

**IN THE UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

HANSHOW TECHNOLOGY CO., LTD.,

Plaintiff,

v.

SES-IMAGOTAG SA AND SES-IMAGOTAG
GMBH,

Defendants.

Civil Action No. 2:23-cv-174

COMPLAINT FOR PATENT INFRINGEMENT

1. Plaintiff Hanshow Technology Co., Ltd. (“Hanshow”) files this Complaint against Defendants SES-imagotag SA and SES-imagotag GmbH (collectively, “SES-imagotag”), based on its own knowledge as to itself and its own actions, and based on information and belief as to all other matters, alleging as follows:

INTRODUCTION

2. This matter involves U.S. Patent 11,540,216 B2 (the “’216 patent”, attached to this Complaint as Ex. A), titled “Interactive Electronic Tag Device Communication System and Method,” infringed by SES-imagotag’s VUSION platform (“VUSION”).

THE PARTIES

3. Plaintiff Hanshow Technology Co., Ltd. (“Hanshow”) is a corporation organized under the laws of China with its principal place of business at Floor 4, Building 1 and Floor 7, Building 5, Jiaxing Guangfu Innovation Park, No.1288 Kanghe Road, Xiuzhou District, Jiaxing, Zhejiang Province, China.

4. Hanshow specializes in, among other things, the research and development, production, sales, and service of Electronic Shelf Label (“ESL”) devices, including its Stellar Pro series and Nebular series which are sold/used throughout the world, including the United States.

5. Defendant SES-imagotag SA is French corporation with its principal place of business at 55 Place Nelson Mandela, CS 60106, 92024 Nanterre Cedex, France.

6. Defendant SES-imagotag GmbH is an Austrian corporation with its principal place of business at Kalsdorfer Strasse 12, AT-8072 Fernitz-Mellach, Austria.

NATURE OF THE ACTION

7. This is an action for patent infringement.

8. Hanshow is informed and believes and alleges that SES-imagotag has been and is currently infringing and contributing to and/or actively inducing others to infringe claims of the '216 patent.

JURISDICTION AND VENUE

9. This action arises under the patent laws of the United States, Title 35 of the United States Code, 35 U.S.C. § 1, *et seq.*

10. The Court has subject matter jurisdiction over this action pursuant to 28 U.S.C. §§ 1331 and 1338(a).

11. This Court has at least specific personal jurisdiction over SES-imagotag SA and SES-imagotag GmbH, because, on information and belief, SES-imagotag SA and SES-imagotag GmbH have substantial contacts and conduct business in the State of Texas and in this District, actively market VUSION in the State of Texas and in this District, deliver VUSION into the stream of commerce with the expectation that it will be purchased by end users in the State of Texas and in this District, and indicate an intent or purpose to serve the market in the State of Texas and in this District.

12. Venue is proper in this Court pursuant to 28 U.S.C. § 1391 and § 1400, because a substantial part of the events giving rise to Hanshow's claims occurred in this District and because both SES-imagotag SA and SES-imagotag GmbH are subject to personal jurisdiction in this District, and because neither SES-imagotag SA nor SES-imagotag GmbH is resident in the United States.

FACTUAL BACKGROUND

13. The '216 patent relates to an interactive electronic tag device communication system and method.

14. On December 27, 2022, the '216 patent was duly and legally issued by the United States Patent and Trademark Office to Min Liang *et al.*

15. Hanshow is the assignee of the '216 patent.

16. Hanshow is the owner of the '216 patent with all substantive rights in and to that patent, including the sole and exclusive right to prosecute this action and enforce the '216 patent against infringers, and to collect damages for infringement during all relevant times.

17. Reproduced immediately below is "FIG. 1" from the '216 patent.

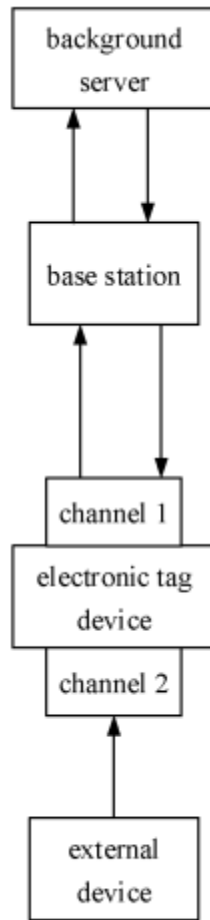


FIG. 1

18. Hanshow manufactures or licenses other companies to manufacture interactive electronic tag device communication systems claimed in the '216 patent, and practices or licenses other companies to practice interactive electronic tag device communication methods claimed in the '216 patent. Companies who do not obtain a license from Hanshow do not have permission to manufacture or practice systems and methods claimed in the '216 patent.

19. Hanshow is informed and believes and alleges that SES-imagotag SA and SES-imagotag GmbH have made, used, provided, supplied, distributed, sold, and/or offered for sale in the United States, and in particular in the State of Texas and in this District, products that infringe the '216 patent, without obtaining a license from Hanshow, and continue to do so now.

20. As described in SES-imagotag's Annual Report 2021 (Ex. B), SES-imagotag SA and SES-imagotag GmbH market themselves as "the world's leading in-store retail technology player." As further disclosed in the same report, SES-imagotag SA and SES-imagotag GmbH make, distribute, sell and market their VUSION Retail IoT Cloud Platform.

Against this backdrop, it is imperative to put technology at the service of individuals and consumers. Retailers can now harness the power of IoT, Cloud and AI technologies to transform physical stores into high-value, data-driven digital assets that are increasingly automated, connected to consumers and suppliers, and able to deliver efficient and seamless services thanks to transparent, omnichannel and personalized information, while guaranteeing the integrity and confidentiality of personal data. The digitization of physical stores helps accurately analyze in-store events in real time, ushering in a new era of enhanced collaboration between suppliers and retailers to improve efficiency, transparency, security and resilience of the entire chain.

As the world's leading in-store retail technology player, **SES-imagotag's primary objective is implementing retailers' digital transformation.**

Ex. B, at 23.

SES-imagotag is recognized worldwide for its cutting-edge technology, particularly in terms of highly reliable and very low-power communication protocol, e-Paper and TFT digital display technologies for in-store retail, and IoT Cloud solutions featuring high scalability and security (smart labels, sensors and connected cameras), artificial intelligence applied to image recognition, and collaborative online services.

The Group invests around 6-7% of its revenue in R&D (software, hardware, IT, industrialization). This major innovation effort employs around a hundred engineers and technicians in five specialized research centers (software/Cloud, display, radio and IoT, computer vision) located in France, Germany, Austria, Taiwan and China.

This major R&D effort is guided by the ambition to provide the best possible response to the increasingly demanding requirements of the retail sector:

- absolute reliability of prices;
- increased responsiveness of adjustment and multi-channel synchronization;
- commercial and marketing performance and

The result of several years of development and consolidation of technological start-ups (Imagotag, Market Hub, Findbox, PDi), the VUSION platform effectively responds to these challenges.

The VUSION platform

In 2018, SES-imagotag launched the VUSION Retail IoT Cloud platform to help retailers accelerate their digital transition and transform their physical stores into true digital, automated and data-driven environments connected to consumers and suppliers.

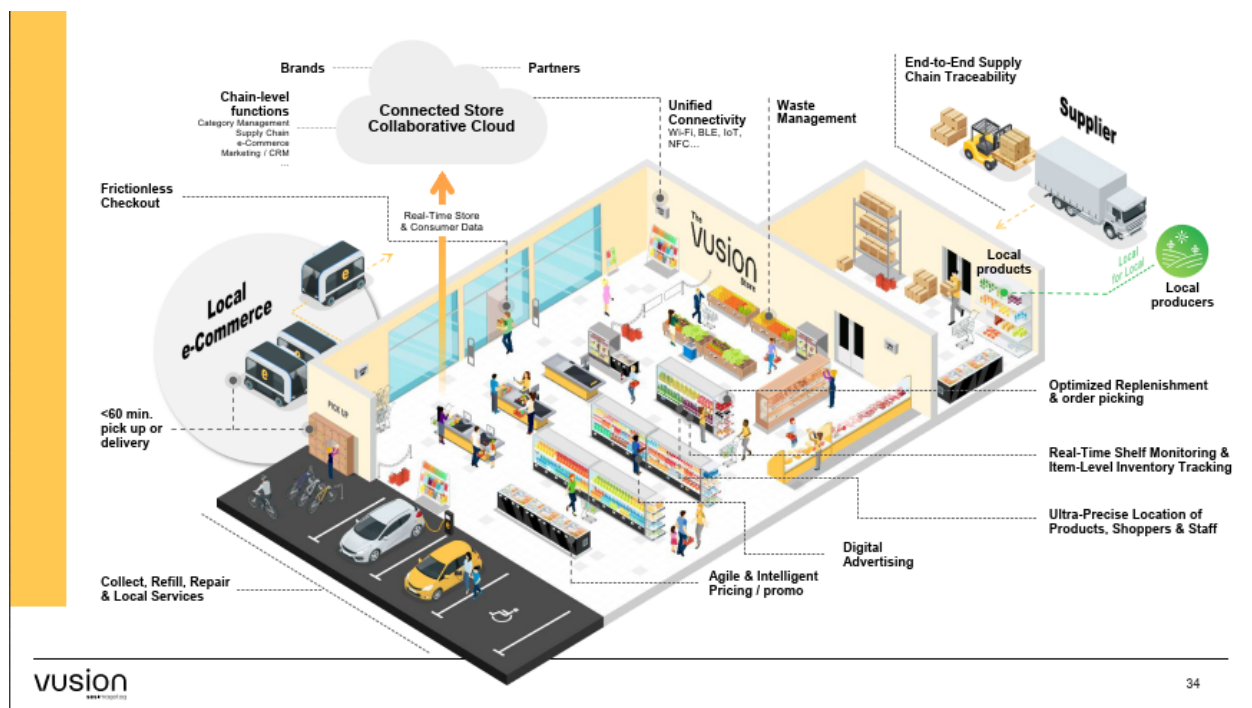
- VUSION improves the agility and accuracy of prices, ensures the omnichannel synchronization of prices, product information and marketing campaigns.
- VUSION optimizes the productivity and accuracy of order preparation and the restocking of products on shelves.
- VUSION eases the workload of in-store staff by automating low value-added processes and allows them to focus on customer service and merchandising.

Ex. B, at 26-27.

21. SES-imagotag SA and SES-imagotag GmbH have made, used, provided, supplied, distributed, sold, and/or offered to sale in the United States, and in particular in the State of Texas and in this District, products, including but not limited to VUSION, that infringe the '216 patent.

22. As shown in more detail below, VUSION meets each and every limitation of at least, but not limited to, claims 1-2, 7-8 and 14-15 of the '216 patent (the “Asserted Claims”). Hanshow reserves the right to assert additional claims and to assert infringement under the doctrine of equivalents in light of information learned during discovery or in view of this Court’s claim construction order.

23. Reproduced immediately below from the document “VUSION ’27: A VUSION for the future” (Ex. C) is an image showing SES-imagotag SA’s and SES-imagotag GmbH’s conceptual use scenario of VUSION.



Ex. C, at 34.

24. The VUSION platform comprises electronic shelf labels (ESLs), access points, and servers or core appliances. Ex. B, at 27. As shown in SES-imagotag's Annual Report 2021 (Ex. B), The servers or core appliances are no longer in store, but are maintained in a "VUSION cloud."

Each ESL is "seen" by several APs, guaranteeing that hardware failures in stores have no effect on operations. Redundancy and the absence of a SPOF thus contribute to the solution's maximum availability.

An in-store infrastructure that is both extremely light and robust. Servers and Core Appliances are no longer required in stores, eliminating any single point of failure (SPOF). The only active elements are the Access Points (AP), which are mutually redundant.

Ex. B, at 27.

25. SES-imagotag SA and SES-imagotag GmbH makes available the software product V Manager, which, according to the V Manager Version 1.5 User Guide by SES-imagotag (Ex. D), is a graphical interface to the VUSION cloud and allows the synchronization of prices and promotions.



Notice

This manual provides information and features of **VUSION Cloud** graphic interface: **VUSION Manager**. Images used in this manual are subject to change without prior notice. They may differ from actual displays.
Unauthorized copying parts of this entire manual is prohibited.



About

With **VUSION Manager**, customers ensure that prices and promotions are always synchronized online and in-store.
Thanks to various dashboards and statistics, it is now possible to have real-time access to the store activity and to the status of its assets.

Ex. D, at 1.

26. ESLs used in the VUSION platform include but are not limited to VUSION 1.6 (EDG2-0160-A), VUSION 2.2 and 2.2F (EDG2-0220-A), VUSION 2.6 and 2.2F (EDG2-0260-A), VUSION 2.7 (EDG2-0270-A), VUSION 3.7 (EDG2-0370-A), VUSION 4.2 (EDG2-0420-A), VUSION 4.5 (EDG2-0450-A), VUSION 5.9 (EDG2-0590-A), VUSION 7.4 (EDG2-0740-A), VUSION 9.7 (EDG2-0970-A), VUSION 12.2 (EDG2-1220-A), as listed in the Core Service Quick Start Guide by SES-imagotag (Ex. E). ESLs used in the VUSION platform further include, without limitation, VUSION 2.9” and VUSION 6.0”, as listed on <https://www.ses-imagotag.com/products/electronic-shelf-labels/> (last accessed April 17, 2023) (Ex. F).

2.3 The VUSION label family

The SES-imagotag VUSION (2.4GHz) electronic shelf label family is capable of changing all pixels to black, white or red. The current line-up has display sizes from 1.6 inch to 12.2 inch. They may be used in landscape and portrait mode and can be configured in terms of radio, theft protection, display protection and LED flash.

Caption	Model	Display Resolution	Density (dpi)	Display Colors	Useable Pages	Active Display Area (mm)	Updates/hour/AP (standard / FCC&IC mode)	Battery lifetime: 5 years with N updates per day
VUSION 1.6	EDG2-0160-A	152 x 152	140	b/w/r	4	27.5 x 27.5	7500/4600	1
VUSION 2.2	EDG2-0220-A	212 x 104	111	b/w/r	4	48.6 x 23.8	8500/5000	2
VUSION 2.2 F	EDG2-0220-A	212 x 104	111	b/w	4	48.6 x 23.8	10000/6500	1*
VUSION 2.6	EDG2-0260-A	296 x 152	125	b/w/r	4	60.1 x 30.7	4500/2600	2
VUSION 2.6 F	EDG2-0260-A	296 x 152	125	b/w	4	60.1 x 30.7	6500/4500	1*
VUSION 2.7	EDG2-0270-A	264 x 176	117	b/w/r	4	57.3 x 38.2	4500/2600	2
VUSION 3.7	EDG2-0370-A	416 x 240	130	b/w/r	4	81.54 x 47.04	2000/1300	2
VUSION 4.2	EDG2-0420-A	400 x 300	120	b/w/r	4	84.8 x 63.6	2000/1300	2
VUSION 4.5	EDG2-0450-A	480 x 176	117	b/w/r	4	104.2 x 38.2	2500/1500	2
VUSION 5.9	EDG2-0590-A	720 x 256	134	b/w/r	4	138.96 x 49.40	1100/550	2
VUSION 7.4	EDG2-0740-A	480 x 800	126	b/w/r	4	97 x 161.6	600/300	2
VUSION 9.7	EDG2-0970-A	960 x 672	121	b/w/r	4	201.60 x 141.12	300/150	2
VUSION 12.2	EDG2-1220-A	768 x 960	103	b/w/r	6	190.08 x 237.6	300/150	1

* Battery lifetime: 3 years with N updates per day

Ex. E, at 6.

27. All ESLs used in the VUSION platform have near field communication (NFC) capabilities, as shown in SES-imagotag’s Annual Report 2021 (Ex. B).

NFC technology embedded in all ESLs: as the NFC function becomes more widespread on smartphones, the ability to digitize in-store customer journeys using interactive electronic labels will provide customers with detailed, personalized, geolocated and relevant information.

Ex. B, at 27.

28. As described in the Core Service Quick Start Guide by SES-imagotag (Ex. E), the VUSION labels have active NFC capabilities, which means they will receive as well as transmit data through NFC.

- Multiple pages support with preloading
- Integrated NFC
 - G1 - Passive NFC
 - VUSION - "Active" NFC

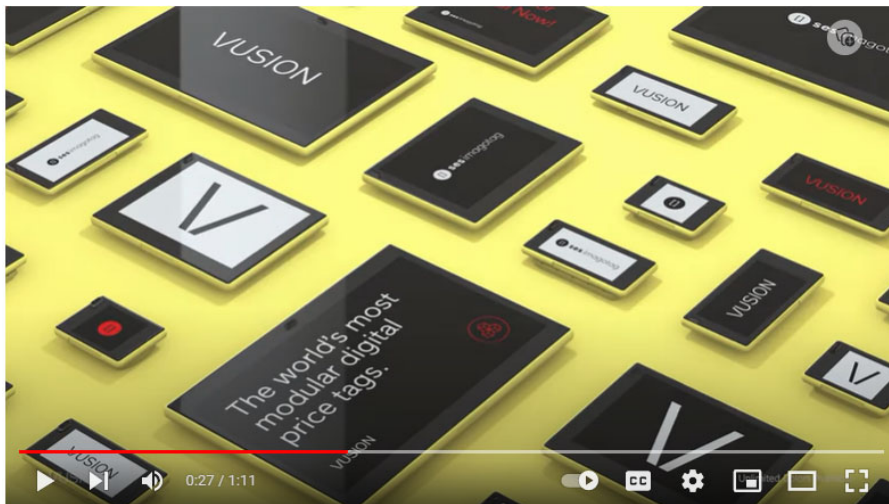
Ex. E, at 5.

29. Reproduced immediately below from SES-imagotag's Annual Report 2021 (Ex. B) is an image showing SES-imagotag's "smart and connected digital labels", that is, VUSION ESLs, in operation.



Ex. B, at 28.

30. Reproduced immediately below is an image capture from the video “VUSION – Electronic Shelf Labels” (Ex. G) showing different kinds of VUSION ESLs.



Ex. G, at 0:27.

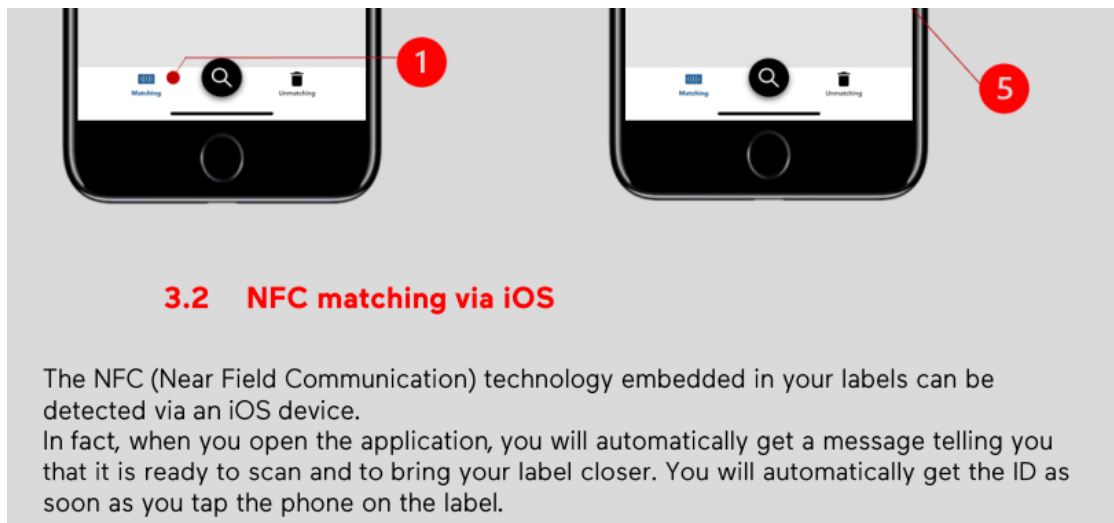
31. VUSION ESLs can update their displayed information. Reproduced immediately below from the video “VUSION – Electronic Shelf Labels” (Ex. G) are two image captures showing VUSION ESLs updating the information displayed.





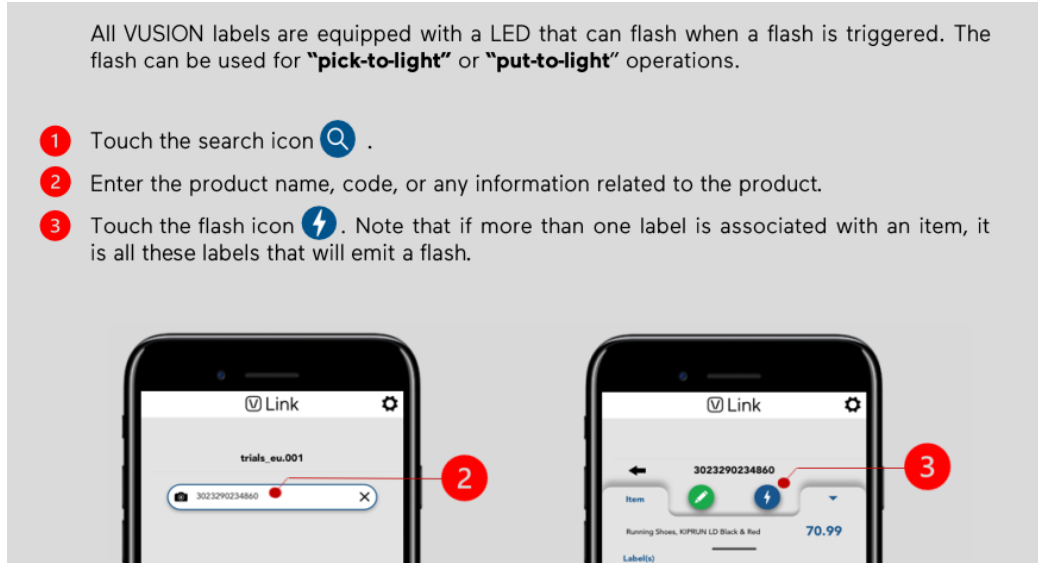
Ex. G, at 0:47, 0:48.

32. VUSION ESLs can communicate with NFC enabled handheld devices, including but not limited to smart phones, through NFC. For example, as shown in the document “V Link Version 1.6 User Guide” by SES-imagotag (Ex. H), an iOS device detects the embedded NFC technology in a VUSION ESL and matches the VUSION Link software by SES-imagotag to the ESL.



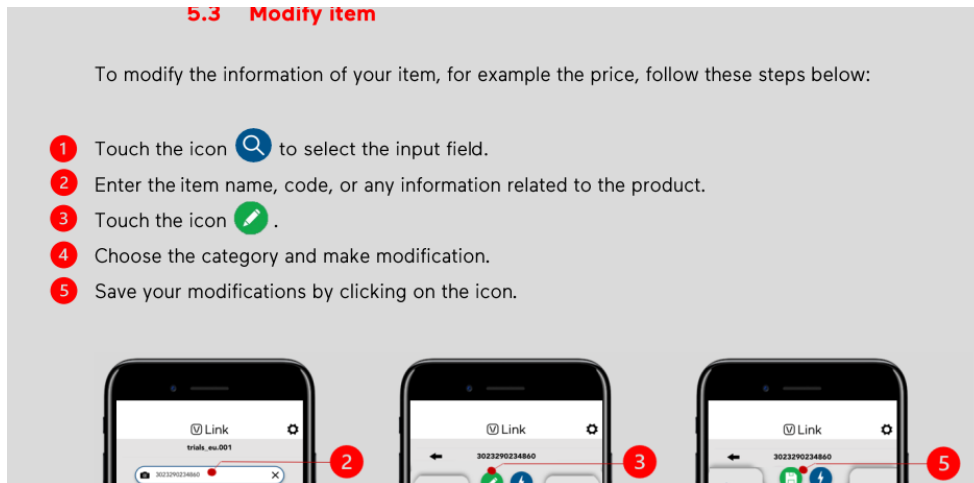
Ex. H, at 20.

33. According the same document, after matching an ESL, the VUSION Link software can be used to cause the ESL to flash.



Ex. H, at 35.

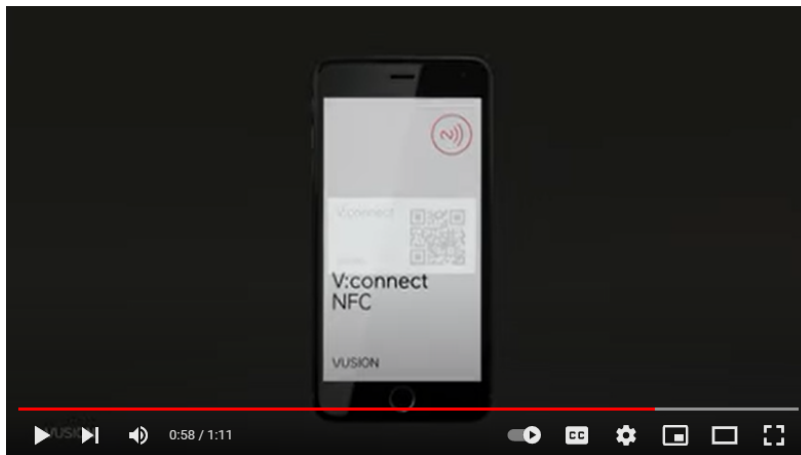
34. According to the same document, the VUSION Link software can also be used to update the label content.

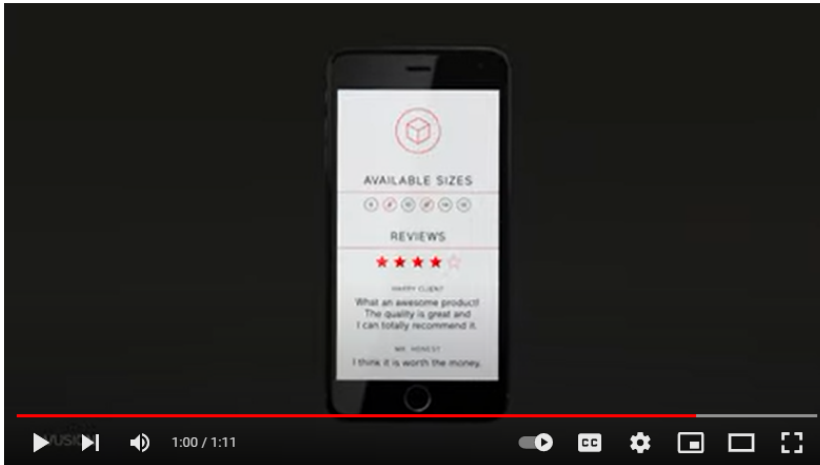


Ex. H, at 37.

35. Consumers also use NFC enabled handheld devices, including but not limited to smart phones, to communicate with VUSION ESLs through NFC. In the image captures reproduced immediately below from the video “VUSION – Electronic Shelf Labels” (Ex. G),

VUSION ESLs are shown to communicate with smart phones through NFC and cause the smart phones to display information related to products.

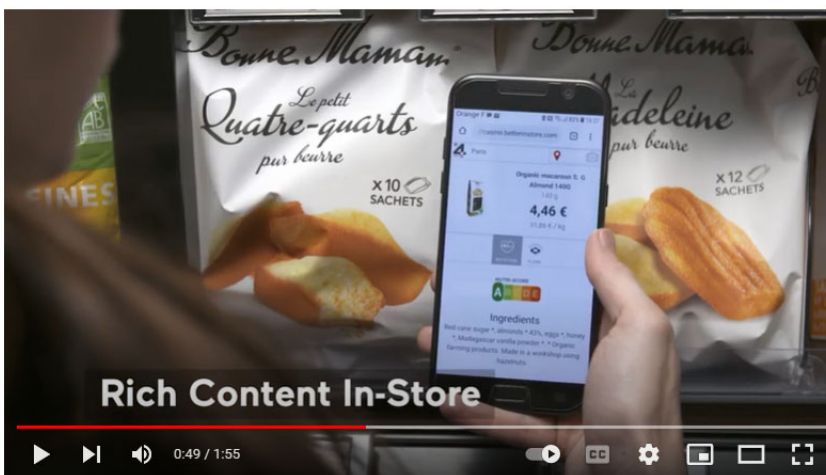
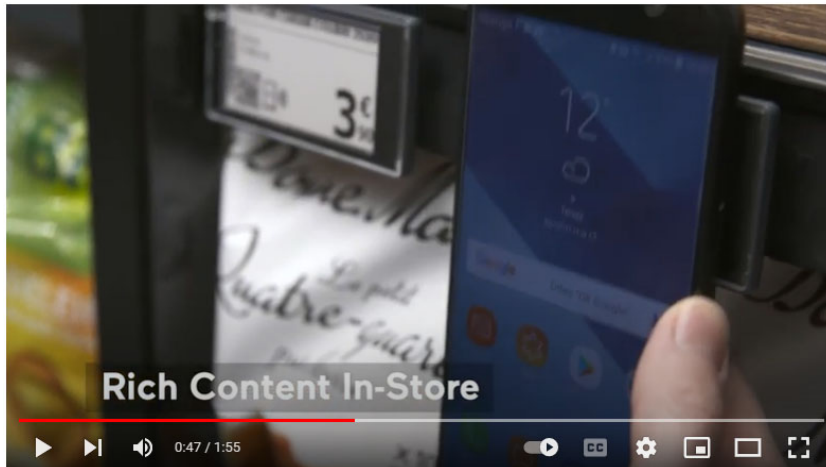




Ex. G, at 0:55-1:00.

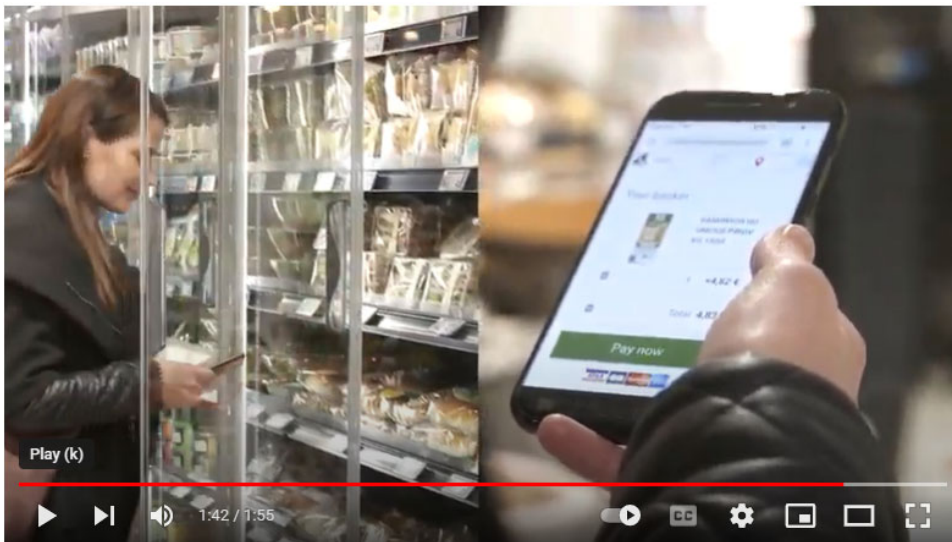
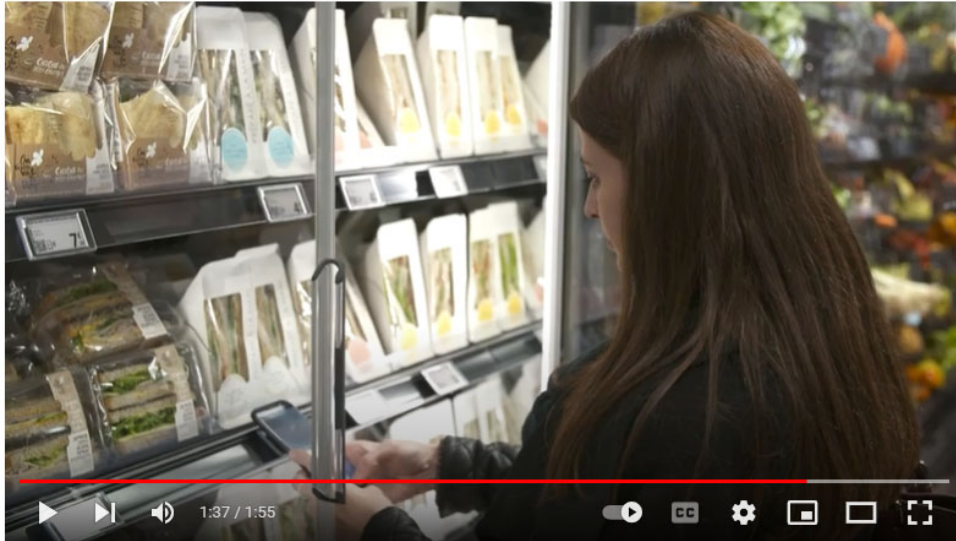
36. VUSION ESLs are also shown to communicate with smart phones (which are NFC enabled handheld devices) for information display purposes through NFC in the image captures reproduced immediately below from the video “VUSION: Enhanced In-Store Shopper Experience” (Ex. I).





Ex. I, at 0:47-0:49.

37. VUSION ESLs are also shown to communicate with smart phones (which are NFC enabled handheld devices) in an automated checkout process in the image captures reproduced immediately below from the same video.



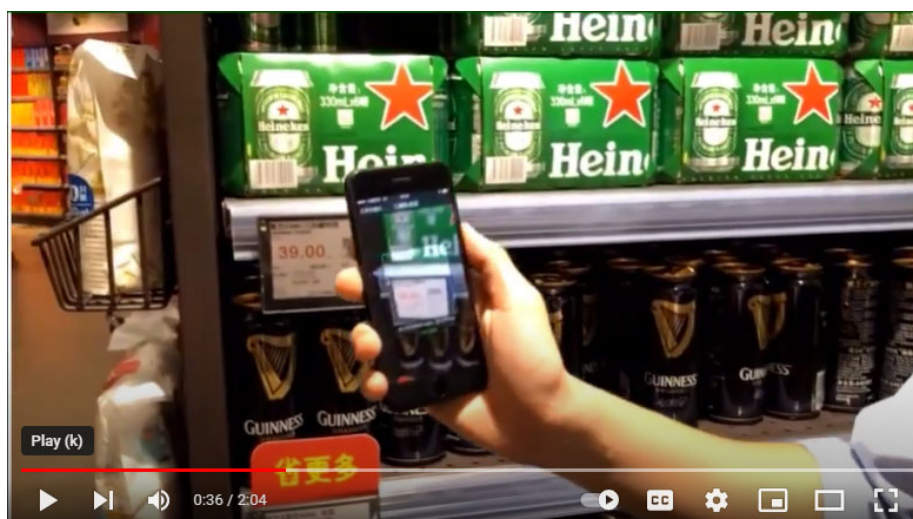
Ex. I, at 1:37-42.

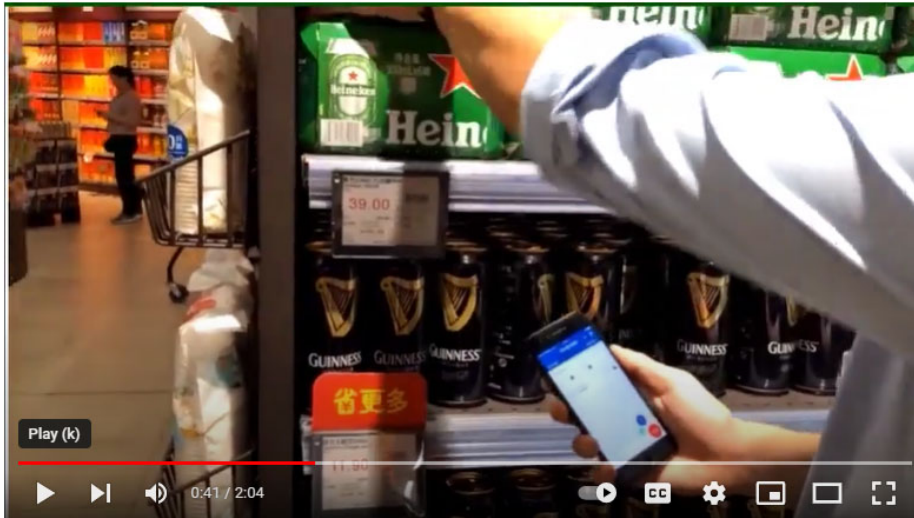
38. A more detailed sequence of automated checkout by use of the VUSION ESLs is shown in the following image captures from the video “Carrefour Shopper Experience” (Ex. J). First, a customer scans a QR code with a smart phone (which is an NFC enabled handheld device) to initiate the automated checkout functionality.



Ex. J, at 0:30.

39. Then, the customer puts the smart phone close to a VUSION ESL to communicate with that ESL, and takes a piece of merchandise item.

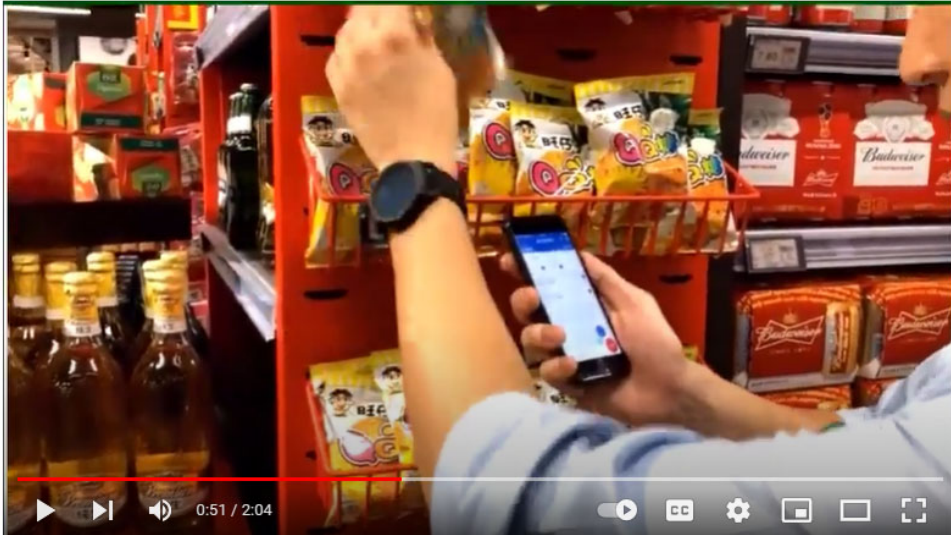




Ex. J, at 0:36-0:41.

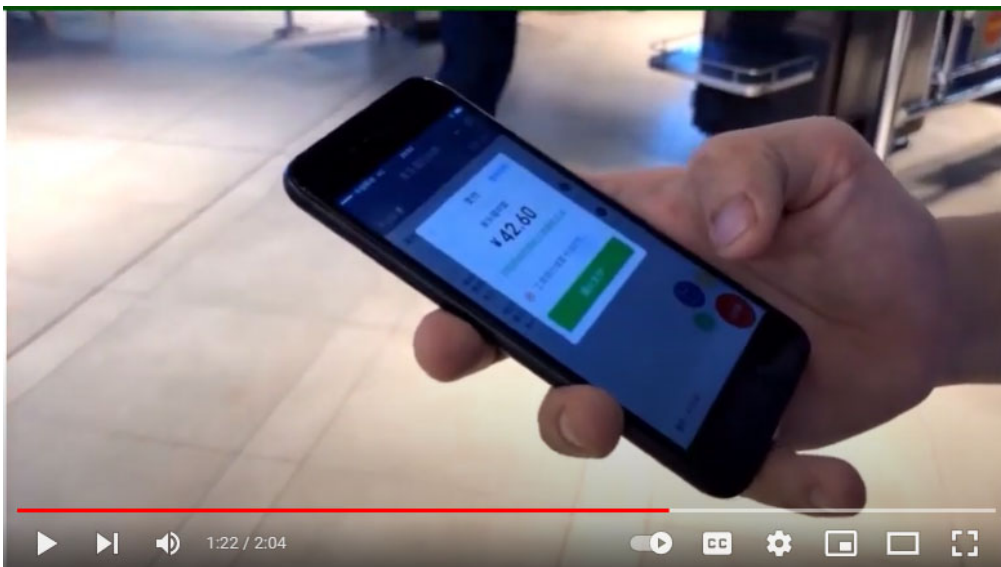
40. The customer then repeats the steps for a piece of different merchandise item.

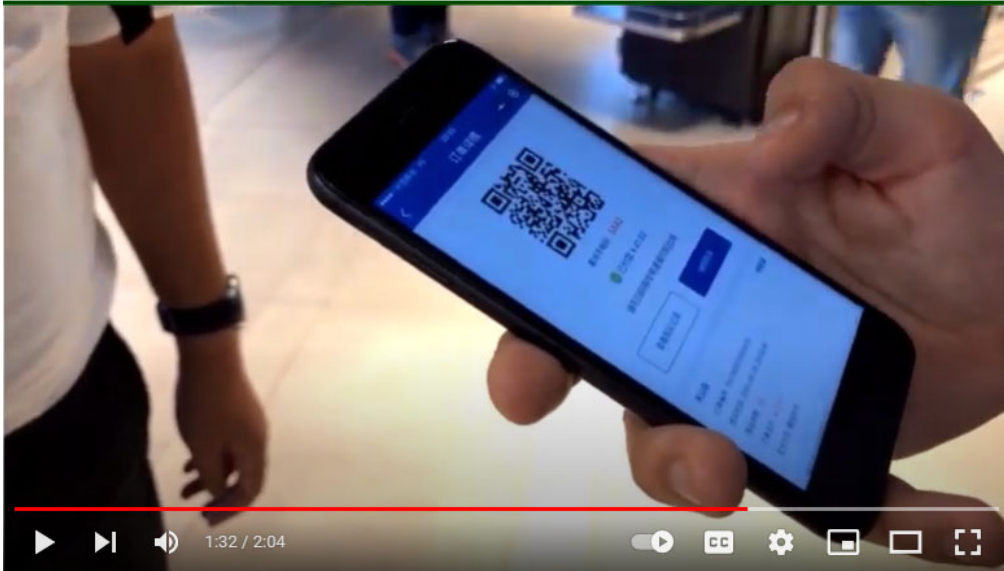




Ex. J, at 0:49-0:51.

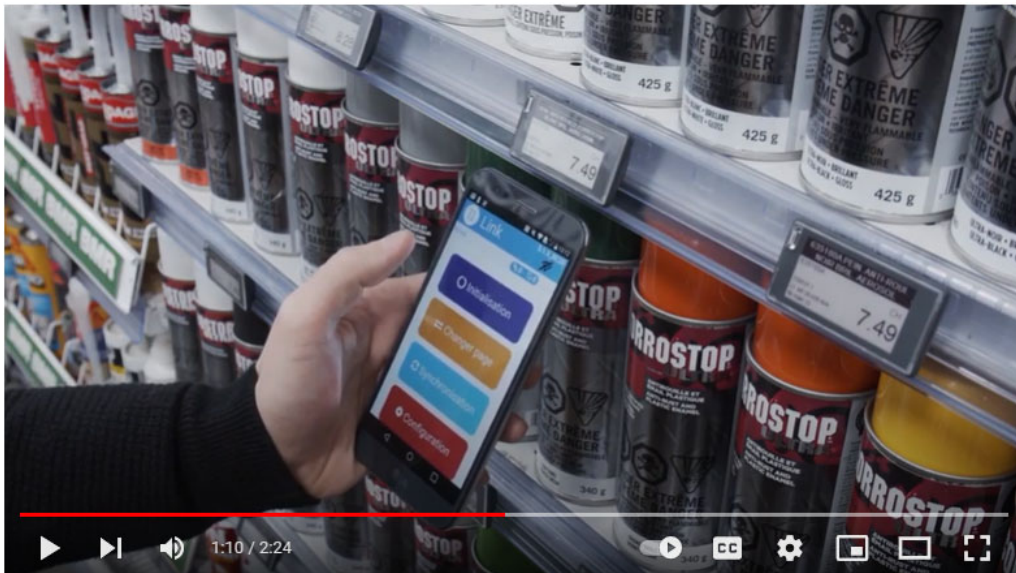
41. Then, at the exit of the store, the customer pays on the smart phone and receives a QR code as proof of purchase.





Ex. J, at 1:22-1:32.

42. VUSION ESLs can also change their display to show information such as inventory level when instructed through NFC enabled handheld devices, including but not limited to smart phones, placed closely nearby, as shown in the following image captures from the video “BMR & SES imagotag Business Tag – Spanish” (Ex. K).







Ex. K, at 1:10-1:24.

43. On information and belief, VUSION implements these functionalities in ways that infringe the Asserted Claims of the '216 patent.

44. As claimed in the document “SES-imagotag Annual Report 2021” (Ex. B), VUSION fully manages 4,000 stores and nearly 20 million labels in the VUSION cloud, a part of VUSION.

An industrial Cloud and high availability. Developed in partnership with Microsoft Azure, the VUSION platform helps large retailers benefit from all the “elastic” power of the Cloud to deploy very quickly and manage a large number of stores and digital labels over time at a much lower cost than any other architecture and with peak performance.

For example, the ability to simultaneously update all prices for a retailer that has 1,000 stores (the “Black Friday” scenario for 10 million ESLs), guaranteed in less than two hours.

The SES-imagotag Cloud is already an industrial success, now with 4,000 stores and nearly 20 million labels fully managed in the VUSION Cloud and nearly 50 million connected to the Cloud for certain applications (asset management) or in the process of being migrated.

Ex. B, at 27.

45. At least the VUSION cloud meets the “background server” element of Claims 1, 7 and 14 of the ’216 patent.

46. Alternatively, as disclosed in the document “Core Service Quick Start Guide” by SES-imagotag (Ex. E), VUSION uses in-store core appliances to manage VUSION labels.

4 Core Appliance

The Core Appliance is a compact network device which can be used to run the SES-imagotag Core Service in the store, instead of using an additional dedicated server. The SES-imagotag Core Service is always needed in the store locally, also when cloud-based/centralized middleware systems like Jeegy S3 Centralized/Jeegy Cloud or Bison ESL Manager is used.

4.1 Why is it needed in the Store?

- Continuous communication with access points and labels is required (even without tasks)
- Limited bandwidth between store and headquarters
- Disconnected VPN connection will prevent proper operation
- Load (image rendering...) is distributed to stores

Ex. E, at 9.

47. At least the core appliances also meet the “background server” element of Claims 1, 7 and 14 of the ’216 patent.

48. As disclosed in the above two documents, VUSION platforms also comprise access points.

3.2 System requirements

- Server hardware: Pentium 4 (2 GHz or higher), 2 GB RAM
- Java Runtime Environment Version 6, Update 36 or higher
- Windows 7, Windows 10, Windows Server 2008 (R2), Windows Server 2012, Windows Server 2016, Suse Enterprise Linux 11, Ubuntu 12 (all 32/64-bit versions), Mac OS X
- SES-imagotag Core Service
- SES-imagotag Access Point(s)
- SES-imagotag Label(s)
- License key

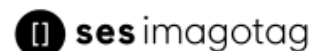
Ex. E, at 7

An in-store infrastructure that is both extremely light and robust. Servers and Core Appliances are no longer required in stores, eliminating any single point of failure (SPOF). The only active elements are the Access Points (AP), which are mutually redundant.

Ex. B, at 27.

49. Moreover, as disclosed in the Core Service Quick Start Guide by SES-imagotag (Ex. E), Access points are the communication centers in the store.

Core Service Quick Start Guide



7 ESL Access Point Configuration

The ESL access points are the communication center in the store that transmits information to the labels. In order to ensure the communication between SES-imagotag Core Service, ESL access point(s) and the labels the access points have to be configured at the start of the SES-imagotag Core Service.

Ex. E, at 16.

50. Access points used in the VUSION system include, but are not limited to, Aruba V:IoT Retail IoT Connector, Cisco Aironet 3800 Retail IoT Connector, Cisco Catalyst 9100 Retail IoT Connector, Extreme Networks Retail IoT Connector, Huawei V:IoT Retail IoT Connector, and Meraki Native Integration, as listed on the website <https://www.ses-imagotag.com/products/wifi-integrations/> (last accessed April 17, 2023) (Ex. L).

51. At least the access points of VUSION meet the “base station” element of Claims 1, 7 and 14 of the ’216 patent.

52. At least the VUSION labels or ESLs meet the “electronic tag device” element of Claims 1, 7 and 14 of the ’216 patent.

53. At least NFC enabled handheld devices, including but not limited to smart phones, meet the “external device” element of Claims 1, 7 and 14 of the ’216 patent.

54. According to the documents “Qualcomm and SES-imagotag collaborate on standards-based electronic shelf labels (ESLs) to enhance retail experiences” (Ex. M), “Bluetooth SIG introduces wireless standard for electronic shelf label market” (Ex. N), and “SES-imagotag expands VUSION IoT cloud platform capabilities to Bluetooth-based IoT protocol” (Ex.O), ESLs generally use wireless technology to provide a two-way communication path with a central hub to create a dynamic pricing automation network, and SES-imagotag implements the same communication path in its ESLs.

ESLs are small, battery-powered e-paper displays that replace paper labels to present product and pricing information at the shelf edge and use wireless technology to provide a two-way communication with a central hub to create a dynamic pricing automation network. Qualcomm Technologies and SES-imagotag's collaboration creates a solution that offers retailers the ability to automate pricing,

Ex. M.

sometimes had to be performed several times in a typical day. Electronic shelf labels are small, battery-powered e-paper displays that replace paper labels to present product and pricing information at the shelf edge and use wireless technology to communicate with a central hub to create a dynamic pricing automation network. ESL systems offer retailers the ability to automate pricing, establish more efficient in-store operations, and increase shopper satisfaction.

"Retailers are increasingly looking towards Internet of Things (IoT) technologies to help them deliver operational efficiencies, increase conversion, and to encourage customers to return to stores," said Andrew Zignani, Research Director at ABI Research. "However, some retailers have been hesitant to adopt ESL technologies due to concerns over vendor lock-in, interoperability, scalability, and the ability to extend this to other smart retail initiatives. The introduction of the Bluetooth ESL standard will help reduce potential obstacles for retailers looking to invest in IoT technologies and accelerate adoption and innovation."

"At SES-imagotag, we are committed to helping the global retail industry realize the full potential of stores through digitalization and electronic shelf labeling. The standardization of ESL connectivity represents an additional avenue towards achieving that goal," said Philipp Maurer, Vice Chair of the Bluetooth SIG ESL Working Group and VP of Engineering at SES-imagotag. "We are honored to have brought our expertise and taken a leadership role in building a global standard with the Bluetooth SIG. We are excited to expand our platform capabilities using Bluetooth technology, enabling us to provide an even broader portfolio of IoT solutions tailored to our customers' unique needs."

Ex. N.

> The VUSION IoT Cloud platform will add native Bluetooth compatibility in addition to existing VUSION IoT protocol, further expanding the ecosystem and platform possibilities available to retailers and many related features

The SES-imagotag group (Euronext: SESL, FR0010288222) today announced the expansion of its current platform to Bluetooth-compatible **Electronic Shelf Labels** based on the recently announced new ESL wireless standard from the Bluetooth Special Interest Group.

Ex.O.

55. As disclosed in the Core Service Quick Start Guide by SES-imagotag (Ex. E), the VUSION labels communicate with access points through 2.4GHz protocol in bi-directional communication.

2 Label Family Introduction

The SES-imagotag electronic shelf label family offers high-quality display options, operating with a replaceable battery, thus working without any external power supply.

The performance of the labels (updates per hour) depends on the mode of the access point. In the USA and Canada the AP-2010 usa/canada bundle incl. antenna with limited data efficiency is required (based on the FCC/IC regulation).

2.1 General Key Features

- 2.4 GHz proprietary radio protocol
- Radio coverage: up to 25 meters
- Bi-directional communication
- 11 available communication channels

Ex. E, at 5.

56. The document “Datenblatt AP 2010 CE” (Ex. P) discloses that access points used with VUSION also communicate with ESLs through 2.4GHz.

AP-2010

TECHNICAL DETAILS*

Product Code	A1A001
Dimensions (mm)	196 x 135 x 45 (without antenna)
Housing	Robus synthetic housing
Mounting	Mounting kit available
Weight	350 g (including antennas)
Antennas	DA-24-01, 5 dBi antenna
Labels supported	Up to 10 000 labels per access point
Transmission range	25 meters indoors (about 1950 m² or 21 000 sq ft area)
Status LED	Multi-colored (shows current operating state)
Power supply	5V DC / 3A external power supply or PoE
Power consumption	5W (typical)
Operating temperature	Temperature range 0 - 40°C; humidity 10 - 80%; non-condensing
Compliance	CE, ROHS

INTERFACES

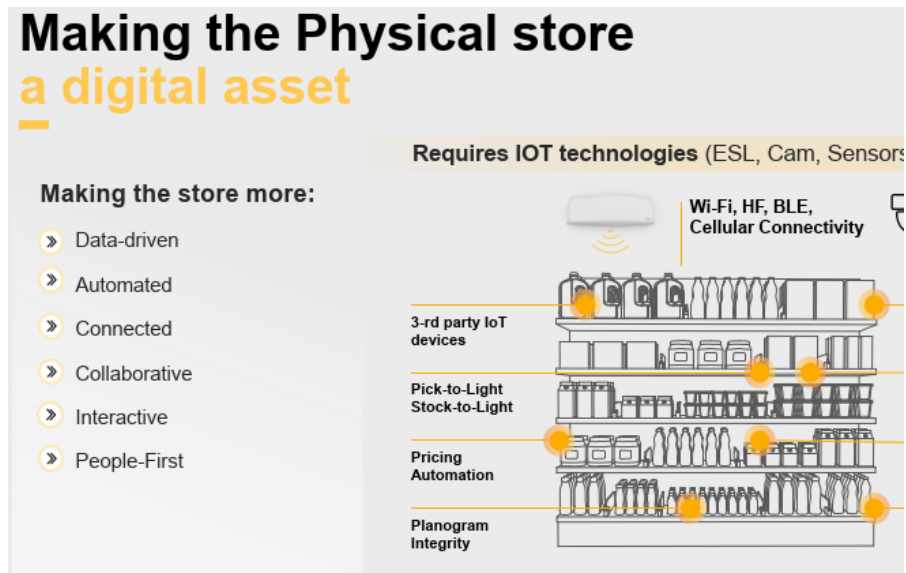
ESL	Integrated radio module with 11 channels in the 2.4 GHz frequency band with a proprietary protocol. 128-bit Advanced Encryption Standard with secure key exchange. Supports up to 10 000 labels per access point. Transmission range of about 25 meters indoors (about 1 950m² or 21 000 sq ft area) but the range can vary depending on the facility of the shop. Operating frequency: 2400 - 2480 GHz Maximum EIRP ≤ 10 mW
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EXEMPLARY PICTURE



Ex. P.

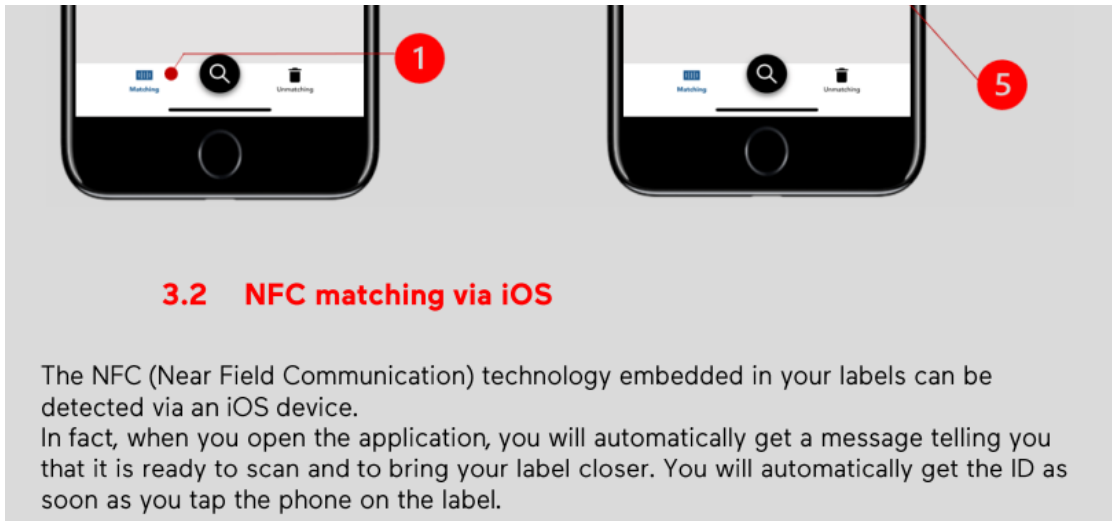
57. Reproduced immediately below from the document “VUSION ’27: A VUSION for the future” (Ex. C) is a diagram showing the communication path between a VUSION label and an access point on the ceiling.



Ex. C, at 71.

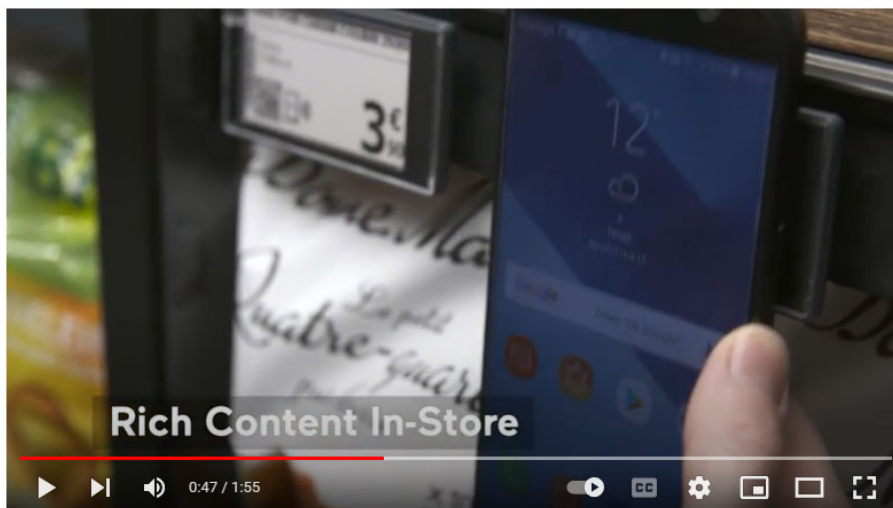
58. At least the communication path between the VUSION label and the access point on the ceiling meets the “first communication path” element of Claims 1, 7 and 14 of the ’216 patent.

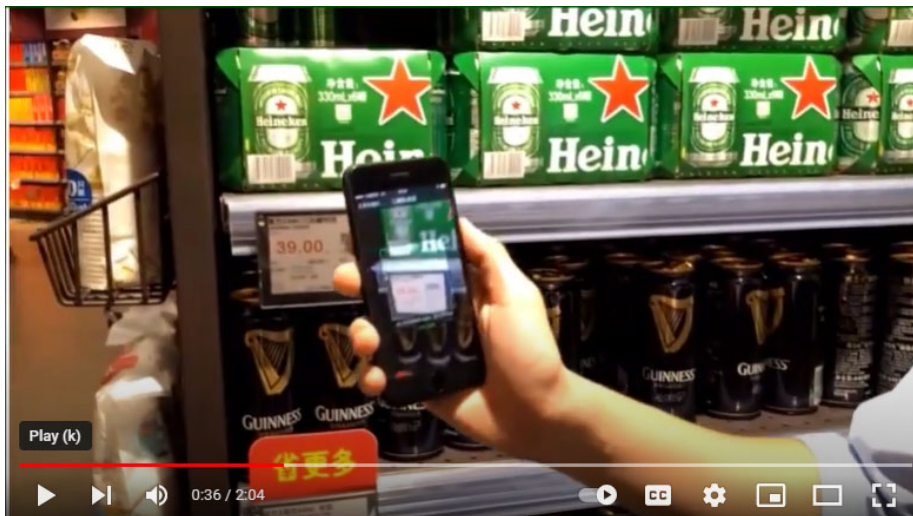
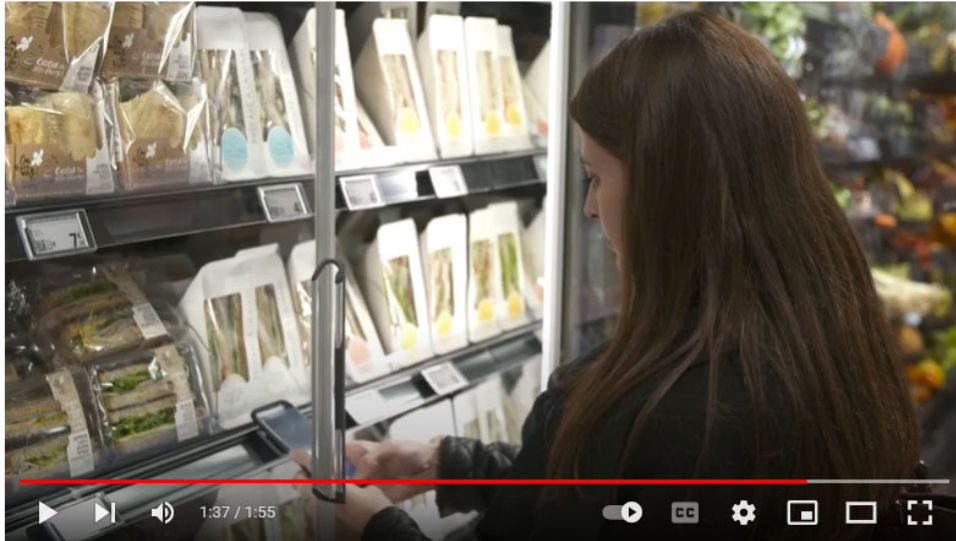
59. The V Link Version 1.6 User Guide by SES-imagotag (Ex. H) discloses that an iOS smart phone (which is an NFC enabled handheld device) equipped with the VUSION Link software communicates with VUSION ESLs through NFC.



Ex. H, at 20.

60. In various videos, customers and store personnel are further shown using NFC enabled handheld devices such as smart phones to communicate with VUSION ESLs through NFC.







Ex. G, I, J, K.

61. At least the communication path between the VUSION label and the NFC enabled handheld device meets the “second communication path” element of Claims 1, 7 and 14 of the ’216 patent.

62. According to the Core Service Quick Start Guide by SES-imagotag (Ex. E), the performance of the labels (updates per hour) depends on the mode of the access point. This depends on the wakeup time.

The performance of the labels (updates per hour) depends on the mode of the access point. In the USA and Canada the AP-2010 usa/canada bundle incl. antenna with limited data efficiency is required (based on the FCC/IC regulation).

Ex. E, at 42.

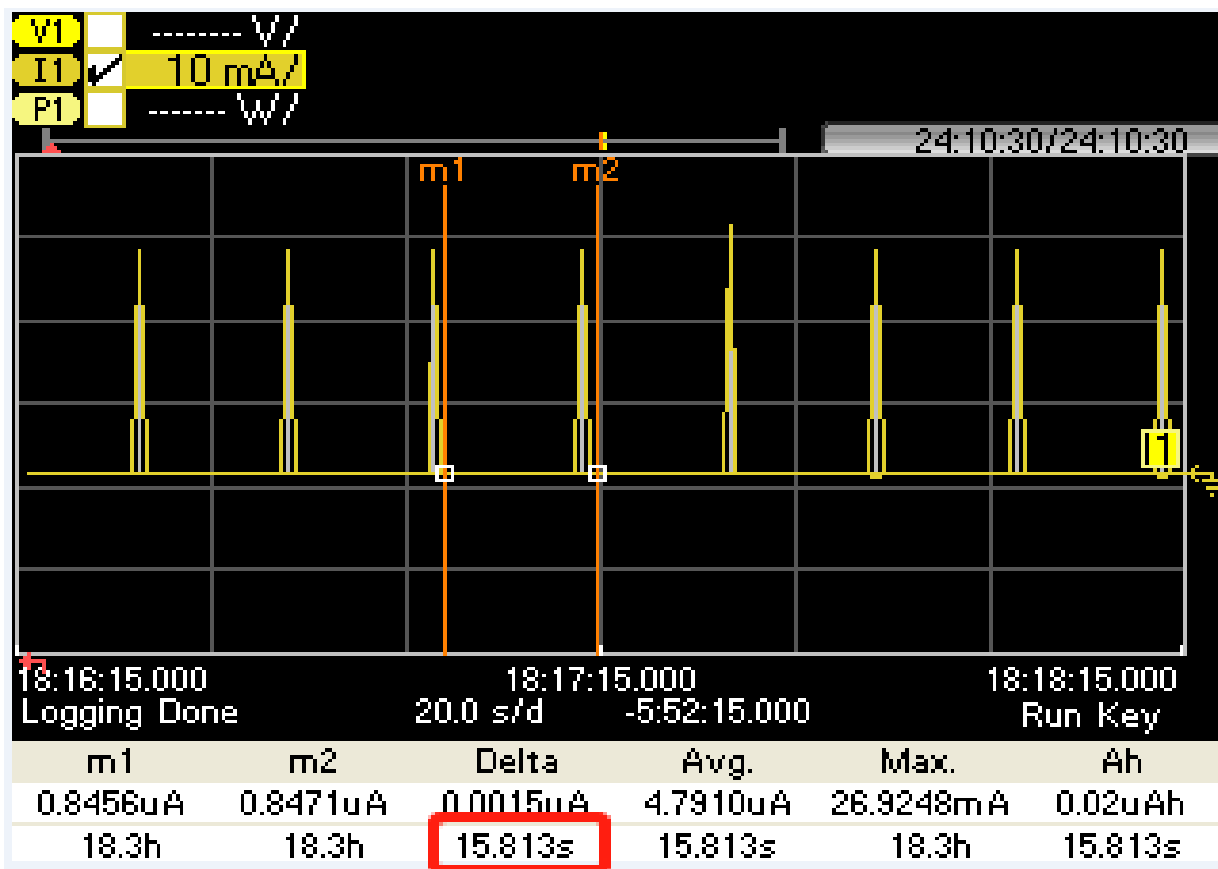
- may be used in landscape and portrait mode
- Fast response time (less than 15/30 seconds, depends on wakeup time)
- 128-bit AES encryption with secure key exchange

Id.

63. On information and belief, at least the different performances or wakeup times of the labels meet the “normal monitoring mode” and “fast monitoring mode” limitations of Claims 1, 7 and 14 of the '216 patent.

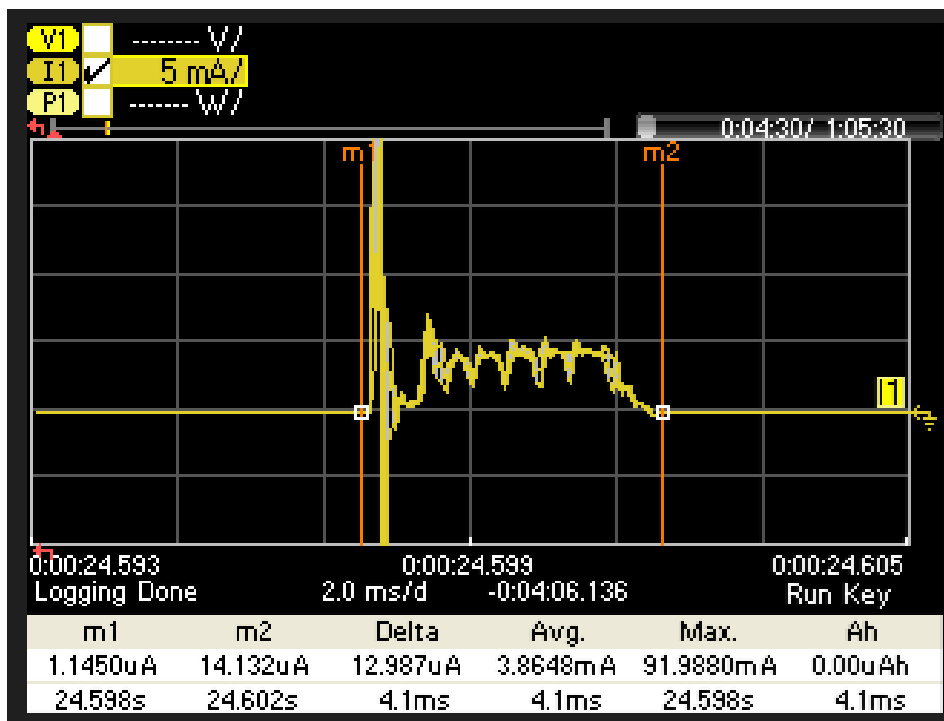
64. On information and belief, at least the different modes of the access points meet the “normal wake-up mode” and “fast wake-up mode” limitations of Claims 1, 7 and 14 of the '216 patent.

65. Reproduced immediately below is a measurement, made by Plaintiff, of electric current passing through a VUSION label when no interaction has been introduced between the label and an NFC enabled handheld device.



66. The measurement shows a periodic peaking behavior with a peaking period of around 15 seconds.

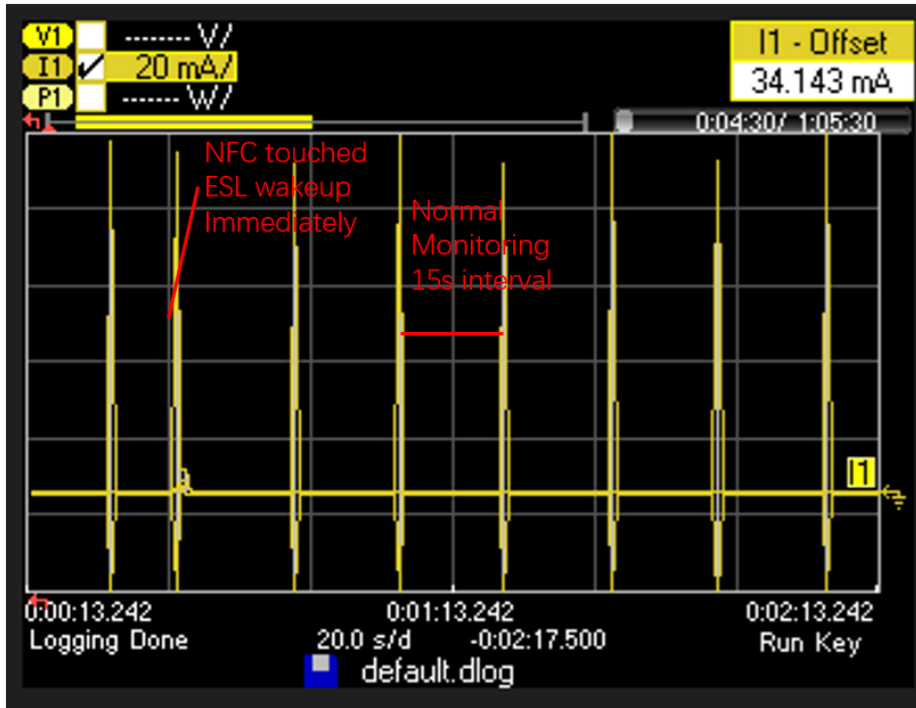
67. Reproduced immediately below is an enlarged measurement, made by Plaintiff, of the periodic peaking phase of the electric current passing through a VUSION label when no interaction has been introduced between the label and an NFC enabled handheld device.



68. The enlarged measurement shows that one typical peaking phase lasts about 4.1 milliseconds.

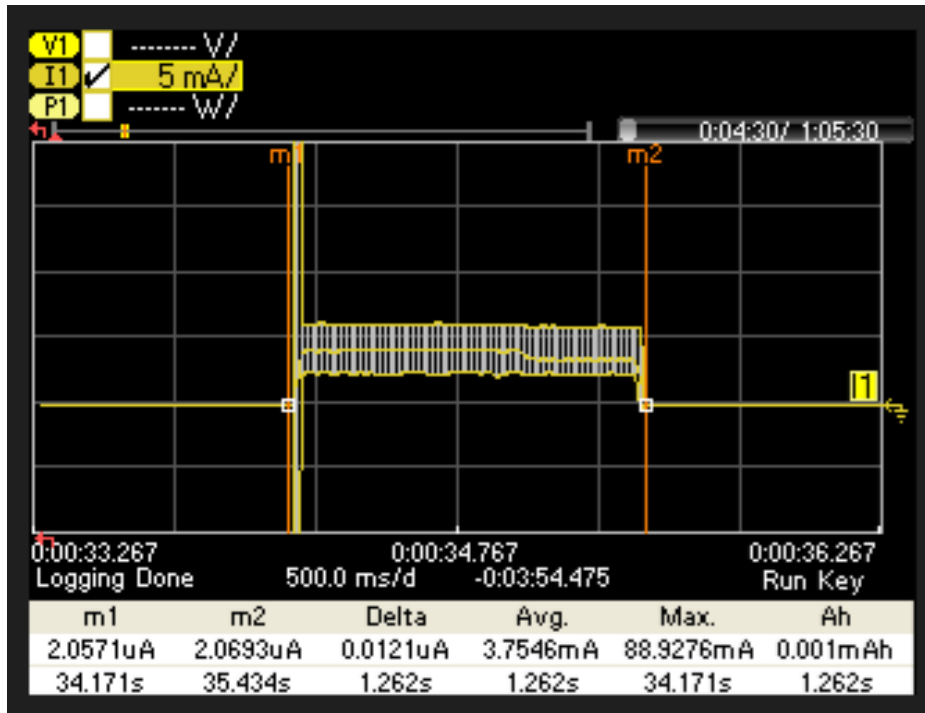
69. This periodic peaking behavior indicates that the first communication path supports a “normal monitoring mode” as claimed by Claims 1, 7 and 14 of the ’216 patent.

70. Reproduced immediately below is a measurement, made by Plaintiff, of electric current passing through a VUSION label after an interaction has been introduced between the label and an NFC enabled handheld device.



71. The measurement shows a peak that does not conform to the normal peaking period of around 15 seconds, but closely follows the interaction between the label and the NFC enabled handheld device.

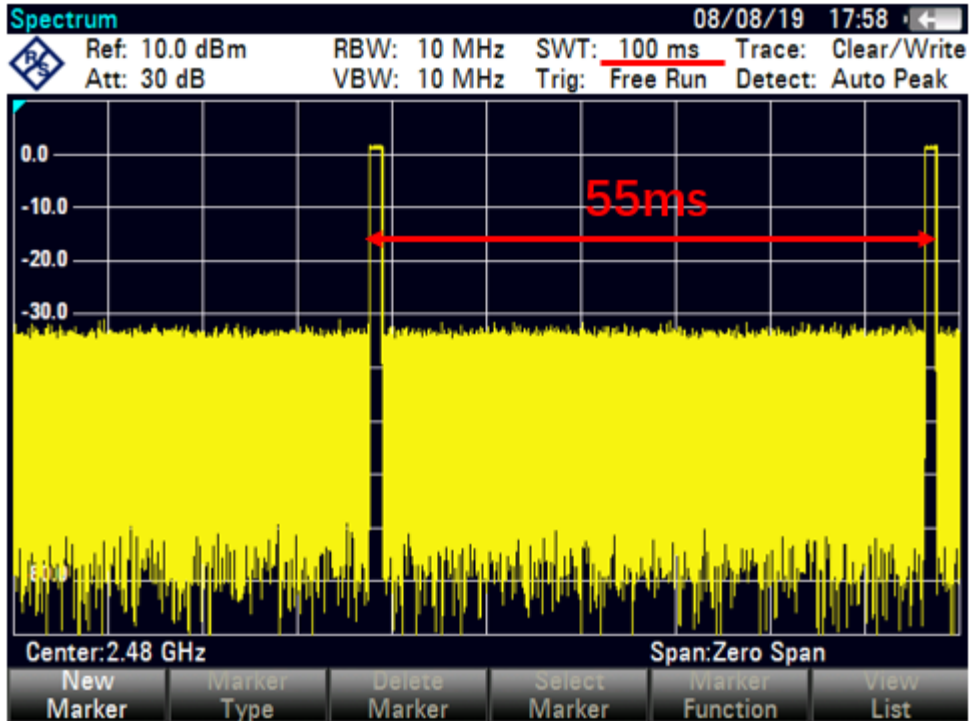
72. Reproduced immediately below is an enlarged measurement, made by Plaintiff, of the peak closely following the interaction between the label and the NFC enabled handheld device.



73. The enlarged measurement shows that the peak closely following the interaction between the label and the NFC enabled handheld device lasts about 1.2 seconds, much longer than a regular peak that lasts about 4.1 milliseconds.

74. The distinctly long peak, closely following the interaction between the label and the NFC enabled handheld device, and not conforming to the normal peaking period, indicates that the first communication path at least supports a “fast monitoring mode”, as claimed by Claims 1, 7 and 14 of the '216 patent.

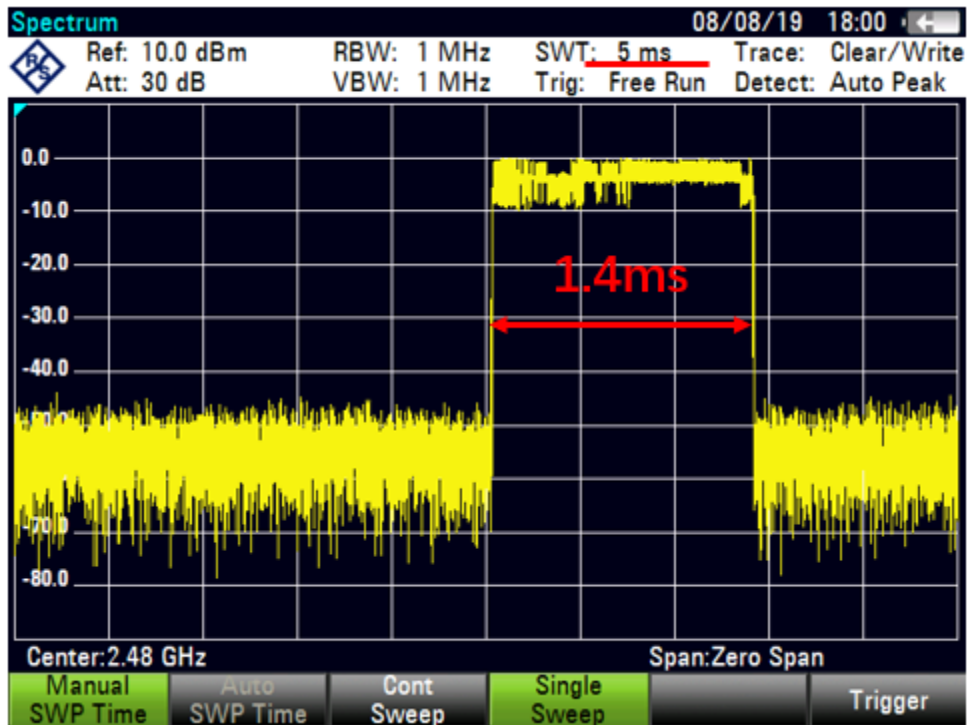
75. Reproduced immediately below is a picture of spectral measurements, made by Plaintiff, of signals transmitted by an access point of VUSION.



76. The spectral measurements show a periodic peaking behavior, with a peaking period of around 55 milliseconds.

77. On information and belief, at least the between-peak behavior of the access point matches the “normal wake-up mode” claimed by Claims 1, 7 and 14 of the '216 patent.

78. Reproduced immediately below is an enlarged measurement, made by Plaintiff, of the peaking phase of the spectral measurement of signals transmitted by the access point of VUSION.



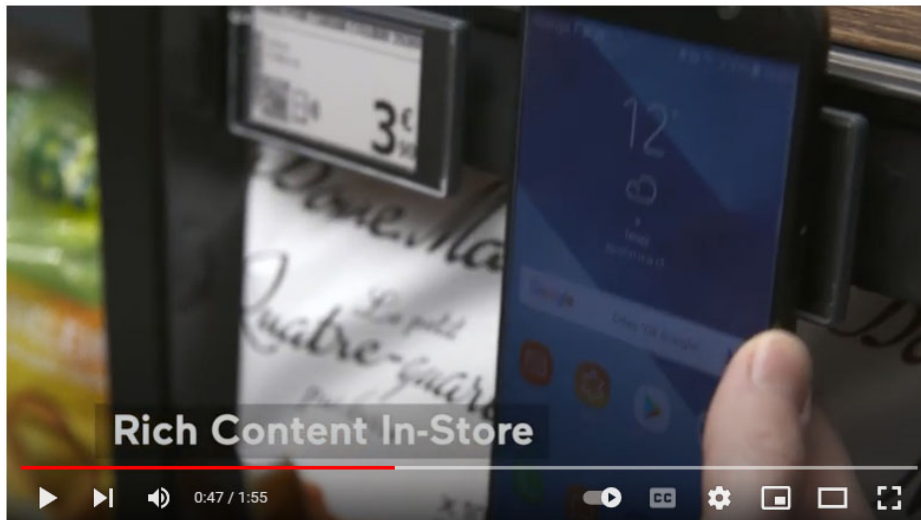
79. The enlarged measurement shows that a typical peaking phase of the spectral measurement lasts around 1.4 milliseconds.

80. On information and belief, at least the peaking behavior of the access point matches the “fast wake-up mode” claimed by Claims 1, 7 and 14 of the ’216 patent.

81. On information and belief, when a customer’s NFC enabled handheld device communicates with a VUSION label through NFC, the NFC enabled handheld device transmits first data through NFC to the VUSION label, at least meeting the “transmit first data to the electronic tag device through the second communication path” limitation of Claims 1, 7 and 14 of the ’216 patent.

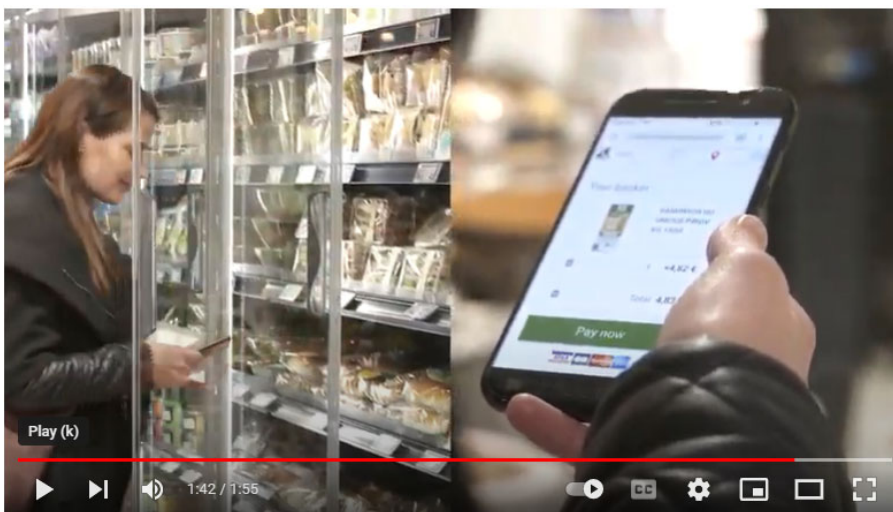
82. For example, on information and belief, when the customer in the following pictures puts the smart phone (which is an NFC enabled handheld device) near the VUSION

label, the smart phone transmits first data through NFC to the VUSION label indicating that the customer intends to view certain information associated with the merchandise item.



Ex. I, at 0:47.

83. For another example, on information and belief, when the customer in the following pictures puts the smart phone (which is an NFC enabled handheld device) near the VUSION label and then removes a piece of merchandise item, the smart phone transmits first data through NFC to the VUSION label indicating that the customer intends to purchase a piece of the associated merchandise item.

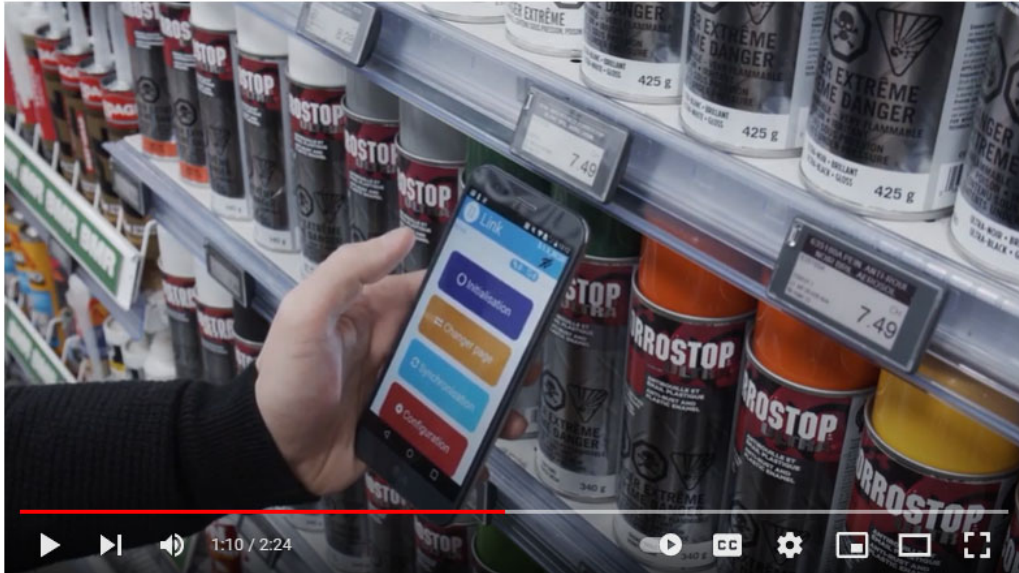


Ex. I, at 1:42.



Ex. J, at 0:36-0:41.

84. For another example, on information and belief when the store personnel in the following pictures put the smart phone (which is an NFC enabled handheld device) near the VUSION label, the smart phone transmits first data through NFC to the VUSION label indicating that the personnel intend the VUSION label to change its display to show inventory information.



Ex. K, at 1:10-1:24.

85. The V Link's Software User Manual (Ex. H) explains that a matching between a merchandise item and a VUSION label, which, on information and belief, is first data transmitted from a smartphone, is sent over an internet connection to the VUSION cloud.

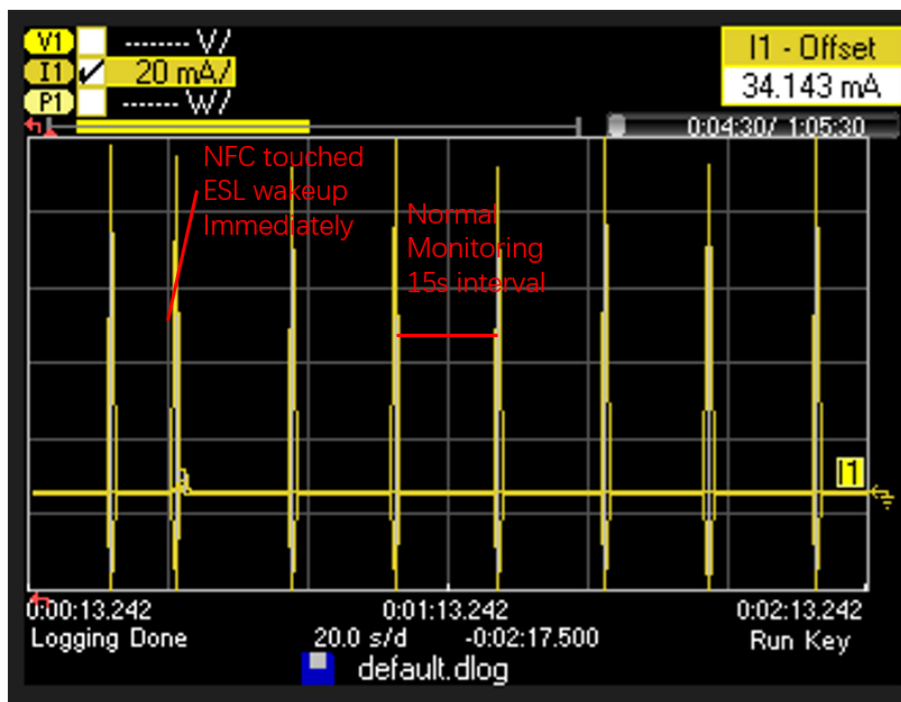
However, afterward, an internet connection is mandatory to send the matching to VUSION Cloud. This mode is only to avoid blocking operations during roll out or in case of bad internet connection in the store.

Ex. H, at 19.

86. Other documents show that access points of VUSION are communication centers that communicate with VUSION ESLs on the 2.4GHz communication path (the first communication path). Ex. E, at 9; Ex. B, at 27.

87. On information and belief, when the customer in the example above or the store personnel in the example above put their smart phones (which are NFC enabled handheld devices) near VUSION labels, VUSION labels will relay the first data transmitted by the smart phones through NFC (the second communication path) to an access point, which will further relay the first data to the VUSION cloud or a VUSION core appliance, such that the VUSION platform will react to the first data in the VUSION cloud or in the VUSION core appliance.

88. When an interaction between the VUSION label and an NFC enabled handheld device has been introduced, the measurement of electric current passing through the VUSION label shows a distinctive peak not conforming to the regular peaking period and lasting longer than normal peaks.



89. On information and belief, at least this sequence of behavior indicates that VUSION meets the “the electronic tag device is configured to receive the first data, transmit the first data to the base station through the first communication path, and enter the fast monitoring mode” limitation of Claims 1, 7 and 14 of the '216 patent.

90. Documents show that access points of VUSION are communication centers that communicate with the VUSION cloud or core appliance. Ex. E, at 9; Ex. B, at 27.

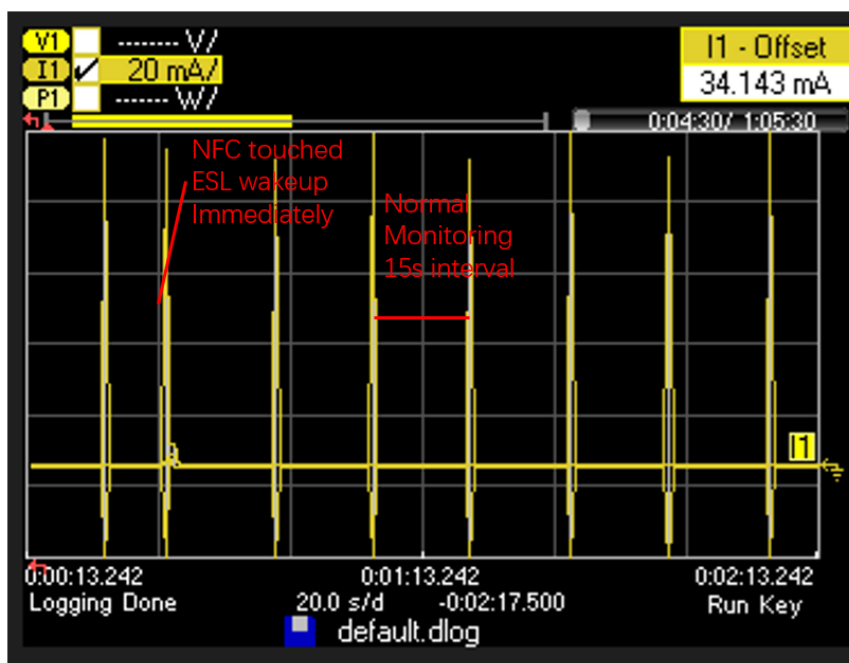
91. On information and belief, to support the further relaying of the first data and to support the processing of the first data by the VUSION cloud or core appliance, an access point of VUSION is configured to receive the first data from VUSION labels and relay the first data to a data center of VUSION, at least meeting the “the base station is configured to receive the first data and transmit the first data to the background server” limitation of Claims 1, 7 and 14 of the '216 patent.

92. On information and belief, a data center of VUSION, upon receiving the first data relayed by an access point of VUSION from a VUSION label, in order to cause the VUSION label to react to the first data properly (for example, by transmitting additional information of a merchandise item to an NFC enabled handheld device, generating a sale, or displaying inventory information) will generate a control instruction and accompanying data and transmit such instruction and data back to the access point, at least meeting the “the background server is configured to generate a control instruction and second data according to the first data, and transmit the control instruction and the second data to the base station” limitation of Claims 1, 7 and 14 of the '216 patent.

93. On information and belief, an access point of VUSION, upon receiving the data center-originated control instruction and data, will enter the fast wake-up mode, generate a fast

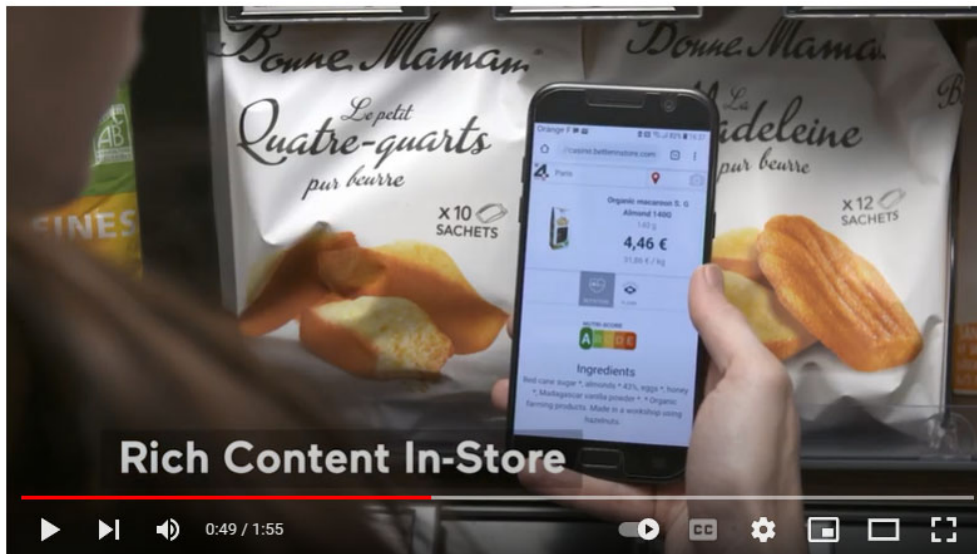
wake-up instruction, and relay such fast wake-up instruction together with the data center-originated control instruction and data to a VUSION label, so that the VUSION label will, under the guidance of the control instruction and data, react to the first data properly, thus at least meeting the “the base station is further configured to receive the control instruction and the second data, communicate with the electronic tag device in the fast wake-up mode, and transmit a fast wake-up instruction, the control instruction and the second data to the electronic tag device through the first communication path” limitation of Claims 1, 7 and 14 of the '216 patent.

94. After the distinctive period of continuously peaking electric current, measurements by Plaintiff show that the electric current passing through the VUSION label regresses to the periodically peaking pattern with a peaking period of around 15 seconds.

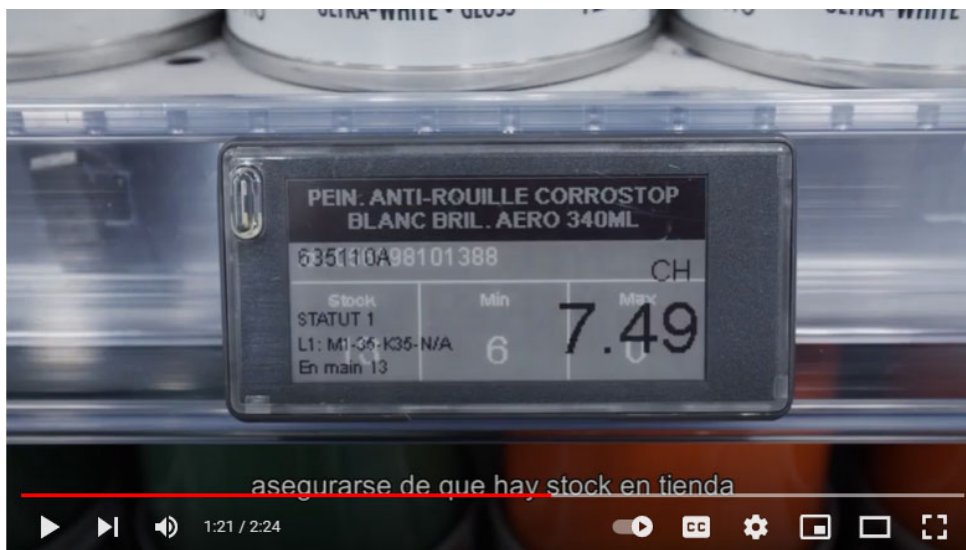


95. This sequence of behavior indicates that VUSION meets the “the electronic tag device is further configured to receive the fast wake-up instruction, the control instruction and the second data, and switch to the normal monitoring mode after completing the communication” limitation of Claims 1, 7 and 14 of the '216 patent.

96. On information and belief, this sequence of behavior is what causes the VUSION label to properly react to the first data, for example by displaying additional information of a merchandise item, or by updating its display to show inventory levels.



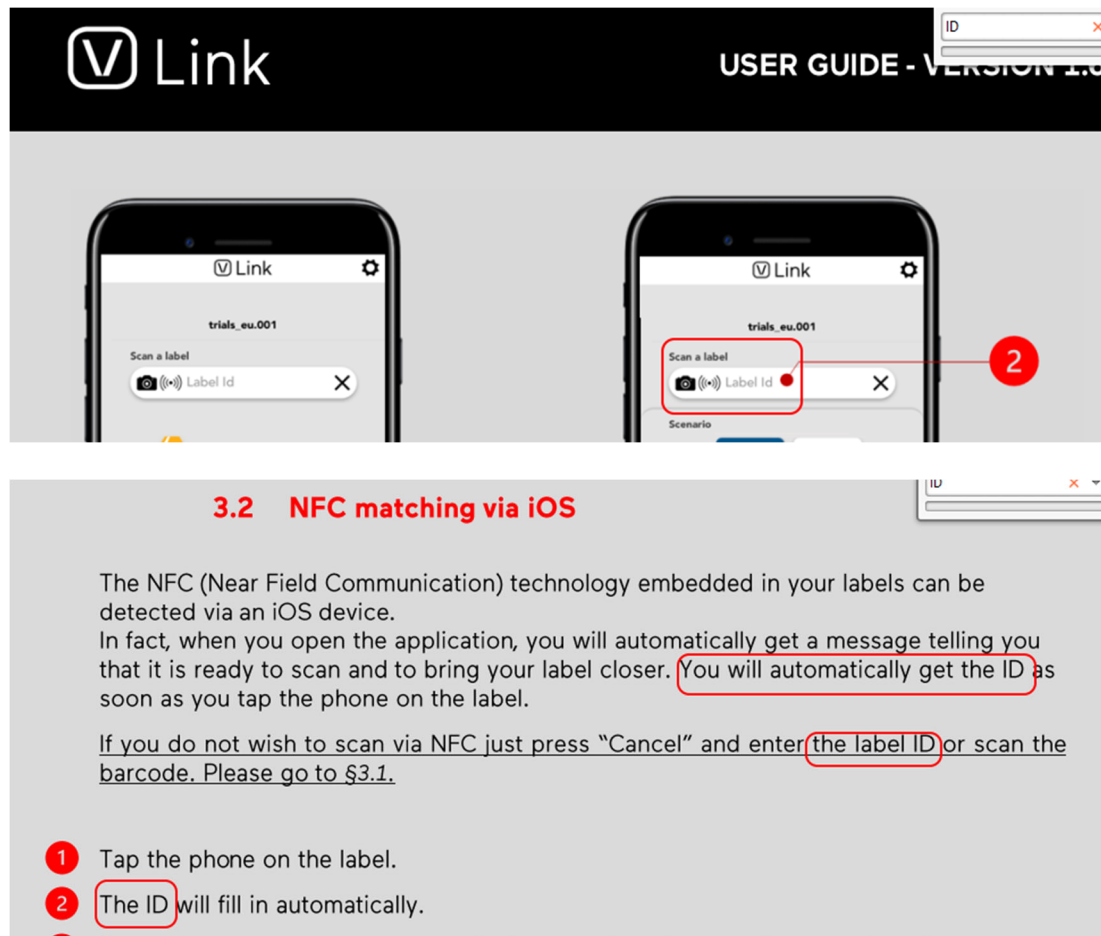
Ex. I, at 0:49.



Ex. J, at 1:21.

97. On information and belief, without such infringing sequence of behavior, the VUSION label would not be capable of properly reacting to the first data.

98. The V Link Software User Manual (Ex. H) discloses that a VUSION label has an ID, which can be transmitted to an NFC enabled handheld device such as a smart phone through NFC.



Ex. H, at 20.

99. The V Link Software User Manual further discloses that a matching, which, on information and belief, includes the label ID information and is a first data transmitted from a smartphone, is sent over an internet connection to the VUSION cloud.

However, afterward, an internet connection is mandatory to send the matching to VUSION Cloud. This mode is only to avoid blocking operations during roll out or in case of bad internet connection in the store.

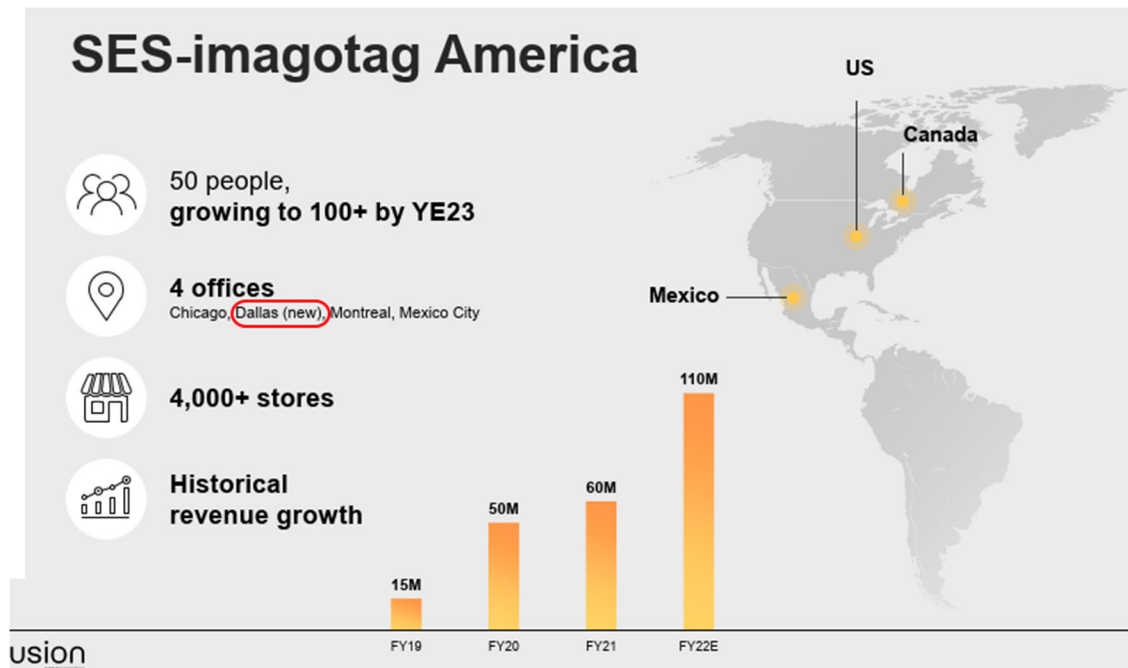
Ex. H, at 19.

100. At least the label ID meets the “ID” limitation of Claims 2, 8 and 15 of the ’216 patent.

101. On information and belief, a VUSION label, in order to establish a dedicated communication path with an access point of VUSION, attaches its label ID to its communication content with the access point, at least meeting the “attach an ID of the electronic tag device to the first data when transmitting the first data to the base station” limitation of Claims 2, 8, and 15 of the ’216 patent.

102. On information and belief, SES-imagotag GmbH designs and manufactures VUSION systems and, under directions by and with contributions from SES-imagotag SA, distributes VUSION systems worldwide including purposefully distributing VUSION systems into the United States.

103. On information and belief, personnel from SES-imagotag SA and SES-imagotag made purposeful contacts with Texas, in connection with SES-imagotag’s new office in Dallas, Texas (as shown in the document “VUSION ’27: A VUSION for the future”, attached to this Complaint as Ex. C), in furtherance of sales, offers for sale, importations, and marketing activities for VUSION.



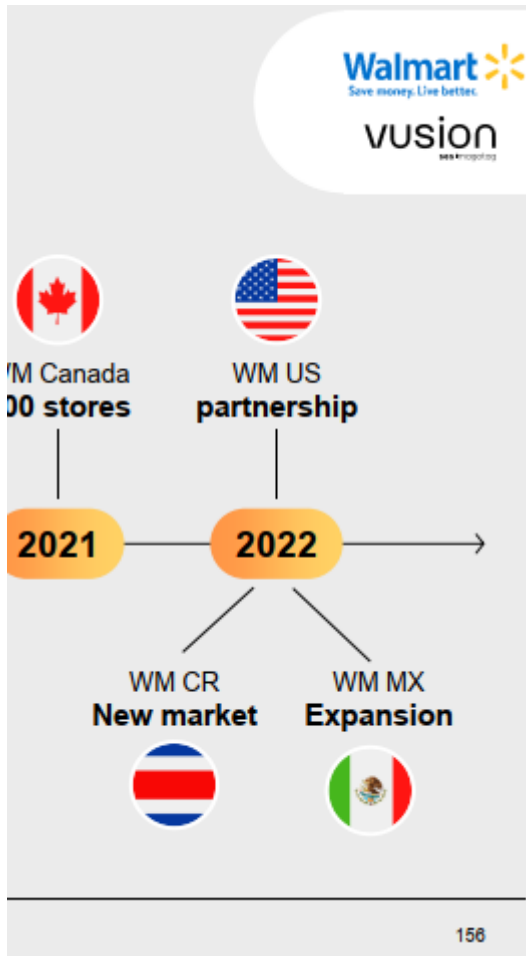
Ex. C, at 154.

104. The document “VUSION ’27: A VUSION for the future” (Ex. C) also shows that SES-imagotag SA and SES-imagotag GmbH have more than 100 clients in North America, including nationwide retailers such as Walmart, Target, Amazon, CVS Pharmacy, Kohl’s, Kroger’s, Meijer, ACE Hardware, and Mattress Firm (a corporation with its headquarters in Houston, Texas). All of these retailers have an extensive presence in the State of Texas.



Ex. C, at 155.

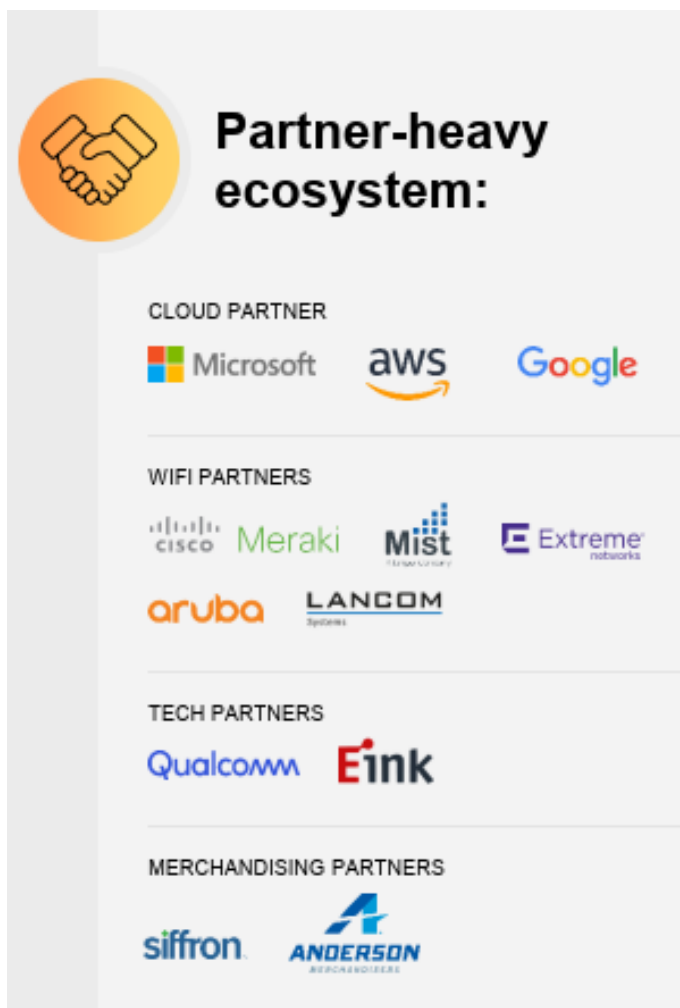
105. In particular, in the same document, SES-imagotag SA and SES-imagotag GmbH claim that Walmart, a nationwide retailer that maintains around 600 stores and more than 175,000 employees inside the State of Texas (as indicated on the Walmart corporate website page <https://corporate.walmart.com/about/texas>), is their “partner” in the United States for VUSION.



Ex. C at 156.

106. By serving and partnering with such nationally renowned retailers, SES-imagotag SA and SES-imagotag GmbH deliver VUSION into the stream of commerce with the expectation that it will be purchased by end users in the State of Texas and in this District, and indicate an intent or purpose to serve the market in the State of Texas and in this District.

107. According to the same document, SES-imagotag SA and SES-imagotag GmbH also partner with nationally renowned technology firms such as Microsoft, AWS, Google, Qualcomm, and E-Ink for technology solutions underlying VUSION.



Ex. C, at 157.

An industrial Cloud and high availability. Developed in partnership with Microsoft Azure, the VUSION platform helps large retailers benefit from all the “elastic” power of the Cloud to deploy very quickly and manage a large number of stores and digital labels over time at a much lower cost than any other

Ex. B, at 27.

interoperable ESL ecosystem,” said Art Miller, vice president, business development and global head of retail IoT, Qualcomm Technologies, Inc. “Our team was honored to collaborate with SES-imagotag and other members of the Bluetooth SIG, and leverage their expertise in the space to create IoT technology that could forever change the retail industry and capabilities for customers.”

Ex. M.

108. Such technological collaboration are purposeful contacts directed towards the United States and by implication towards the State of Texas and this District, in furtherance of sales, offers for sale, importations, and marketing activities for VUSION.

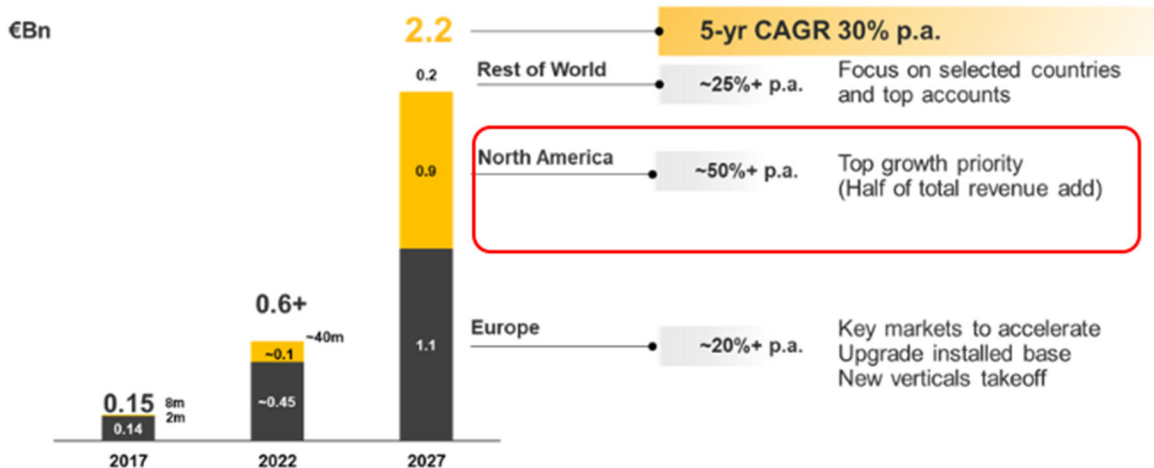
109. In the document “VUSION ’27 Strategic plan” (Ex. Q), SES-imagotag SA estimates that it is serving 4,000 stores in North America, with an annual revenue of more than 100 million dollars. Ex. Q.

North America: Scaling up in the world’s largest retail market

SES-imagotag’s North American region operates through 4 offices (Chicago, Dallas, Montreal and Mexico City), and 50 employees (expected to reach 100 by year-end 2023). All 4,000 stores across the region use the VUSION cloud platform and some of the Company’s VAS solutions. Revenues already total over €100m in 2022.

110. SES-imagotag SA has identified North America as a top growth priority market and has forecasted that North America will account for 50% of its revenue growth by 2027. Ex. Q.

Growth by Region



CLAIMS FOR RELIEF

COUNT I: INFRINGEMENT OF THE '216 PATENT

111. The allegations of paragraphs 1-110 are repeated and realleged as if fully set forth in this Count I of the Complaint.

112. SES-imagotag SA and SES-imagotag GmbH have been and are currently making, using, selling, offering to sell, and/or importing into the United States SES-imagotag's VUSION product.

113. SES-imagotag SA and SES-imagotag have thus infringed and continue to infringe at least the Asserted Claims of the '216 patent literally and/or under the doctrine of equivalents.

114. SES-imagotag SA and SES-imagotag have also actively induced and will continue to actively induce the infringement of at least one of the Asserted Claims of the '216 patent, in violation of 35 U.S.C. § 271(b), by, among other things, actively and knowingly aiding

and abetting infringement of others through activities such as creating and/or distributing data sheets, requirements documents, assembly instructions and/or similar materials with instructions on creating, manufacturing, designing, assembling and/or implementing infringing products, with the specific intent to induce others to directly make, use, offer for sale, sell, and/or import into the United States products that fall within the scope of the '216 patent, without license or authority from Plaintiff. On information and belief, SES-imagotag SA and SES-imagotag GmbH know that the induced acts constitute infringement of the '216 patent.

115. SES-imagotag SA and SES-imagotag GmbH individually, collectively, or through others or intermediaries, have contributorily infringed, and/or are contributorily infringing, in violation of 35 U.S.C. § 271(c), at least one claim of the '216 patent by making, using, offering for sale, selling, and/or importing, material parts of the inventions claimed in the '216 patent, which are not a staple article or commodity of commerce suitable for substantial non-infringing use, and knowing the accused parts to be especially made or especially adapted for use in an infringement of the Asserted Claims.

116. SES-imagotag SA and SES-imagotag GmbH have knowledge of the '216 patent at least as of the date when it was notified of the filing of this action. SES-imagotag SA's and SES-imagotag GmbH's direct and indirect infringements of the '216 Patent have thus been committed with knowledge of the '216 patent, On information and belief, such infringements are also knowing, intentional and deliberate, making SES-imagotag SA and SES-imagotag GmbH liable for direct, indirect, and willful infringement.

117. SES-imagotag SA's and SES-imagotag GmbH's infringement of the '064 Patent has damaged and will continue to damage Hanshow, causing irreparable harm for which there is no adequate remedy at law unless enjoined by this Court.

118. As a result of their infringing conduct, SES-imagotag SA and SES-imagotag GmbH are liable to Hanshow in an amount that adequately compensates it for such infringement, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

119. Hanshow and/or its predecessors-in-interest have satisfied all statutory obligations required to collect pre-filing damages for the full period allowed by law.

PRAYER FOR RELIEF

WHEREFORE, Hanshow prays for the following relief:

- (A) An adjudication that SES-imagotag SA and SES-imagotag GmbH have infringed and continue to infringe the '216 patent;
- (B) An accounting of all damages sustained by Hanshow as a result of SES-imagotag SA's and SES-imagotag GmbH's acts of infringement of the '216 patent;
- (C) An award to Hanshow of actual damages adequate to compensate Hanshow for SES-imagotag SA's and SES-imagotag GmbH's acts of patent infringement, together with prejudgment and post-judgment interest;
- (D) An award to Hanshow of enhanced damages, up to and including trebling of Hanshow's damages pursuant to 35 U.S.C. § 284 for SES-imagotag SA's and SES-imagotag GmbH's willful infringement of the '216 patent;
- (E) A declaration that this action is an exceptional case under 35 U.S.C. § 285, and an award of Hanshow's costs of suit and reasonable attorneys' fees pursuant to 35 U.S.C. § 285 due to the exceptional nature of the case, or otherwise permitted by law;
- (F) Entry of a permanent injunction pursuant to 35 U.S.C. § 283, enjoining SES-imagotag SA and SES-imagotag GmbH, and each of their agents, servants, employees, principals, officers, attorneys, successors, assignees, and all those in active concert or participation with SES-imagotag SA and/or SES-imagotag GmbH, including related individuals and

entities, customers, representatives, OEMs, dealers, and distributors, from further acts of direct and indirect infringement with respect to the claims of the '216 patent; and

(G) The granting of any other relief that this Court deems just and proper.

JURY TRIAL DEMANDED

Plaintiff hereby demands a trial by jury.

Dated on this 17th day of April, 2023.

Respectfully submitted,

/s/ Gary M. Hnath

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