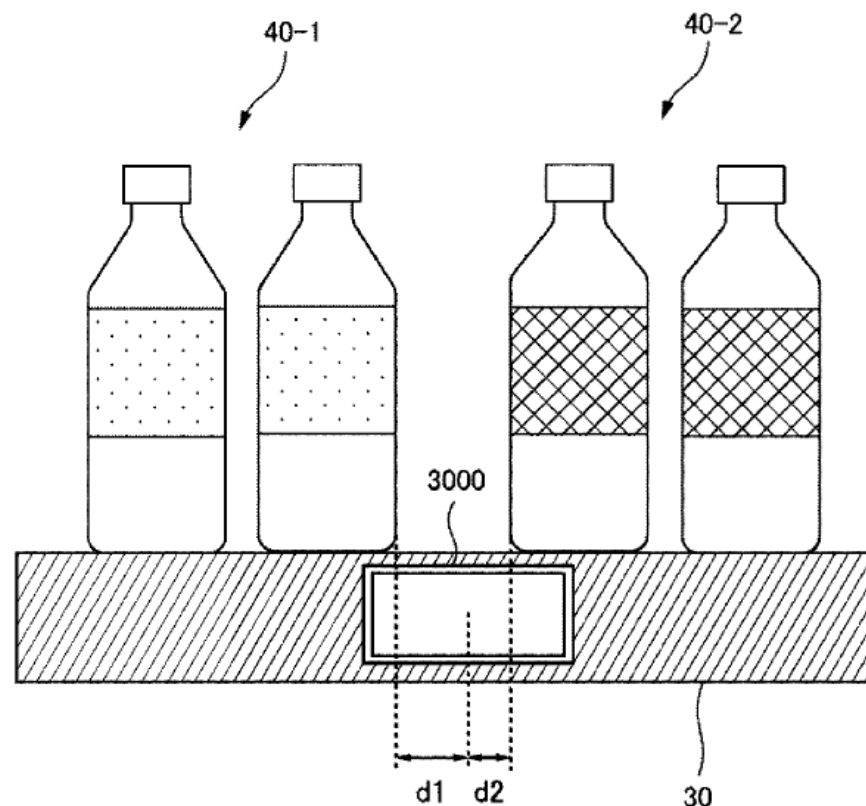
# Itou Discloses a Displacement Measuring Member

Itou

[0095] <<Method of Determining Closest Electronic Shelf Label 3000 and Product>>

[0097] For example, the determination unit 2060 calculates the distance between the product 40 and the electronic shelf label 3000, as a length between the position of the product 40 and the position of the electronic shelf label 3000. Here, in a case where the product recognition unit 2020 recognizes the plurality of positions of the product as stated above, the determination unit 2060 may cause the position of the product 40 used for calculating the distance between the product 40 and the electronic shelf label 3000 to be different based on the positional relationship between the product 40 and the electronic shelf label 3000. FIG. 9 is a diagram illustrating the distance between the product 40 and the electronic shelf label 3000. In FIG. 9, the product 40-1 is located on the left side of the electronic shelf label 3000. Thus, the determination unit 2060 calculates a distance d1 between the product 40-1 and the electronic shelf label 3000, as a distance of a coordinate of the right end of the product group area of the product 40-1 and a coordinate of the center of the electronic shelf label 3000. On the other hand, the product 40-2 is located on the right side of the electronic shelf label 3000. Thus, the determination unit 2060 calculates a distance d2 between the product group area of the product 40-2 and the electronic shelf label 3000, as a distance between a coordinate of the left end of the product group area of the product 40-2 and a coordinate of the center of the electronic shelf label 3000.

FIG. 9



# Auclair Discloses Planogram that Includes Distances

Auclair

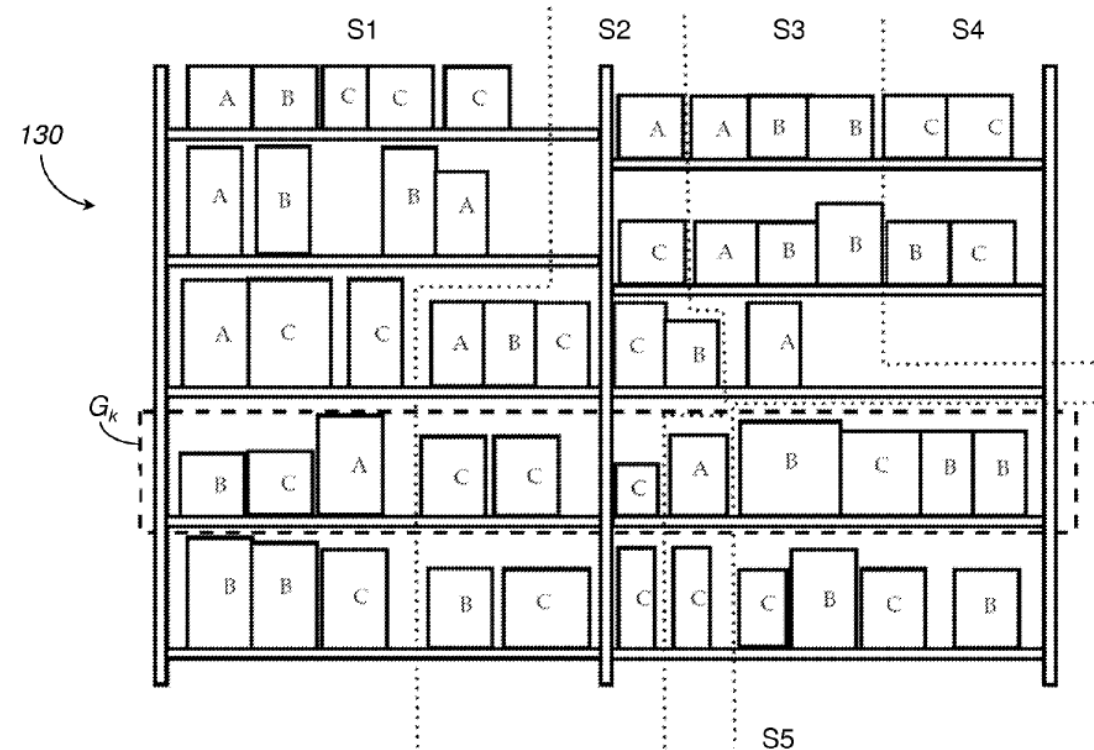
(57)

## ABSTRACT

Method for assigning an assortment of products to an existing planogram includes: providing an existing planogram which includes an existing assortment of products in association with a geometrical placement layout of these products on shelves and storing the existing planogram in memory; providing a user-defined new assortment of products and storing the new assortment in memory; furnishing, by a processor having read/write access to the memory, an output planogram by removing, from the output planogram, products in the existing assortment but not in the new assortment and adding, to the output planogram, products in the new assortment but not in the existing assortment; storing the output planogram in memory. The method further includes: generating a set of at least one segmentation tree which describes the relative geometrical placement of products in the existing planogram according to several ordered category types, each type corresponding to a level of the segmentation tree.

[0037] Optionally also, geometrical information is updated using placement data of the product, such as the identification of the shelf on which the product is placed, the position of the product on this shelf and the length of linear the product occupies.

Figure 4



# Limitations in Claim 7

| Claim 7 | Text                                                                                                                                                                                                         | Disclosure                                                                                                                                                                                                                                                                      |
|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| [7a]    | The method according to claim 1, wherein                                                                                                                                                                     |                                                                                                                                                                                                                                                                                 |
| [7b]    | the reading device comprises a displacement measuring member, and the method further comprises:                                                                                                              | Ex. 1004, [0097]: “the determination unit 2060 calculates the distance between the product 40 and the electronic shelf label 3000, as a length between the position of the product 40 and the position of the electronic shelf label 3000.”<br>Ex. 1004, FIG 9                  |
| [7c]    | determining, by the reading device, the displacement between the label identifier of the adjacent shelf label whereof the location is preliminarily known and the label identifier of the added shelf label. | Ex. 1005, [0037]: “geometrical information is updated using placement data of the product, such as the identification of the shelf on which the product is placed, the position of the product on this shelf and the length of linear the product occupies.”<br>Ex. 1005, FIG 4 |

# Limitations in Claim 8

| Claim 8 | Text                                                                                                                                                                                                                                                                                                                                  | Disclosure                                                                                                                                                                                                                                                                                 |
|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| [8a]    | The method according to claim 7, further comprising:                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                            |
| [8b]    | determining, by the reading device, the distance between the adjacent shelf label whereof the location is known and the added shelf label to be located from the displacement of the reading device between the identifier of the adjacent shelf label whereof the location is known and the identifier of the added shelf label, and | Ex. 1003, 3:12-13: “the deploying device 130 may be a Smartphone, a tablet PC or a handheld device.”<br>Ex. 1003, FIG 3B<br>Ex. 1009, ¶251: “a POSITA would understand that the disclosed reading device of Wu [], at the time of invention, would have likely included an accelerometer.” |
| [8c]    | wherein the identifying further comprises obtaining the location of the added shelf label, by the computer system, and using the distance to update the planogram.                                                                                                                                                                    | Ex. 1005, [0037]: “geometrical information is updated using placement data of the product, such as the identification of the shelf on which the product is placed, the position of the product on this shelf and the length of linear the product occupies.”<br>Ex. 1005, FIG 4            |

# Limitations in Claim 9

| Claim 9 | Text                                                                                                                                      | Disclosure                                                                                                                                                                                                                                                                                                                                                                                                  |
|---------|-------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| [9a]    | The method according to claim 1, further comprising:                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                             |
| [9b]    | acquiring, by the reading device, a label identifier of the adjacent shelf label,                                                         | Ex. 1003, 3:59-61: “[T]he deploying device obtains the label identifying information of the electronic shelf label...”<br>Ex. 1003, FIG 2, FIG 3B                                                                                                                                                                                                                                                           |
| [9c]    | acquiring, by the reading device, a characteristic dimension of the location associated with the shelf label acquired the reading device, | Ex. 1003, 3:12-13: “the deploying device 130 may be a Smartphone, a tablet PC or a handheld device.”<br>Ex. 1003, FIG 3B<br>Ex. 1005, [0037]: “geometrical information is updated using placement data of the product, such as the identification of the shelf on which the product is placed, the position of the product on this shelf and the length of linear the product occupies.”<br>Ex. 1005, FIG 4 |
| [9d]    | transmitting, by the reading device, the characteristic dimension of the location with the label identifier to the computer system.       | Ex. 1003, 3:13-15: “The information read from the deploying device is transmitted to the controlling device.”<br>Ex. 1003, FIG 3B                                                                                                                                                                                                                                                                           |

# ROADMAP

The '709 Patent

Claim Construction

Instituted Grounds

Ground 1 - Wu

Ground 2 – Wu, Chaves

Ground 3 – Wu, Itou, Auclair

Ground 4 – Wu, Fujiwara

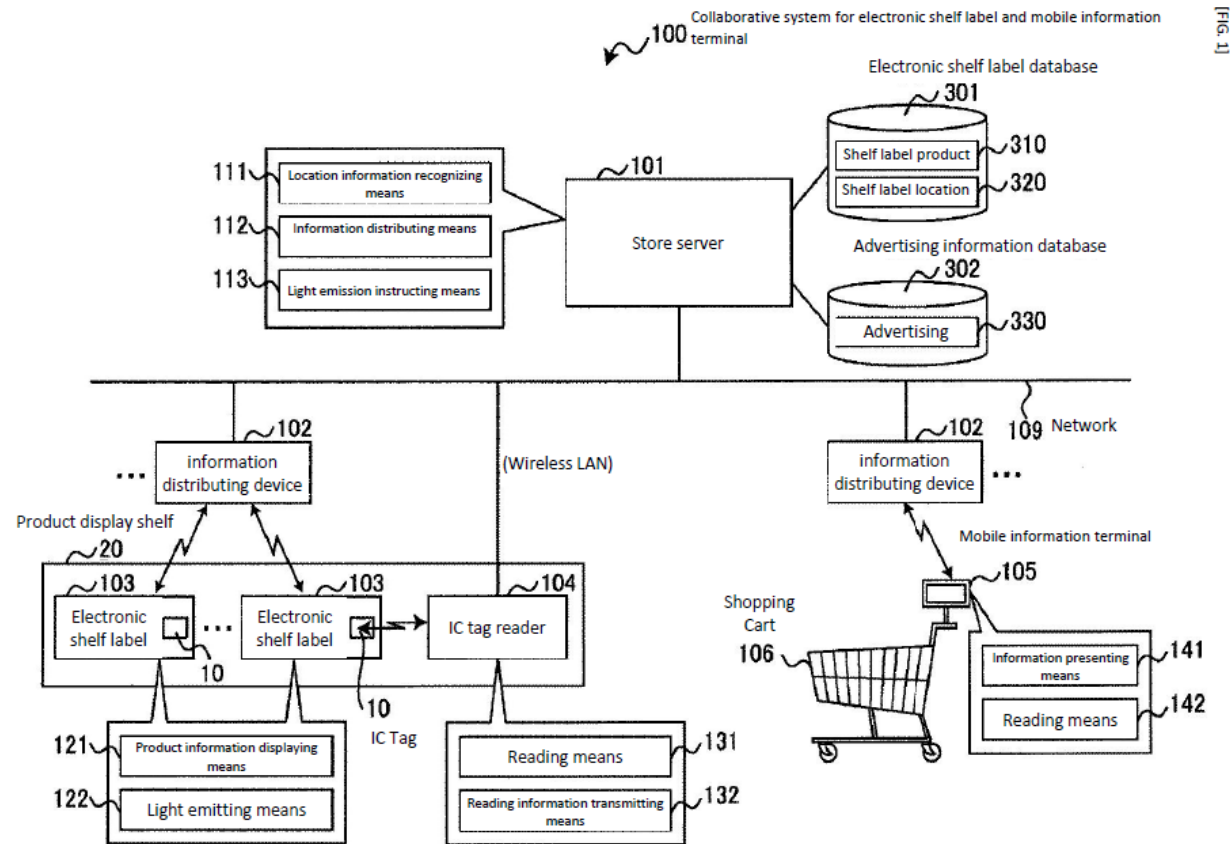
# Fujiwara Discloses a Method of Identifying Product Locations in a Retail Area

Fujiwara

TECHINICAL FIELD

[0001]

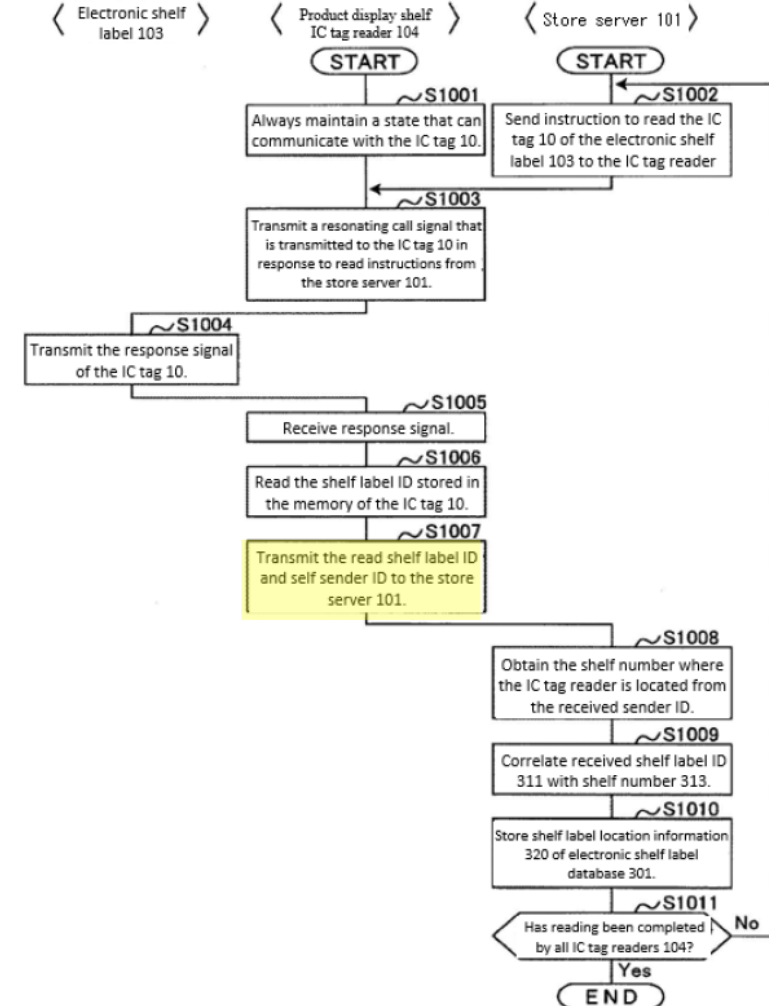
The present invention relates to a system that enables a store to identify location information of a product in the store and inform of the location of the product, by using an electronic shelf label provided for each product on a product display shelf and a mobile information terminal.



# Fujiwara Discloses a Method of Identifying Product Locations in a Retail Area by Acquiring and Transmitting Label Identifiers

Fujiwara

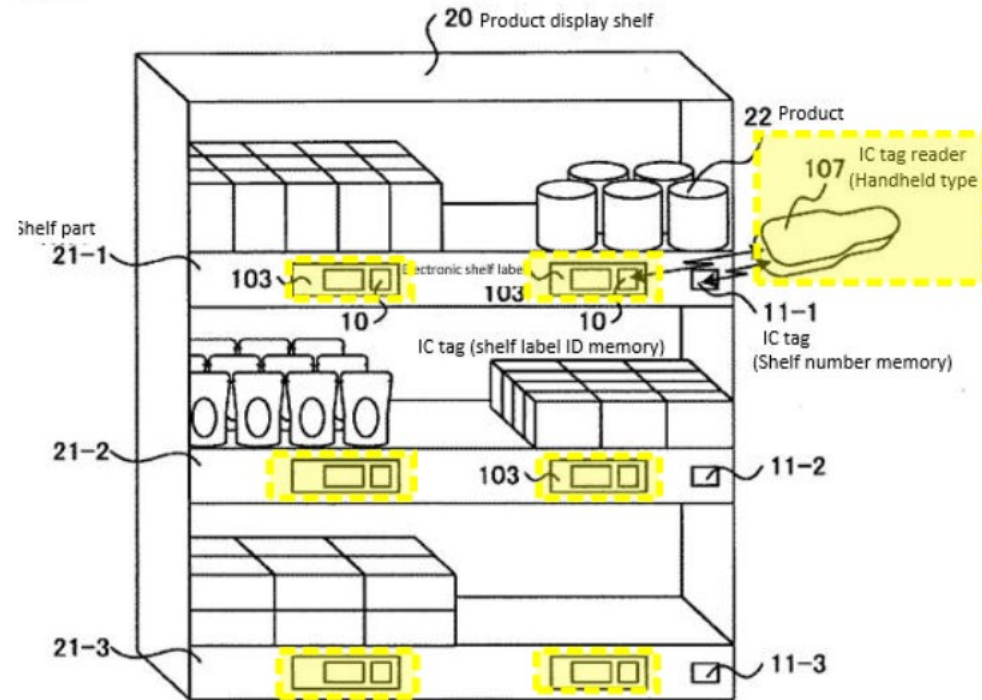
[FIG. 10]



[0047]

An IC tag reader 104 is installed on each shelf part 21 forming a product display shelf 20, and includes reading means 131 and read-information transmitting means 132. The reading means 131 collectively reads the shelf label IDs stored in the IC tags 10 which are prepared for one or more electronic shelf labels 103 installed in the shelf part 21. The read-information transmitting means 132 wirelessly transmits the read shelf label IDs and the sender ID to the store server 101.

[FIG. 11]



# Limitations in Claim 1

| Claim 1 | Text                                                                                                                                                                                                                                                                                                          | Disclosure                                                                                                                                                                                                                   |
|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| [1a]    | A method for updating a planogram registered in a computer system, to reflect an addition of a shelf label in a shelf of a retail area,                                                                                                                                                                       | Ex. 1007, [0001]: “The present invention relates to a system that enables a store to identify location information of a product in the store and inform of the location of the product...”<br>Ex. 1007, FIG 1                |
| [1c]    | acquiring, by a reading device, a sequence of label identifiers comprising a label identifier of an added shelf label reflecting an addition of the shelf label in the shelf of the retail area, and also comprising a label identifier of an adjacent shelf label which is adjacent to the added shelf label | Ex. 1007, [0047]: “The reading means 131 collectively reads the shelf label IDs stored in the IC tags 10 which are prepared for one or more electronic shelf labels 103 installed in the shelf part 21.”<br>Ex. 1007, FIG 11 |
| [1k]    | transmitting, by the reading device, the sequence of label identifiers to the computer system,                                                                                                                                                                                                                | Ex. 1007, [0047]: “The read-information transmitting means 132 wirelessly transmits the read shelf label IDs and the sender ID to the store server 101.”<br>Ex. 1007, FIG 10                                                 |