

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

NORTHSTAR SYSTEMS LLC,	)	Case No.
	)	
Plaintiff,	)	<b><u>JURY TRIAL DEMANDED</u></b>
	)	
v.	)	
	)	
LENOVO GROUP LIMITED,	)	
	)	
Defendant.	)	
	)	
	)	

**COMPLAINT FOR PATENT INFRINGEMENT**

Plaintiff NorthStar Systems LLC (“NorthStar” or “Plaintiff”) for its Complaint against Defendant Lenovo Group Limited (“Lenovo” or “Defendant”) alleges as follows:

**THE PARTIES**

1. NorthStar is a limited liability company organized and existing under the laws of the State of Texas, with its principal place of business located at 104 E. Houston Street, Marshall, Texas 75670.

2. Upon information and belief, Defendant Lenovo is a corporation organized and existing under the laws of China, with its principal place of business located at No. 6 Chuang Ye Road, Haidian District, Shangdi Information Industry Base, Beijing, 100085, China. Upon information and belief, Lenovo does business in Texas and in the Eastern District of Texas, directly or through its subsidiaries.

**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 Lenovo. Lenovo regularly conducts business and has committed acts of patent infringement and/or has induced acts of patent infringement by others in this Judicial District and/or has contributed to patent infringement by others in this Judicial District, the State of Texas, and elsewhere in the United States.

5. Venue is proper in this Judicial District pursuant to 28 U.S.C. § 1391 because, among other things, Lenovo is not a resident in the United States, and thus may be sued in any judicial district pursuant to 28 U.S.C. § 1391(c)(3).

6. Lenovo 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 October 19, 2010, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 7,817,085 (the "'085 Patent") entitled "Position Privacy in an Electronic Device." A true and correct copy of the '085 Patent is available at <http://pdfpiw.uspto.gov/.piw?docid=7817085>.

8. On February 5, 2008, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 7,327,312 (the "'312 Patent") entitled "Position Privacy in an

Electronic Device.” A true and correct copy of the ’312 Patent is available at: <http://pdfpiw.uspto.gov/.piw?docid=7327312>.

9. On May 6, 2014, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 8,717,231 (the “’231 Patent”) entitled “Position Privacy in an Electronic Device.” A true and correct copy of the ’231 Patent is available at <http://pdfpiw.uspto.gov/.piw?docid=8717231>.

10. On August 12, 2014, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 8,805,416 (the “’416 Patent”) entitled “Method and System for Mobile Device Selectively Reporting of GPS Position Information to Others.” A true and correct copy of the ’416 Patent is available at <http://pdfpiw.uspto.gov/.piw?docid=8805416>.

11. On February 7, 2006, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 6,995,708 (the “’708 Patent”) entitled “Local Positioning System.” A true and correct copy of the ’708 Patent is available at <http://pdfpiw.uspto.gov/.piw?docid=6995708>.

12. On September 6, 2011, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 8,014,943 (the “’943 Patent”) entitled “Method and System for Displaying Social Networking Navigation Information.” A true and correct copy of the ’943 Patent is available at <http://pdfpiw.uspto.gov/.piw?docid=8014943>.

13. On October 4, 2011, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 8,032,297 (the “’297 Patent”) entitled “Method and System for Displaying Navigation Information on an Electronic Map.” A true and correct copy of the ’297 Patent is available at <http://pdfpiw.uspto.gov/.piw?docid=8032297>.

14. 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>.

15. NorthStar is the sole and exclusive owner of all right, title, and interest in the ’085 Patent, the ’312 Patent, the ’231 Patent, the ’416 Patent, the ’708 Patent, the ’943 Patent, ’297 Patent and the ’283 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, present, and future infringement of the Patents-in-Suit and to seek injunctive relief as appropriate under the law.

### **FACTUAL ALLEGATIONS**

16. The ’085 Patent generally discloses a privacy enhancement device and methods for electronic devices such as a handheld phone. The technology described in the ’085 Patent was developed by Scott C. Harris. By way of example, this technology is implemented today in handheld devices that perform a method that stores navigation information on a user interface through the use of labels.

17. The ’312 Patent generally discloses methods for a remote server to process and send location information regarding a local element. The technology described in the ’312 Patent was developed by Scott C. Harris. By way of example, this technology is implemented today in handheld devices that perform a method that uses remote servers to process location information regarding the handheld device.

18. The ’231 Patent generally discloses methods which prevents current location information from being transmitted in response to enabling privacy mode. The technology

described in the '231 Patent was developed by Scott C. Harris. By way of example, this technology is implemented today in handheld devices that perform a method to prevent the transmission of current location information in privacy mode.

19. The '416 Patent generally discloses a method for a mobile device to communicate with a remote source over a wireless network in the presence of GPS signal interference. The technology described in the '416 Patent was developed by Scott C. Harris. By way of example, this technology is implemented today in devices that communicate wirelessly with a remote source to obtain location information.

20. The '708 Patent generally discloses a method for determining the position of a device by determining using earth-based positioning instead of satellite-based positioning when available. The technology described in the '708 Patent was developed by Dominik J. Schmidt of Gallitzin Allegheny LLC. By way of example, this technology is implemented today in handheld devices that determine whether earth-based media are available and using the earth-based media for location information instead of a satellite-based media.

21. The '943 and '297 Patents generally disclose methods for the displaying and generating object vector indicators referenced on an electronic map. The technology described in the '943 and '297 Patents was developed by Gabriel Jakobson. By way of example, this technology is implemented today in handheld devices that generate electronic maps based on received user input which display object vector indicators.

22. 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 Lenovo's manufacturing, supply chain and storage facilities.

23. Lenovo offers mobile broadband as a feature on Lenovo laptops and tablets:

**What is mobile broadband technology?**

Mobile broadband technology allows for a wireless wide area network (WWAN). In simple terms, it provides wireless high-speed Internet access to portable devices by way of radio towers. With mobile broadband technology, you can connect to the Internet anywhere there is GSM or CDMA-based cellular service available for mobile Internet connectivity. This allows individuals to maintain an Internet connection as they move from place to place, without having to rely upon WiFi hotspots.

24. Upon information and belief, Lenovo’s mobile broadband products include GPS and A-GPS functionality. For example, Lenovo offers mobile broadband in the Lenovo Tab M10 HD, which includes GPS and A-GPS functionality:

<b>Location Services**</b>	
Models	Location
WLAN model	GPS + GLONASS
WWAN model	GPS + GLONASS + A-GPS

25. Lenovo manages a global supply chain that manufactures and delivers more than 100 million Lenovo products to over 180 countries, including the United States. Lenovo’s supply chain incorporates big data analytics, including AI and IoT. Lenovo’s one-stop warehousing solution, known as Lenovo’s “Smart Warehouse Solution”, combines AI and IoT to “transform cameras into smart sensors which is used to track products”.

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<sup>1</sup> <https://www.lenovo.com/us/en/faqs/pc-life-faqs/what-is-mobile-broadband/?orgRef=https%253A%252F%252Fwww.google.com%252F>.

<sup>2</sup> [https://psref.lenovo.com/syspool/Sys/PDF/Lenovo\\_Tablets/Tab\\_M10\\_HD\\_2nd\\_Gen/Tab\\_M10\\_HD\\_2nd\\_Gen\\_Spec.PDF](https://psref.lenovo.com/syspool/Sys/PDF/Lenovo_Tablets/Tab_M10_HD_2nd_Gen/Tab_M10_HD_2nd_Gen_Spec.PDF).

Lenovo StoryHub > Supply Chain Solutions Made Smarter by One of the World's Top Supply Chains

## Supply Chain Solutions Made Smarter by One of the World's Top Supply Chains

26 June 2020

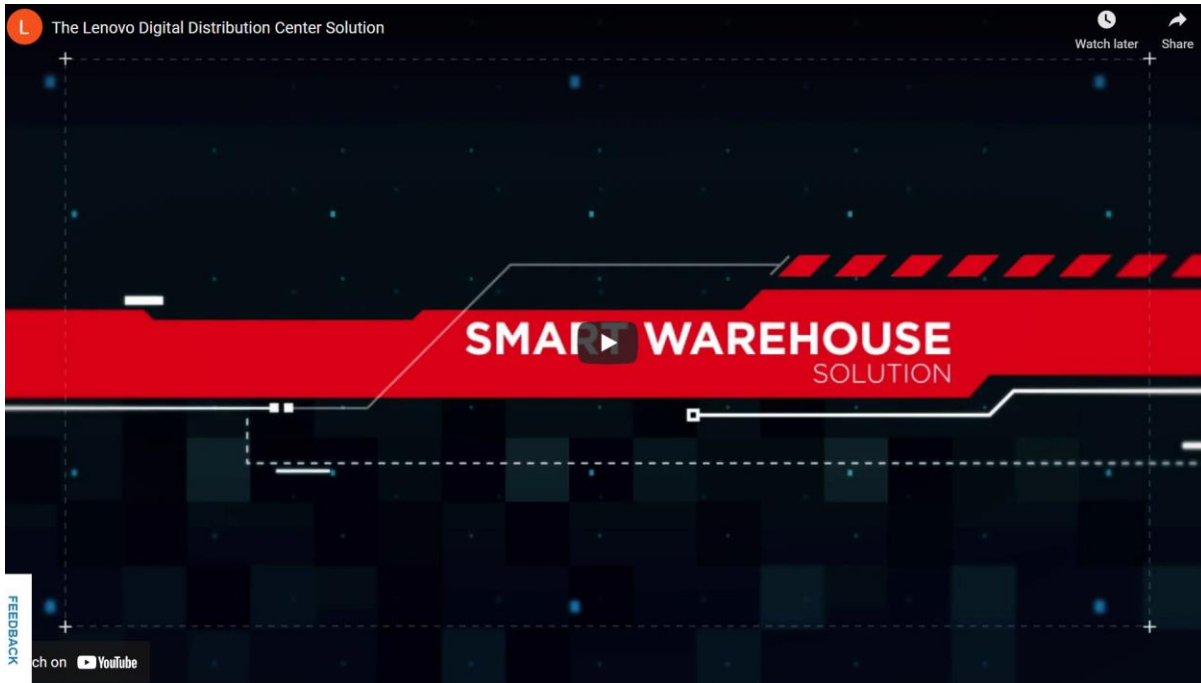
Read in: **English** [Spanish](#)

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- A company's supply chain plays an essential role in delivering strong customer experience. Even one weak link in the chain can result in delays and order errors.
  - Lenovo manages a highly complex global supply chain that manufactures and delivers more than 100 million Lenovo products to over 180 markets.
  - Lenovo's smarter supply chain incorporates big data analytics, AI, AR, IoT, 5G, and blockchain.
  - A smarter supply chain can integrate customer data through the entirety of the system with real-time sharing and feedback.
  - [Lenovo's one-stop warehousing solution](#) combines IoT and AI to transform cameras into smart sensors that can understand their physical environments and help reduce errors.
  - Lenovo can build out the infrastructure, from the cameras to the computers to the software making sense of it all. We can be your one-stop partner and are able to scale and customize the tech with in-house expertise.
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<sup>3</sup> <https://news.lenovo.com/smarter-technology-global-coordination-fuel-worlds-top-supply-chains/>.



26. Lenovo has infringed and/or is continuing to infringe the Patents-in-Suit by making, using, offering to sell, selling, and/or importing mobile phones and tablets what utilize the accused functionality, including, but not limited to, the Moto G 100, Motorola Razr, Motorola Edge, Moto G Stylus, Lenovo Tab P12 Pro, Lenovo Tab P11, and Lenovo Tab L10 LTE, as well as by making, offering to sell, selling, importing, and using asset tracking, visual recognition, and automation systems and methods deployed through its supply chain (*e.g.*, warehousing, logistics, and retail spaces).

**COUNT I**  
**(Infringement of the '085 Patent)**

27. Paragraphs 1 through 26 are incorporated by reference as if fully set forth herein.

28. NorthStar has not licensed or otherwise authorized Lenovo to make, use, offer for sale, sell, or import any products that embody the inventions of the '085 Patent.

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<sup>4</sup> <https://techtoday.lenovo.com/ww/en/solutions/media/video/lenovo-digital-distribution-center-solution>.



29. Lenovo infringed the '085 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 '085 Patent, for example, Lenovo has infringed Claim 6 of the '085 Patent. Such products include at least the Moto G 100, Motorola Razr, Motorola Edge, Moto G Stylus, Lenovo Tab P12 Pro, Lenovo Tab P11, and Lenovo Tab L10 LTE.

30. For example, Lenovo has directly infringed at least claim 6 of the '085 Patent by making, using, offering to sell, selling, and/or importing into the United States products that include laptops, tablets, and phones that practice the method of claim 6 by providing a portable device with a user interface, which provides determines position, stores the position in memory, and provides navigation information, such as the Motorola Edge.

31. For example, the Motorola Edge is a portable device that performs a method of using position sensing parts to detect a current position of the portable device:

• Location Services: GPS AGPS LTEPP SUPL Glonass Galileo

• Sensors: Proximity, Ambient light, Accelerometer, Gyroscope, Magnetometer (compass), Barometer




<sup>5</sup>


32. The Motorola Edge (operating on the Android Operating System) performs the step of determining if a current position storing memory in the portable device has a position stored and if the current position storing memory does not already have a position stored therein, then storing information indicative of the current position as a stored location in the current position storing memory:

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<sup>5</sup> *Id.*


## Pin directions to home or work

1. On your Android phone or tablet, open the Google Maps app . Set your home and work addresses, if you haven't already.
2. Tap Directions .
3. Select your mode of transportation.
4. Tap Home or Work.
5. Tap on Pin  at the bottom of the screen.




You can find your pinned trips on the Go  tab with ETA and traffic information for that trip. [Learn more about your favorite trips.](#)

## Hide your regular route

If your [Location History is turned on](#), directions will sometimes show your usual way home or to work. You can hide your regular route in Google Maps at any time.

1. Tap your profile picture or initial  > Settings > Personal content.
2. To hide the routes, turn off **Regular routes**.

## Pick your favorite icon for home or work

1. On your Android phone or tablet, open the Google Maps app .
2. Tap Saved . Under "Your lists," tap **Labeled**.
3. Next to "Home" or "Work," tap More  > **Change icon**.
4. Tap a new icon for your home or work from the list.
5. Tap **Save**.

6

33. The Motorola Edge performs the step of detecting that position in said current position storing memory has been selected and automatically provide navigation information from a current position to the stored location.

34. Lenovo has indirectly infringed one or more claims of the '085 Patent by knowingly and intentionally inducing others, including Lenovo's customers and end-users, to directly infringe, either literally or under the doctrine of equivalents, by making, using, offering to sell, selling and/or importing into the United States products that include infringing technology, such as Lenovo mobile devices.

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<sup>6</sup> <https://support.google.com/maps/answer/3093979?co=GENIE.Platform%3DAndroid&hl=en>.

35. Lenovo, with knowledge that these products, or the use thereof, infringed the '085 Patent at least as of the date of this Complaint, knowingly and intentionally induced, indirect infringement of the '085 Patent by providing these products to end users for use in an infringing manner.

36. Lenovo induced infringement by others, including end users, with the intent to cause infringing acts by others or, in the alternative, with the belief that there was a high probability that others, including end users, infringe the '085 Patent.

37. NorthStar has suffered damages as a result of Lenovo's indirect infringement of the '085 Patent in an amount to be proved at trial.

**COUNT II**  
**(Infringement of the '312 Patent)**

38. Paragraphs 1 through 26 are incorporated by reference as if fully set forth herein.

39. NorthStar has not licensed or otherwise authorized Lenovo to make, use, offer for sale, sell, or import any products that embody the inventions of the '312 Patent.

40. Lenovo infringed the '312 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 '312 Patent. Such products include at least the Moto G 100, Motorola Razr, Motorola Edge, Moto G Stylus, Lenovo Tab P12 Pro, Lenovo Tab P11, and Lenovo Tab L10 LTE..

41. For example, Lenovo directly infringed at least claim 23 of the '312 Patent by making, using, offering to sell, selling, and/or importing into the United States products that include Lenovo laptops, tablets, and phones, which uses A-GPS.

• Location Services: GPS AGPS LTEPP SUPL Glonass Galileo

• Sensors: Proximity, Ambient light, Accelerometer, Gyroscope, Magnetometer (compass), Barometer

42. For example, upon information and belief, the Motorola Edge performs a method which comprises the step of acquiring information about a local area from a client in said area. The Motorola Edge performs the step of sending the information about the local area over a data channel to a remote server. The Motorola Edge performs the step of using the information from the remote server to determine a position of the local area. The Motorola Edge performs the step of receiving information indicative of the position of the local area, which is returned to the Motorola Edge in the local area.

43. Lenovo has indirectly infringed one or more claims of the '312 Patent by knowingly and intentionally inducing others, including Lenovo's customers and end-users, to directly infringe, either literally or under the doctrine of equivalents, by making, using, offering to sell, selling and/or importing into the United States products that include infringing technology, such as Lenovo mobile devices.

44. Lenovo, with knowledge that these products, or the use thereof, infringed the '312 Patent at least as of the date of this Complaint, knowingly and intentionally induced, indirect infringement of the '312 Patent by providing these products to end users for use in an infringing manner.

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<sup>7</sup> <https://www.lenovo.com/us/en/p/phones/motorola-smartphones/motorola-edge/motorola-edge/panx0000us>.

45. Lenovo induced infringement by others, including end users, with the intent to cause infringing acts by others or, in the alternative, with the belief that there was a high probability that others, including end users, infringe the '312 Patent.

46. NorthStar has suffered damages as a result of Lenovo's indirect infringement of the '312 Patent in an amount to be proved at trial.

**COUNT III**  
**(Infringement of the '231 Patent)**

47. Paragraphs 1 through 26 are incorporated by reference as if fully set forth herein.

48. NorthStar has not licensed or otherwise authorized Lenovo to make, use, offer for sale, sell, or import any products that embody the inventions of the '231 Patent.

49. Lenovo directly infringed the '231 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 '231 Patent. Such products include at least the Moto G 100, Motorola Razr, Motorola Edge, Moto G Stylus, Lenovo Tab P12 Pro, Lenovo Tab P11, and Lenovo Tab L10 LTE, which detect location information and enable privacy mode.

50. For example, Lenovo directly infringed at least claim 20 of the '231 Patent by making, using, offering to sell, selling, and/or importing into the United States products that include laptops, tablets, and phones.






51. For example, the Motorola Edge performs the step of detecting information indicative of a current location of the device. The Motorola Edge performs the step of determining the current location based, at least in part on the detected information and transmits current location information:

• Location Services: GPS AGPS LTEPP SUPL Glonass Galileo

• Sensors: Proximity, Ambient light, Accelerometer, Gyroscope, Magnetometer (compass), Barometer<sup>8</sup>

52. The Motorola Edge (operating on the Android Operating System) performs the step of enabling privacy mode, wherein the current location information is prevented from being transmitted in response to the privacy mode being enabled:

### Turn location on or off for your phone

1. Swipe down from the top of the screen.
2. Touch and hold Location . If you don't find Location  :
  - a. Tap Edit  or Settings .
  - b. Drag Location  into your Quick Settings.

Tip: If these steps don't work for you, [get help from your device manufacturer](#).

53. Lenovo has indirectly infringed one or more claims of the '231 Patent by knowingly and intentionally inducing others, including Lenovo's customers and end-users, to directly infringe, either literally or under the doctrine of equivalents, by making, using, offering to sell, selling and/or importing into the United States products that include infringing technology, such as Lenovo mobile devices.

54. Lenovo, with knowledge that these products, or the use thereof, infringed the '231 Patent at least as of the date of this Complaint, knowingly and intentionally induced, indirect infringement of the '231 Patent by providing these products to end users for use in an infringing manner.

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<sup>8</sup> <https://www.lenovo.com/us/en/p/phones/motorola-smartphones/motorola-edge/motorola-edge/panx0000us>.

<sup>9</sup> <https://support.google.com/accounts/answer/3467281?hl=en>.

55. Lenovo induced infringement by others, including end users, with the intent to cause infringing acts by others or, in the alternative, with the belief that there was a high probability that others, including end users, infringe the '231 Patent.

56. NorthStar has suffered damages as a result of Lenovo's indirect infringement of the '231 Patent in an amount to be proved at trial.

**COUNT IV**  
**(Infringement of the '416 Patent)**

57. Paragraphs 1 through 26 are incorporated by reference as if fully set forth herein.

58. NorthStar has not licensed or otherwise authorized Lenovo to make, use, offer for sale, sell, or import any products that embody the inventions of the '416 Patent.

59. Lenovo has and continues to directly infringe the '416 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 '416 Patent. Such products include, but are not limited to, laptops, tablets, and mobile phones.

60. For example, Lenovo has and continues to directly infringe at least claim 1 of the '416 Patent by making, using, offering to sell, selling, and/or importing into the United States products that include laptops, tablets, and phones that utilize GPS/A-GPS, detect signal interference, and receive navigation information.

61. For example, the Motorola Edge, upon information and belief, utilizes a method for receiving information about current a current location of a mobile communication device, wherein the information about the current location includes global position system (GPS) information:

• Location Services: GPS AGPS LTEPP SUPL Glonass Galileo

<sup>10</sup>

62. The Motorola Edge performs the step of detecting by the mobile communication device, signal interference. The Motorola edge performs the step of generating, by the mobile communication device, an indication of the signal interference, communication, by the mobile communication device, with a remote source over a wireless network, wherein said communication comprises sending both the indication of the signal interference and the GPS information from the mobile communication device to the remote source. The Motorola Edge performs the step of receiving, by the mobile communication device navigation information from the remote source in response to sending both the indication of the signal interference and the GPS information, wherein the navigation information comprises data for plotting a course on a map including the current location of the mobile communication device. The Motorola Edge performs the step of displaying by the mobile communication device, the map based on the navigation information.

63. Lenovo, with knowledge that these products, or the use thereof, infringes the '416 Patent at least as of the date of this Complaint, knowingly and intentionally induced, and continues to knowingly and intentionally induce, direct infringement of the '416 Patent by providing these products to end users for use in an infringing manner.

64. Lenovo induced infringement by others, including end users, with the intent to cause infringing acts by others or, in the alternative, with the belief that there was a high probability that others, including end users, infringe the '416 Patent, but while remaining willfully blind to the infringement.

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<sup>10</sup> <https://www.lenovo.com/us/en/p/phones/motorola-smartphones/motorola-edge/motorola-edge/panx0000us>.



65. NorthStar has suffered damages as a result of Lenovo's direct and indirect infringement of the '416 Patent in an amount to be proved at trial.

66. NorthStar has suffered, and will continue to suffer, irreparable harm as a result of Lenovo's infringement of the '416 Patent, for which there is no adequate remedy at law, unless Lenovo's infringement is enjoined by this Court.

**COUNT V**  
**(Infringement of the '708 Patent)**

67. Paragraphs 1 through 26 are incorporated by reference as if fully set forth herein.

68. NorthStar has not licensed or otherwise authorized Lenovo to make, use, offer for sale, sell, or import any products that embody the inventions of the '708 Patent.

69. Lenovo has and continues to directly infringe the '708 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 '708 Patent. Such products include, but are not limited to, laptops, tablets, and mobile phones.

70. For example, Lenovo has and continues to directly infringe at least claim 1 of the '708 Patent by making, using, offering to sell, selling, and/or importing into the United States products that include laptops, tablets, and phones that utilize GPS/A-GPS.

71. For example, the Motorola Edge, performs a method to determine position of a user, comprising sniffing for one or more earth-based media with a mobile device. Upon information and belief, if the one or more earth-based media is present, the Motorola Edge performs the step of using an earth-based positioning system receiving of the mobile device selected from one of a short-range wireless receiver of the mobile device and a cellular receiver of the mobile device to determine the position, otherwise using a satellite-based positioning system

receiver of the mobile device to determine the position only if the one or more earth-based media are not present, using code of the mobile device to fix the mobile device to favor use of the earth based positioning system receiver over the satellite-based positioning system receiver.

72. For example, the Motorola Edge, uses GPS with Assisted GPS:

• Location Services: GPS AGPS LTEPP SUPL Glonass Galileo<sup>11</sup>

73. Lenovo, with knowledge that these products, or the use thereof, infringes the '708 Patent at least as of the date of this Complaint, knowingly and intentionally induced, and continues to knowingly and intentionally induce, direct infringement of the '708 Patent by providing these products to end users for use in an infringing manner.

74. Lenovo induced infringement by others, including end users, with the intent to cause infringing acts by others or, in the alternative, with the belief that there was a high probability that others, including end users, infringe the '708 Patent, but while remaining willfully blind to the infringement.

75. NorthStar has suffered damages as a result of Lenovo's direct and indirect infringement of the '708 Patent in an amount to be proved at trial.

76. NorthStar has suffered, and will continue to suffer, irreparable harm as a result of Lenovo's infringement of the '708 Patent, for which there is no adequate remedy at law, unless Lenovo's infringement is enjoined by this Court.

**COUNT VI**  
**(Infringement of the '943 Patent)**

77. Paragraphs 1 through 26 are incorporated by reference as if fully set forth herein.

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<sup>11</sup> <https://www.lenovo.com/us/en/p/phones/motorola-smartphones/motorola-edge/motorola-edge/panx0000us>.

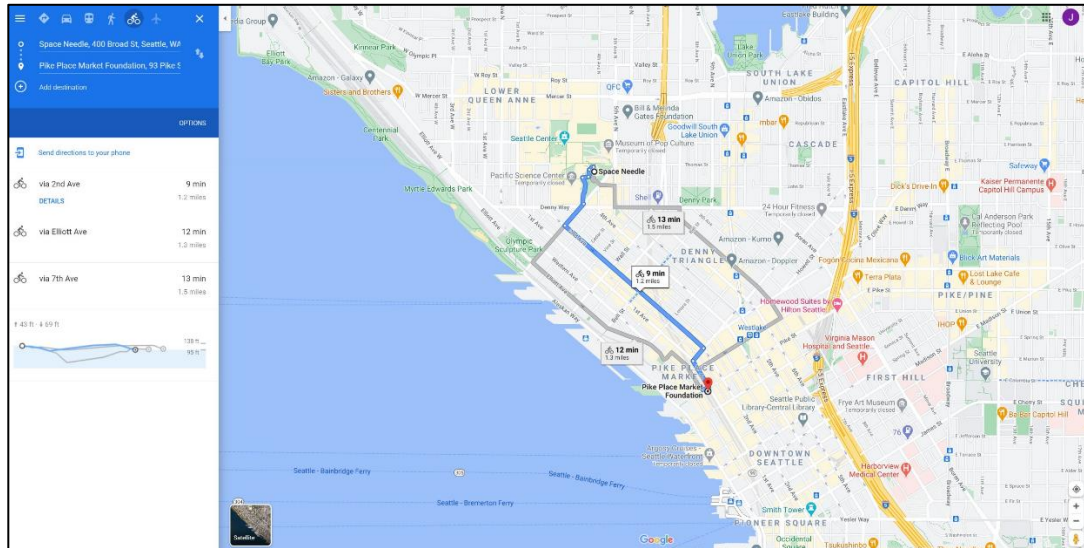
78. NorthStar has not licensed or otherwise authorized Lenovo to make, use, offer for sale, sell, or import any products that embody the inventions of the '943 Patent.

79. Lenovo has and continues to directly infringe the '943 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 '943 Patent. Such products include at least the Moto G 100, Motorola Razr, Motorola Edge, Moto G Stylus, Lenovo Tab P12 Pro, Lenovo Tab P11, and Lenovo Tab L10 LTE.

80. For example, Lenovo has and continues to directly infringe at least claim 1 of the '943 Patent by making, using, offering to sell, selling, and/or importing into the United States products that include laptops, tablets, and phones that display object vector indicators referencing social-network map-objects on an electronic map.

81. For example, the Motorola Edge (operating on the Android Operating System), performs a method for displaying object vector indicators referencing social-network map-objects on an electronic map, comprising: providing an electronic device having a map-display application that is coupled to a mapping service, a social-network and a display for displaying a selected area of the electronic map; authenticating to the social network; obtaining from the social network the map-object; determining that coordinates of the map-object are not within the selected area of the electronic map; computing distance and travel-related information from a location within the selected area of the electronic map to the map-object; computing a placement position of an object vector indicators referencing the map-object on the map-display application; creating the object vector indicators containing the distance and travel-related information; displaying the object vector indicators on the display at the computed placement position; receiving user input selecting

the object vector indicators; displaying a secondary area of the electronic map, wherein the secondary area is a region of the electronic map centered approximately around the map-object; and displaying the map-object approximately at the center of the secondary area.



12

#### Scroll (pan) gestures

A user can scroll (pan) around the map by dragging the map with their finger. You can disable scrolling by calling `UiSettings.setScrollGesturesEnabled(boolean)`.

13

82. Lenovo, with knowledge that these products, or the use thereof, infringes the '943 Patent at least as of the date of this Complaint, knowingly and intentionally induced, and continues to knowingly and intentionally induce, direct infringement of the '943 Patent by providing these products to end users for use in an infringing manner.

83. Lenovo induced infringement by others, including end users, with the intent to cause infringing acts by others or, in the alternative, with the belief that there was a high probability

<sup>12</sup> <https://developers.google.com/maps/documentation/urls/get-started>.

<sup>13</sup> [https://developers.google.com/maps/documentation/android-sdk/controls#:~:text=A%20user%20can%20scroll%20\(pan,disable%20scrolling%20by%20calling%20UiSettings](https://developers.google.com/maps/documentation/android-sdk/controls#:~:text=A%20user%20can%20scroll%20(pan,disable%20scrolling%20by%20calling%20UiSettings).

that others, including end users, infringe the '943 Patent, but while remaining willfully blind to the infringement.

84. NorthStar has suffered damages as a result of Lenovo's direct and indirect infringement of the '943 Patent in an amount to be proved at trial.

85. NorthStar has suffered, and will continue to suffer, irreparable harm as a result of Lenovo's infringement of the '943 Patent, for which there is no adequate remedy at law, unless Lenovo's infringement is enjoined by this Court.

**COUNT VII**  
**(Infringement of the '297 Patent)**

86. Paragraphs 1 through 26 are incorporated by reference as if fully set forth herein.

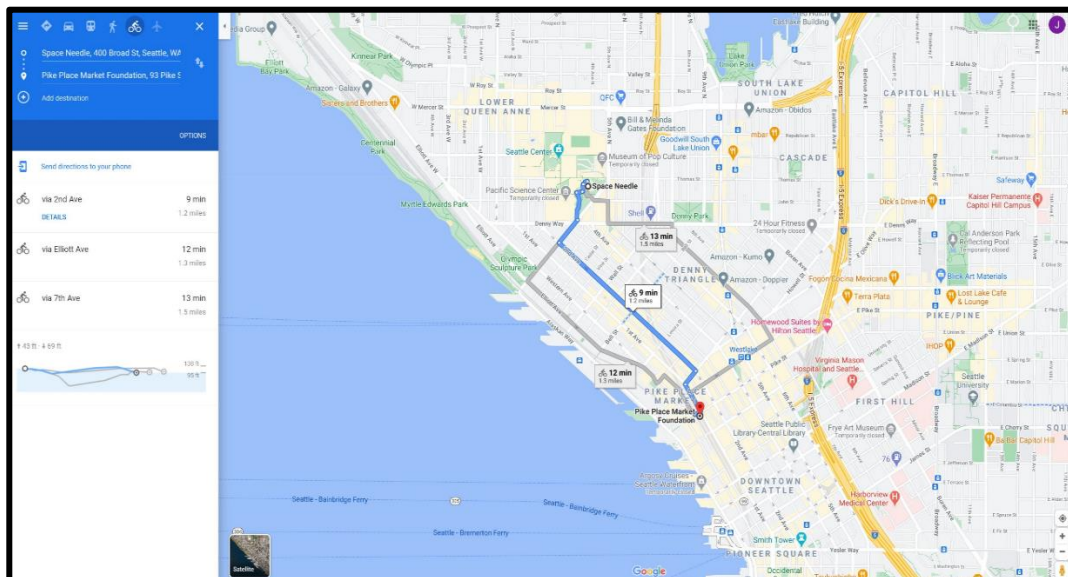
87. NorthStar has not licensed or otherwise authorized Lenovo to make, use, offer for sale, sell, or import any products that embody the inventions of the '297 Patent.

88. Lenovo has and continues to directly infringe the '297 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 '297 Patent. Such products include, but are not limited to, laptops, tablets, and phones.

89. For example, Lenovo has and continues to directly infringe at least claim 1 of the '297 Patent by making, using, offering to sell, selling, and/or importing into the United States products that include laptops, tablets, and phones that display object vector indicators referencing map-objects on an electronic map.

90. For example, the Motorola Edge performs a method for displaying object vector indicators referencing map-objects on an electronic map, comprising: providing an electronic device having a map-display application that is coupled to a mapping service and a display for

displaying a selected area of the electronic map. The Motorola Edge performs the step of determining that coordinates of the map-objects are not within the selected area of the electronic map. The Motorola edge performs the step of computing distance and travel-related information from a location within the selected area of the electronic map to the map-objects. The Motorola edge performs the step of computing a placement position of an object vector indicators referencing the map-objects on the map-display application. The Motorola edge performs the step of creating the object vector indicators containing the distance and travel-related information. The Motorola edge performs the step of displaying the object vector indicators on the display at the computed placement position. The Motorola edge performs the step of receiving user input selecting the object vector indicators. The Motorola edge performs the step of displaying a secondary area of the electronic map, wherein the secondary area is a region of the electronic map centered approximately around the map-objects; and displaying the map-objects approximately at the center of the secondary area.



14

<sup>14</sup> <https://developers.google.com/maps/documentation/urls/get-started>.

91. Lenovo, with knowledge that these products, or the use thereof, infringes the '297 Patent at least as of the date of this Complaint, knowingly and intentionally induced, and continues to knowingly and intentionally induce, direct infringement of the '297 Patent by providing these products to end users for use in an infringing manner.

92. Lenovo induced infringement by others, including end users, with the intent to cause infringing acts by others or, in the alternative, with the belief that there was a high probability that others, including end users, infringe the '297 Patent, but while remaining willfully blind to the infringement.

93. NorthStar has suffered damages as a result of Lenovo's direct and indirect infringement of the '297 Patent in an amount to be proved at trial.

94. NorthStar has suffered, and will continue to suffer, irreparable harm as a result of Lenovo's infringement of the '297 Patent, for which there is no adequate remedy at law, unless Lenovo's infringement is enjoined by this Court.

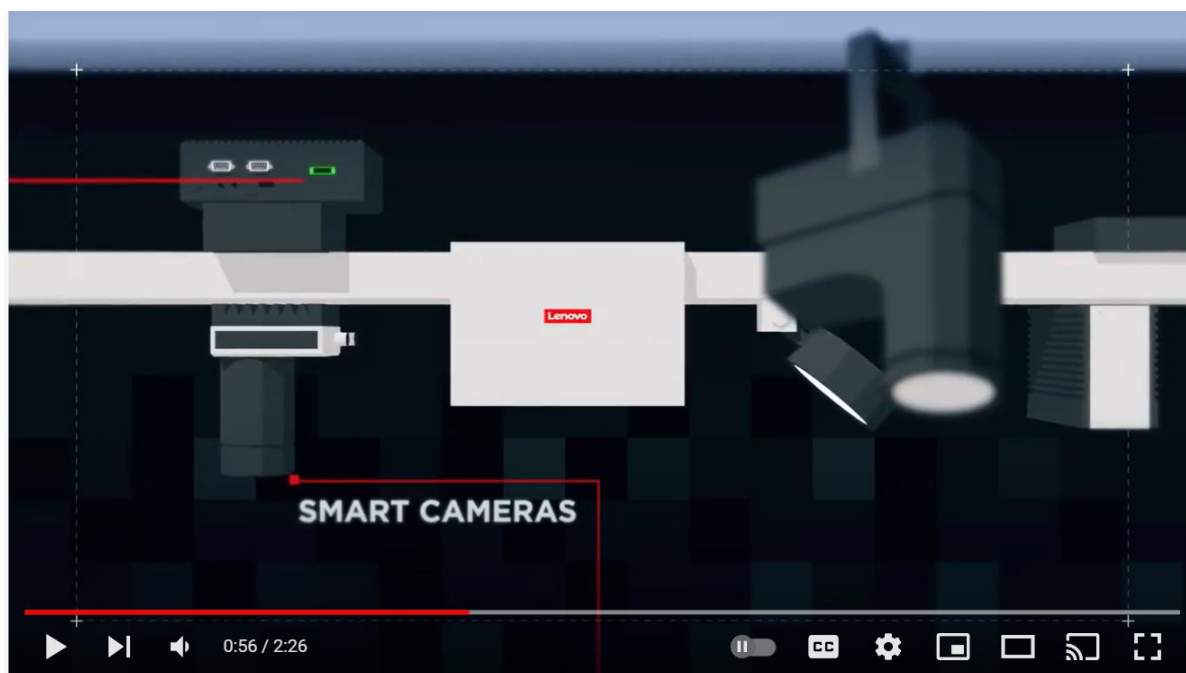
**COUNT VIII**  
**(Infringement of the '283 Patent)**

95. Paragraphs 1 through 26 are incorporated by reference as if fully set forth herein.

96. 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.

97. Defendant has and continues to directly 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 inventory tracking and loss prevention systems, and automated systems Lenovo's manufacturing, supply chain and storage facilities. For example, Defendant directly infringes at least claim 20 of the '283

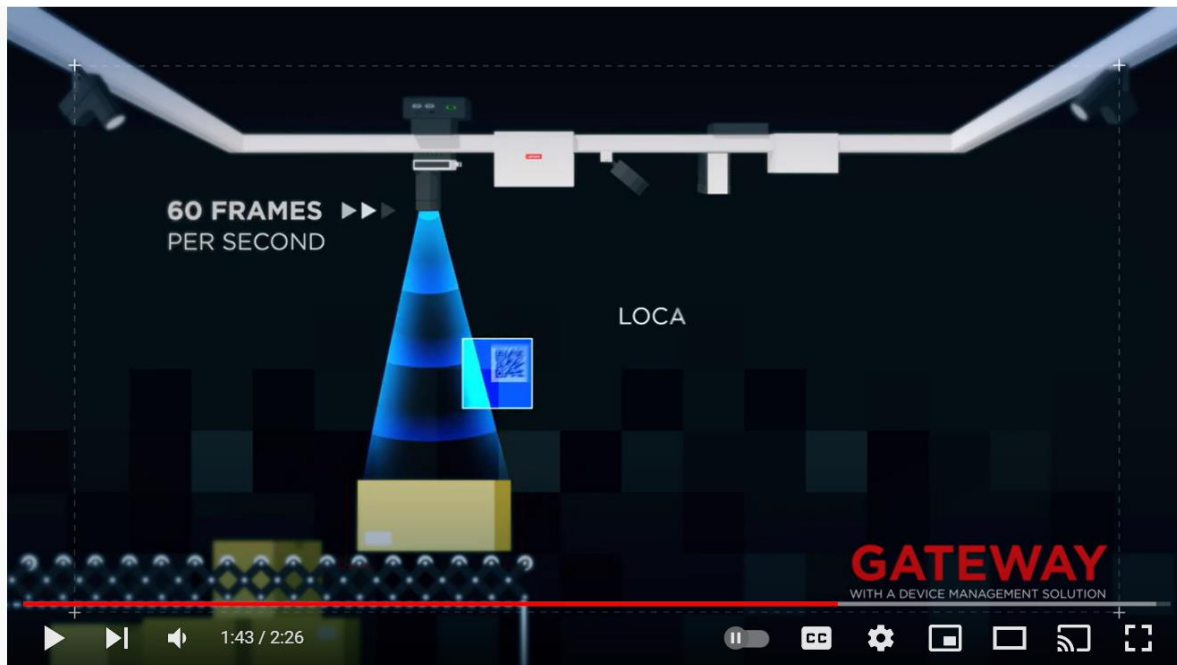
Patent by making, offering to sell, selling, importing, and/or using in the United States systems and methods which use visual recognition and image recognition technology and robotic systems with vision functionality within its manufacturing, supply chain and storage facilities, such as Lenovo's Smart Warehouse Solution. Upon information and belief, Lenovo operates automated manufacturing, warehousing, and shipping facilities across the United States which use Lenovo's Smart Warehouse Solution.



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15

98. For example, Lenovo's Smart Warehouse Solution (deployed in manufacturing, supply chain and storage facilities) performs a method comprising the step of receiving, 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 Lenovo Smart Warehouse Solution performs step of visually recognizing a second object of observation associated with the second visual data and verifying that the first visual data was received from the first object of observation in response to the visually recognizing the first object of observation. The Lenovo Smart Warehouse Solution further performs the step of verifying 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 transmitting, via the

<sup>15</sup> <https://www.youtube.com/watch?v=NHapwhotRsI> at 0:56; 1:43.

network, the first visual data to the second mobile unit and transmitting, 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.

99. Defendant has and continues to indirectly infringe one or more claims of the '283 Patent by knowingly and intentionally inducing others, including Lenovo's customers and end-users, to directly infringe, either literally or under the doctrine of equivalents, by making, using, offering to sell, selling and/or importing into the United States products that include infringing technology, such as automated manufacturing, warehousing, and shipping facilities across the United States which use Lenovo's Smart Warehouse Solution.

100. Defendant, with knowledge<sup>16</sup> that these products, or the use thereof, infringe the '283 Patent at least as of the date of this Complaint, knowingly and intentionally induced, and continues to knowingly and intentionally induce, direct infringement of the '283 Patent by providing these products to end users for use in an infringing manner.

101. Defendant has and continues to infringe and induce infringement by others, including end users, with the intent to cause infringing acts by others or, in the alternative, with the belief that there was a high probability that others, including end users, infringe the '283 Patent, but while remaining willfully blind to the infringement.

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<sup>16</sup> Lenovo's subsidiary, Motorola, Inc., cited to the '283 Patent family in its U.S. Patent No. 5,705,980, which was published on January 6, 1998. Motorola, Inc. further cited to the '283 Patent family in its U.S. Patent Nos. 6,039,258, 6,212,550, 7,010,682, 7,127,611, 7,132,005, 6,839,710, 7,137,001, and 7,137,142. Lenovo's subsidiary, Motorola Mobility LLC, further cited to the '283 Patent family in its U.S. Patent Nos. 8,882,795, 8,489,576, and 8,314,838.

102. NorthStar has suffered, and will continue to suffer, irreparable harm as a result of Defendant's infringement of the '283 Patent, for which there is no adequate remedy at law, unless Defendant's infringement is enjoined by this Court.

**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 directly and/or indirectly infringed one or more claims 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 them, 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: July 18, 2022

Respectfully submitted,

/s/ Vincent J. Rubino, III

Alfred R. Fabricant

NY Bar No. 2219392

Email: ffabricant@fabricantllp.com

Peter Lambrianakos

NY Bar No. 2894392

Email: plambrianakos@fabricantllp.com

Vincent J. Rubino, III

NY Bar No. 4557435  
Email: vrubino@fabricantllp.com  
**FABRICANT LLP**  
411 Theodore Fremd Road, Suite 206 South  
Rye, NY 10580  
Telephone: (212) 257-5797  
Facsimile: (212) 257-5796

John Andrew Rubino  
NY Bar No. 5020797  
Email: jarubino@rubinoip.com  
Michael Mondelli III  
NY Bar No. 5805114  
Email: mmondelli@rubinoip.com  
**RUBINO IP**  
51 J.F.K. Parkway  
Short Hills, NJ, 07078  
Telephone: (201) 341-9445  
Facsimile: (973) 535-0921

Justin Kurt Truelove  
Texas Bar No. 24013653  
Email: kurt@truelovelawfirm.com  
**TRUELOVE LAW FIRM, PLLC**  
100 West Houston  
Marshall, Texas 75670  
Telephone: (903) 938-8321  
Facsimile: (903) 215-8510

**ATTORNEYS FOR PLAINTIFF,  
NORTHSTAR SYSTEMS LLC**