

JURISDICTION

3. This is an action for patent infringement arising under the patent laws of the United States, 35 U.S.C. §§ 1, *et seq.* This Court has jurisdiction over this action pursuant to 28 U.S.C. §§ 1331 and 1338(a).

4. This Court has personal jurisdiction over Defendant. Defendant regularly conducts business and has committed acts of patent infringement in this Judicial District, the State of Texas, and elsewhere in the United States.

5. Venue is proper in this Judicial District as to Defendant Best Buy pursuant to 1400(b). Best Buy has a regular and established place of business in this Judicial District, including in Collin County, and is deemed to reside in this Judicial District. On information and belief, Best Buy has committed acts of infringement in this Judicial District, and/or has purposely transacted business involving the accused devices in this Judicial District including providing sales and technical support for the products accused of infringement herein.

6. Defendant is subject to this Court's jurisdiction pursuant to due process and/or the Texas Long Arm Statute due at least to its substantial business in this State and Judicial District, including (a) at least part of its past infringing activities, (b) regularly doing or soliciting business in Texas, and/or (c) engaging in persistent conduct and/or deriving substantial revenue from goods and services provided to customers in Texas.

PATENTS-IN-SUIT

7. On September 2, 2003, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 6,614,349 (the "'349") entitled "Facility and Method for Tracking Physical Assets". A true and correct copy of the '349 Patent is available at: <http://pdfpiw.uspto.gov/.piw?PageNum=0&docid=6614349>.

8. On March 28, 2017, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 9,609,283 (the “’283 Patent”) entitled “Mobile Unit Communication Via A Network”. A true and correct copy of the ’283 Patent is available at: <http://pdfpiw.uspto.gov/.piw?PageNum=0&docid=9609283>.

9. On December 18, 2012, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 8,335,254 (the “’254 Patent”) entitled “Advertisements Over a Network”. A true and correct copy of the ’254 Patent is available at: <http://pdfpiw.uspto.gov/.piw?PageNum=0&docid=8335254>.

10. NorthStar is the sole and exclusive owner of all right, title, and interest in the ’349 Patent, the ’283 Patent, and the ’254 Patent (the “Patents-in-Suit”) and holds the exclusive right to take all actions necessary to enforce its rights to the Patents-in-Suit, including the filing of this patent infringement lawsuit. NorthStar also has the right to recover all damages for past infringement of the Patents-in-Suit and to seek injunctive relief as appropriate under the law.

FACTUAL ALLEGATIONS

11. The Patents-In-Suit generally disclose technology for monitoring object.

12. The ’349 Patent generally discloses systems and methods that employ monitoring and tracking inventory through the use of wireless communication system. The technology described in the ’349 Patent was developed by Rod L. Proctor and Andrew J. Rimkus. By way of example, this technology is implemented today in asset tracking systems deployed throughout the supply chain (*e.g.*, warehousing, logistics, and retail spaces).

13. The ’283 Patent generally discloses a network system for monitoring and transmitting information regarding remote objects. The technology described in the ’283 Patent was developed by Dennis Sunga Fernandez and Irene Hu Fernandez. By way of example, this

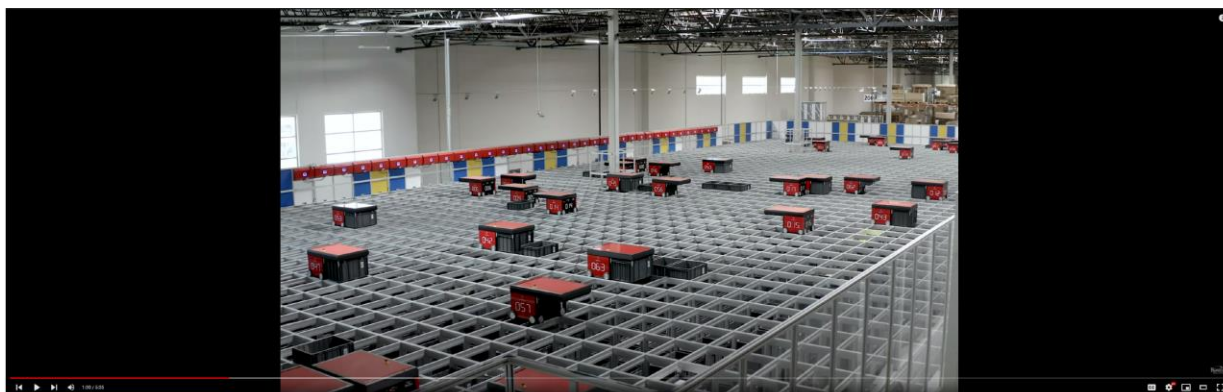
technology is implemented today in asset tracking systems deployed throughout the supply chain (e.g., warehousing, logistics, and retail spaces).

14. The '254 Patent generally discloses a method for monitoring consumers to transmit an unsolicited advertisement. The technology described in the '254 Patent was developed by Dennis Sunga Fernandez and Irene Hu Fernandez. By way of example, this technology is implemented today in methods used by Best Buy's digital marketing program and retail spaces.

15. Upon information and belief, Best Buy uses Warehouse Management Systems ("WMS") and the Exacta Warehouse Execution Systems ("WES") in its Regional Distribution Centers and Metro E-Commerce Centers around the United States.



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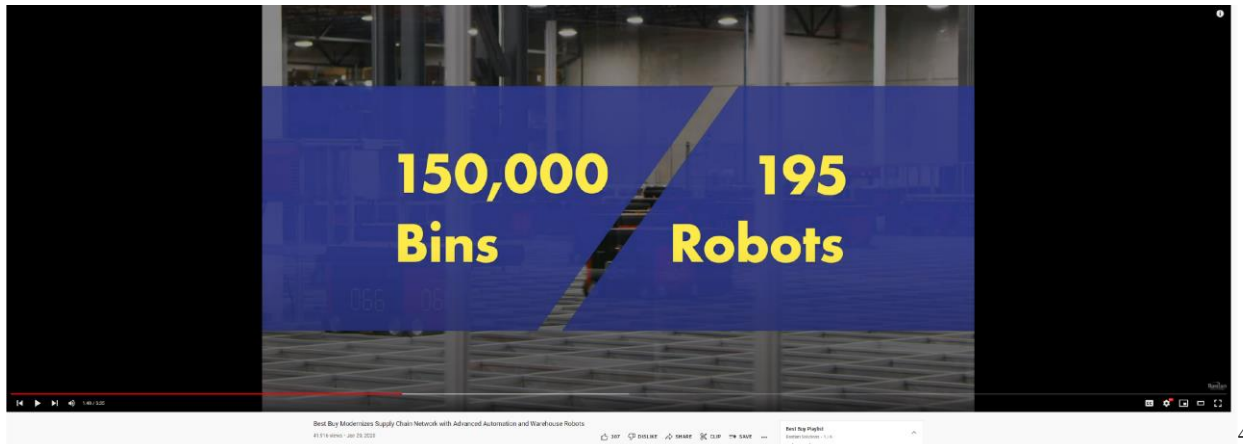
¹<https://www.youtube.com/watch?v=TAAFAv9zpc>

² *Id.*

16. Upon information and belief, the above systems use a web based system, which uses robotics. These robotic systems employ a method used to locate specific bins and deliver them to workstations, as depicted below:



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³ <https://www.youtube.com/watch?v=ecftHVqxRpg>.

⁴ <https://www.youtube.com/watch?v=TAAFAv9zpoc>.

17. Upon information and belief, Best Buy uses visual recognition, including, but not limited to, image recognition and/or light recognition within its supply chain and storage facilities, including, but not limited to, the use of Exacta WES, which include automated order picking systems, such as robotic order picking⁸ and other visual recognition solutions.

18. Best Buy has infringed and is continuing to infringe the '283 Patent by making, offering to sell, selling, importing, and/or using inventory tracking and loss prevention system in its stores and throughout its supply chain, such as the Exacta WES supply chain solution and inventory management system.

19. Best Buy infringed the '349 the Patent by making, offering to sell, selling, importing, and/or using asset tracking systems methods deployed throughout the supply chain (*e.g.*, warehousing, logistics, and retail spaces).

20. Best Buy infringed the '254 the Patent by making, offering to sell, selling, importing, and/or using methods used by Best Buy's digital marketing program and retail spaces.

COUNT I
(Infringement of the '254 Patent)

21. Paragraphs 1 through 20 are incorporated by reference as if fully set forth herein.

22. NorthStar has not licensed or otherwise authorized Defendant to make, use, offer for sale, sell, or import any products that embody the inventions of the '254 Patent.

23. Defendant directly infringed the '254 Patent, either literally or under the doctrine of equivalents, without authority and in violation of 35 U.S.C. § 271, by making, using, offering

⁸<https://www.bastiansolutions.com/solutions/technology/picking/#:~:text=Automated%20order%20picking%20systems%20%E2%80%93%20voice,to%20person%20picking%20and%20more.>

to sell, selling, and/or importing into the United States products that satisfy each and every limitation of one or more claims of the '254 Patent. Such products include asset tracking systems.

24. For example, Defendant directly infringed at least claim 1 of the '254 Patent by making, offering to sell, selling, importing, and/or using in the United States inventory tracking and loss prevention system in its stores and throughout its supply chain.

25. The process implemented by Defendant includes: monitoring a consumer via a wireless network coupled to a detector network, wherein a detector in the detector network detects an attribute associated with the consumer. The process implemented by Defendant extrapolates a predicted future location of the consumer based on last stored information associated with the consumer in order to obtain an observation range of the detector network into which the consumer is expected to be moving in the future and transmits, in response to the attribute and the extrapolating the predicted future location, an unsolicited advertisement to the consumer, wherein the unsolicited advertisement is a future advertisement associated with a vendor associated with the observation range into which the consumer is expected to be moving in the future. An example of such directed advertisement is depicted below:

Overall personalization score: 68

5. Best Buy

You can't have a successful digital marketing program without personalization, and yet most sales still take place in brick-and-mortar stores. Best Buy is bridging the on and offline personalization with its app, which enters "local store" mode when the customer walks into a store and sends relevant personalized push notifications while also tailoring the experience to that location's inventory. It also includes an "On My Way" feature that lets sales associates know when someone is heading in to pick up an online order. With AI-driven technology, Best Buy has honed its personalized emails by timing, frequency and products to make sure customers never miss out on the products they'd like best. It also has a generous My Best Buy program that rewards shoppers on all its platforms, while its well-known Geek Squad service offers tech and installation support, providing the company with a competitive advantage over online-only retailers. For customers who don't even know where to begin, the retailer offers free home visits to help customers figure out exactly what they need, whether that's smart-home tech, appliances or home theaters and a service launched last year offers unlimited technical support in-person, over the phone or online for an annual fee. That's called meeting your customers where they are, both physically and mentally.

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26. Defendant directly infringed one or more claims of the '254, either literally or under the doctrine of equivalents, by making, using, offering to sell, selling and/or importing into the United States products or systems that include infringing technology.

27. NorthStar has suffered damages as a result of Defendant's direct infringement of the '254 Patent in an amount to be proved at trial.

COUNT II
(Infringement of the '283 Patent)

28. Paragraphs 1 through 20 are incorporated by reference as if fully set forth herein.

29. NorthStar has not licensed or otherwise authorized Defendant to make, use, offer for sale, sell, or import any products that embody the inventions of the '283 Patent.

⁹ <https://risnews.com/top-10-retailers-do-personalization-best>.

30. Defendant directly infringed and continues to infringe the '283 Patent, either literally or under the doctrine of equivalents, without authority and in violation of 35 U.S.C. § 271, by making, using, offering to sell, selling, and/or importing into the United States products that satisfy each and every limitation of one or more claims of the '283 Patent. Such products include asset tracking systems.

31. For example, Defendant directly infringed at least claim 20 of the '283 Patent by making, offering to sell, selling, importing, and/or using in the United States inventory tracking and loss prevention system in its stores and throughout its supply chain, such as the Exacta WES supply chain solution and inventory management system.

32. For example, upon information and belief, Best Buy's inventory tracking and loss prevention system includes a method that receives, via a network, first visual data from a first mobile unit; receiving, via the network, second visual data from a second mobile unit and visually recognizes a first object of observation associated with the first visual data. The Defendant's system visually recognizes a second object of observation associated with the second visual data and verifies that the first visual data was received from the first object of observation in response to the visually recognizing the first object of observation. Defendant's system further verifies that the second visual data was received from the second object of observation in response to the visually recognizing the second object of observation and transmits, via the network, the first visual data to the second mobile unit and transmits, via the network, the second visual data to the first mobile unit, to facilitate visual communication between the first mobile unit and the second mobile unit.

33. For example, upon information and belief, Best Buy's inventory tracking and loss prevention system uses methods which employ automated order picking and robotic order picking

which uses visual recognition and image recognition technology and robotic systems with vision functionality within its supply chain and storage facilities, as exemplified below:

How It Works

The vision platform will direct mechanical controls to manipulate the robotic arm and EoAT (end of arm tool) to successfully pick the item without encroaching on other objects or the tote walls. The robot then retracts from the bin and places the object in a secondary shipping carton and is ready for another pick and place sequence. As the robot picks different object shapes, dimensions, and surfaces, it continues to learn and improve how to identify and pick objects in different positions, further improving accuracy and efficiency. In the rare case that an item can't be picked in the first few attempts, the AI vision system determines whether object's orientation should be changed, and it will jostle the item to expose a different surface and try to pick again.

Fully Automated Order Picking & Fulfillment

A fully automated order fulfillment solution consists of a goods to person system, industrial robot, AI vision system, takeaway conveyor with automated labelling and checkweighing, and warehouse software to control the entire process, like a WES. When an order is received, the warehouse software communicates with the GTP (goods to person) system to deliver the bin containing the ordered item to the robot operated GTP workstation. The robot's AI and vision platform identifies the SKU(s) needed for the order, then selects the "most pick-able" product in the pile and releases the robot to pick it and place into the designated container. When the order is complete, the container will be transported via the takeaway conveyor for further outbound processing like checkweighing with in-line scales to ensure order accuracy and automated labeling to attach a shipping label.

Artificial Intelligence and Vision System

Equipped with innovative AI and machine vision, Bastian Solutions' piece picking robots don't require training or programming to handle your current products or new product integration. As new products are introduced, the AI software builds a library of objects it has seen and handled over time, along with optimal picking information. This is shared across the entire fleet allowing them to continuously learn from each other so they can function as a single, highly efficient order fulfillment operation. The AI and vision platform directly interfaces with Bastian Solutions' Exacta® software, communicating product data and sharing order fulfillment information. This integration allows the cells to run with even higher autonomy.

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34. Defendant directly infringed one or more claims of the '283, either literally or under the doctrine of equivalents, by making, using, offering to sell, selling and/or importing into the United States products or systems that include infringing technology.

35. NorthStar has suffered damages as a result of Defendant's infringement of the '283 Patent in an amount to be proved at trial.

COUNT III **(Infringement of the '349 Patent)**

36. Paragraphs 1 through 20 are incorporated by reference as if fully set forth herein.

37. NorthStar has not licensed or otherwise authorized Defendant to make, use, offer for sale, sell, or import any products that embody the inventions of the '349 Patent.

38. Defendant infringed the '349 Patent, either literally or under the doctrine of equivalents, without authority and in violation of 35 U.S.C. § 271, by making, using, offering to

¹⁰ <https://www.bastiansolutions.com/solutions/technology/industrial-robotics/goods-to-robot/>.

sell, selling, and/or importing into the United States products that satisfy each and every limitation of one or more claims of the '349 Patent. Such products include asset tracking systems.

39. For example, Defendant directly infringed at least claim 1 of the '349 Patent by making, offering to sell, selling, importing, and/or using in the United States inventory tracking and loss prevention system in its stores and throughout its supply chain, such as the Exacta WES supply chain solution and inventory management system.

40. For example, upon information and belief, Best Buy's inventory tracking and loss prevention system includes a method of monitoring an inventory of assets, each having a communication module that provides a facility having a first wireless communication system operable to communicate with each module, generates a first communication between the first system and each module, and based on the communication, establishes an inventory of assets in the facility. The Defendant's system further, based on the inventory, identifies a missing asset absent from the facility and generates a second communication via a second communication System operating outside of the facility.

41. Defendant directly infringed one or more claims of the '349, either literally or under the doctrine of equivalents, by making, using, offering to sell, selling and/or importing into the United States products or systems that include infringing technology.

42. NorthStar has suffered damages as a result of Defendant's infringement of the '349 Patent in an amount to be proved at trial.

DEMAND FOR JURY TRIAL

Plaintiff hereby demands a jury for all issues so triable.

PRAYER FOR RELIEF

WHEREFORE, NorthStar prays for relief against Defendant as follows:

- a. Entry of judgment declaring that Defendant has infringed one or more claims of each of the Patents-in-Suit;
- b. An order pursuant to 35 U.S.C. § 283 permanently enjoining Defendant, its officers, agents, servants, employees, attorneys, and those persons in active concert or participation with it, from further acts of infringement of one or more of the Patents-in-Suit;
- c. An order awarding damages sufficient to compensate NorthStar for Defendant's infringement of the Patents-in-Suit, but in no event less than a reasonable royalty, together with interest and costs;
- d. Entry of judgment declaring that this case is exceptional and awarding NorthStar its costs and reasonable attorney fees under 35 U.S.C. § 285; and,
- e. Such other and further relief as the Court deems just and proper.

Dated: May 10, 2022

Respectfully submitted,

/s/ Vincent J. Rubino, III

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