



existing under the laws of the State of New Jersey, having a principal place of business at 2425 North Central Expressway, Suite 800, Richardson, Texas 75080. ZTE (USA), Inc. may be served through its agent Incorp Services, Inc., 815 Brazos, Suite 500, Richardson, Texas 78701. Fractus is informed and believes, and on that basis alleges, that ZTE (USA), Inc., operates as ZTE Corp.'s general agent within Texas and "is the conduit through which ZTE Corp. sells its commercial telecommunications equipment in the United States." *NTCH-WA, Inc. v. ZTE Corp.*, No. 12-CV-3110-TOR, 2013 U.S. Dist. LEXIS 191196, at \*6-7 (E.D. Wash. Jan. 14, 2013).

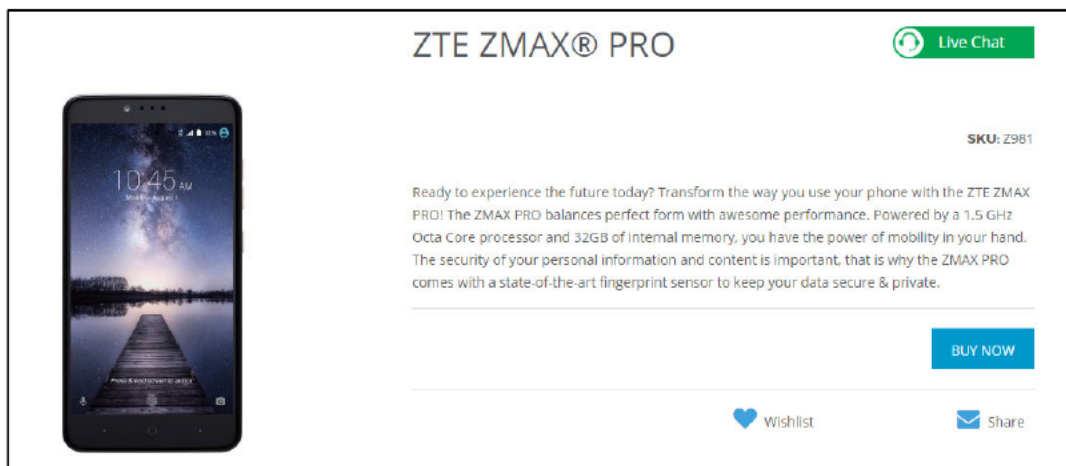
### **JURISDICTION AND VENUE**

4. 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, 1338(a), and 1367.

5. This Court has personal jurisdiction over Defendant. Fractus is informed and believes, and on that basis alleges, that Defendant conducts business and has committed acts of patent infringement and/or has induced acts of patent infringement by others in this judicial district, the State of Texas, and elsewhere in the United States. Defendant maintains substantial, systematic, and continuous contacts with the State of Texas, and/or Defendant has purposefully directed infringing activities at residents of the State of Texas, and this litigation results from those infringing activities. Defendant regularly imports, sells (either directly or indirectly), markets, and supports its products and services within this district. Defendant is subject to this Court's specific and/or general personal jurisdiction pursuant to due process and/or the Texas Long Arm Statute, due at least to its substantial and pervasive business in this State and judicial district, including: (i) at least part of its infringing activities alleged herein; and (ii) regularly doing or soliciting business, engaging in other persistent conduct, and/or deriving substantial revenue from goods sold and services provided to Texas residents.

6. Venue is proper for Defendant in this federal district pursuant to 28 U.S.C. § 1400(b) and *Brunette Mach. Works, Ltd. v. Kockum Indus., Inc.*, 406 U.S. 706 (1972). There is no clearly more convenient venue.

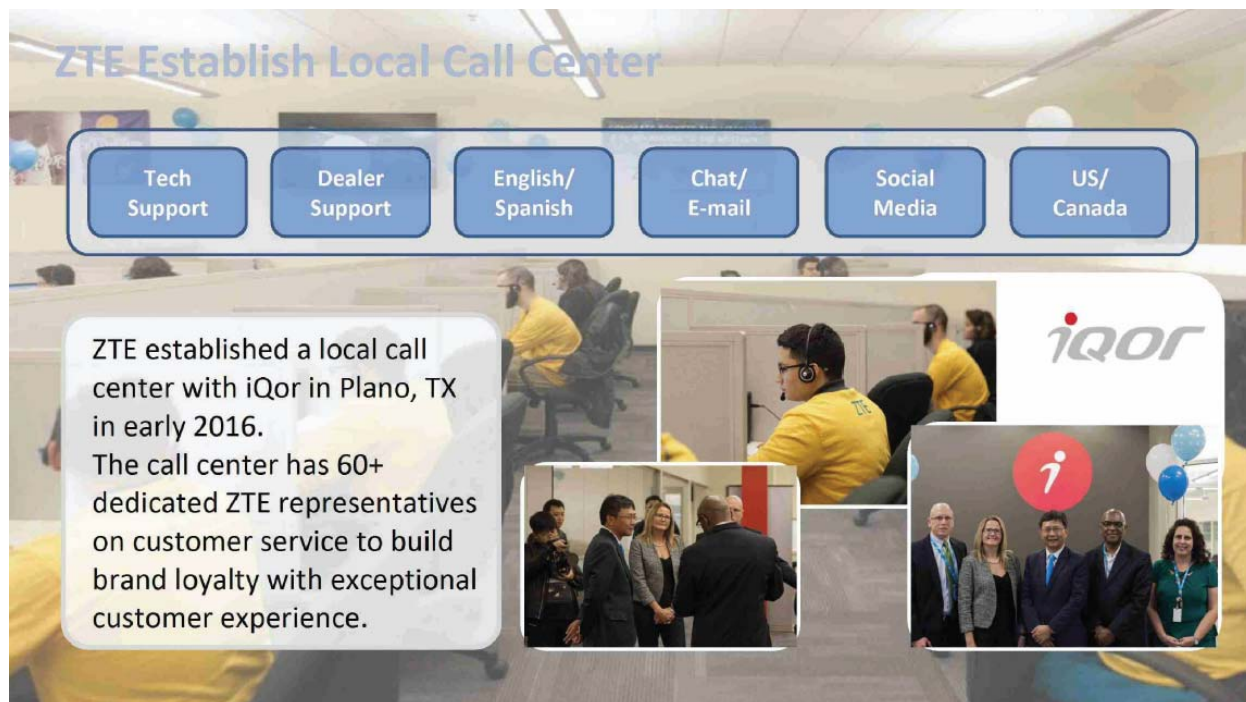
7. Venue is proper in this district because ZTE (USA) has committed acts of infringement and has a regular and established place of business in the district. Fractus is informed and believes, and on that basis alleges, that ZTE (USA) manufactures, sells, offers to sell, and/or imports Infringing Products within this judicial district, and/or induced acts of patent infringement by others within this judicial district. For example, on information and belief, ZTE (USA) sells mobile phones exclusively through its retailers, such as Target, Walmart, and carriers such as MetroPCS and AT&T. For example, clicking through the “Buy Now” link for one of the phones advertised on ZTE (USA)’s website leads directly to a MetroPCS online storefront. *See, e.g.*, <https://www.zteusa.com/zte-zmax-pro-mpcs>, shown below. The MetroPCS storefront allows consumers to look up one of the MetroPCS locations in the Marshall, Texas, and Longview, Texas, areas where they can purchase ZTE’s Infringing Products.



The screenshot shows the MetroPCS website's Store Locator interface. At the top, there are navigation links for SHOP, SUPPORT, and PAYMENT, along with a 'Your Store' section. The main search area is titled 'Find A Store' and includes a search box with 'marshall, tx', a 'Within' dropdown set to '25 mi', and a 'GO' button. Below the search box, there are filters for 'Filter By: All' and 'Display' options, which are checked for Corporate, Authorized Dealers, and iPhone. The results section on the left lists three MetroPCS Authorized Dealers, each with their address, phone number, distance, and service hours. A map on the right displays the geographical locations of these dealers, marked with blue pins and numbered 1, 2, and 3.

8. ZTE (USA) maintains a regular and established place of business in the Eastern District of Texas, in addition to its headquarters in Richardson, TX. In early 2016, ZTE (USA) established a call center at 6865 Windcrest Drive, Plano, TX 75024, within the Eastern District. The call center is a regular and established facility. A ZTE document announced that “ZTE Establish [sic] Local Call Center.” According to this ZTE document, the Plano call center has

“60+ dedicated ZTE representatives on customer service to build brand loyalty with exceptional customer experience.” That document also includes a photograph of the Plano call center employees wearing ZTE clothing while answering calls to promote ZTE’s local presence in the Eastern District of Texas. *See* ZTE-FRCT0000544 (below). The document demonstrates ZTE’s belief that it “established” a facility in Plano, which is within the Eastern District of Texas.



9. On information and belief, ZTE contracts with iQor, who owns or leases the Plano Call Center. iQor hires employees to work at the facility. On information and belief, other ZTE employees and representatives visit and work at the Plano call center on a full-time or part-time basis, supervising and training the ZTE call center representatives. Any customer in the United States who calls ZTE Customer Service is directed to the Plano call center or a second call center overseas. To the outside world, the Plano call center is a ZTE call center.

10. A ZTE customer who engages in on-line communications or calls the call center would understand he or she is communicating with a ZTE representative. In addition to the Plano

call center, ZTE has also integrated its online customer support with iQor. When a ZTE customer wants to obtain a User Guide for a particular ZTE phone, the user is directed to a joint ZTE/iQor customer support web page from which the ZTE User Manual can be downloaded. ([http://zte-iqorsupport.custhelp.com/app/answers/detail/a\\_id/5448/~/~how-do-i-get-the-user-guide-for-the-majesty-pro-plus-%28z899v1%29-with-tracfone%3F](http://zte-iqorsupport.custhelp.com/app/answers/detail/a_id/5448/~/~how-do-i-get-the-user-guide-for-the-majesty-pro-plus-%28z899v1%29-with-tracfone%3F)). When a customer selects the “Troubleshooting” icon on ZTE’s customer support page, the website takes the customer to a joint ZTE/iQor page ([zte-iqorsupport.custhelp.com](http://zte-iqorsupport.custhelp.com)). When a customer wishes to chat with a “member of our [ZTE] support team” online, the customer is directed to another joint ZTE/iQor page. And when a ZTE customer calls the call center for support regarding a ZTE phone, representatives answer the phone, “Thank you for calling ZTE, this is NAME.” Thus, the ZTE/iQor customer support facility assists customers in using and operating their ZTE telephone to make telephone calls and to transmit and receive data, which are activities that directly infringe the Fractus Patents identified in this Complaint.

11. ZTE (USA) maintains a significant connection to the Eastern District of Texas. ZTE (USA) has its principal place of business in Richardson, Texas. Richardson, Texas lies partly within this judicial district in Collin County, Texas. Fractus is informed and believes, and on that basis alleges, that ZTE (USA) openly represents its presence and involvement in Richardson, Texas, as well as more generally in Collin County, which is within this district. ZTE (USA) advertises job openings for positions based in Richardson and is closely involved with the Richardson Chamber of Commerce. Mr. Lixin Cheng, Senior Vice President of ZTE Corporation, President of ZTE North America Mobile Devices Business Unit, and Chairman and CEO of ZTE USA stated “ZTE is proud to be headquartered in Richardson and honored to be recognized by the Richardson community for our 15-year track record of creating jobs, delivering innovation and

serving the communities in which we live and work in the U.S. . . . We look forward to strengthening our relationship with local partners and co-developing Richardson’s thriving economy.” *See* [http://enterprise.zte.com.cn/us/about\\_us/news\\_center/news/201401/t20140124\\_417216.html](http://enterprise.zte.com.cn/us/about_us/news_center/news/201401/t20140124_417216.html). ZTE has similarly touted its involvement with other civic organizations in Collin County. *See* <https://www.mckinneyonline.com/news/community-involvement/boys-and-girls-clubs-of-collin-county-in-new-partnership-with-zte-usa/>. Mr. Lixin Chang again stated that “Giving back to the communities in which we live and work is very important to us and speaks to ZTE’s mission to help people around the world connect with one another in meaningful ways . . . .” *Id.* ZTE (USA) also receives benefits from this district. ZTE (USA) has numerous employees residing in the district, including all three of its directors registered with the Texas Secretary of State (including Mr. Lixin Chang).

## FACTUAL ALLEGATIONS

### *Fractus Technology*

12. Fractus is a company specializing in advanced antenna technologies based in Barcelona, Spain. Fractus was founded by two college friends, Ruben Bonet and Carles Puente. Dr. Puente, a Professor at the Universitat Politècnica de Catalunya, is the lead inventor on the Patents-in-Suit. Dr. Puente’s early research work focused on fractal antennas and evolved over time into the widely applicable and flexible antenna designs that appear in and are covered by the Patents-in-Suit. While these designs have their origins in fractal antenna designs, they are not themselves fractal antennas. Instead, the antenna designs adhere to rules that allow the reuse of antenna regions during operation in multiple frequency bands while eliminating the requirement of a self-repeating shape as was required in fractal designs. By implementing the concepts disclosed in the Patents-in-Suit, the inventions permit antennas to operate at increased numbers of frequency bands while simultaneously reducing their size, allowing greater performance within

smaller spaces.

13. Fractus has designed antennas for and/or has licensed the right to use its technology to much of the mobile antenna community, including HTC, Kyocera, LG, Palm, Pantech, RIM, Motorola, Samsung, Sharp, and UTStarcom. Fractus continues to develop antennas, including antennas for use in cellular phones. Since its incorporation Fractus has cumulatively sold more than 40 million antennas to customers. Among the numerous awards and honors the company has received for its innovative work, Fractus won the 2004 Frost & Sullivan Award for technological innovation, was named a 2005 Davos World Economic Forum Technology Pioneer and one of Red Herring's top innovative companies for 2006. Fractus inventors were finalists for the EPO European Inventor Award in 2014, and on April 2017 Fractus received the "European Inspiring Company Award" by the London Stock Exchange and the Elite Group.

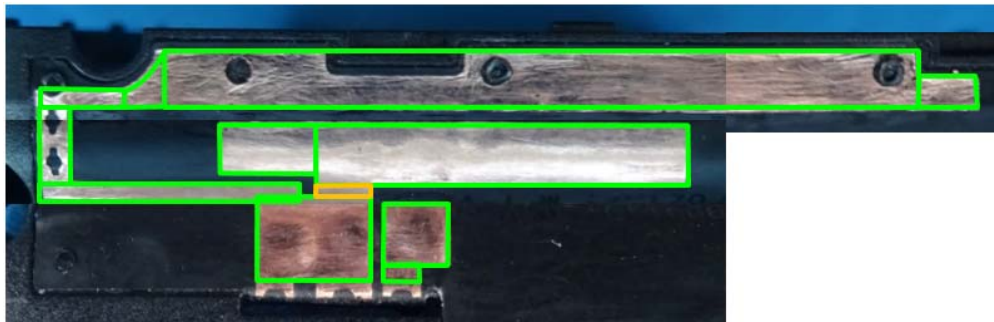
***ZTE's Infringing Products***

14. ZTE makes, uses, sells, offers for sale and/or imports Infringing Products in the United States, including but not limited to, the following examples of infringing mobile devices: Atrium, Avid Plus, Avid Trio, Avid 828, Axon, Axon Pro, Blade Max 3, Blade Spark, Blade Vantage, Blade X Max, Blade Z Max, Cymbal C LTE, Grand X 3, Grand X 4, Jasper LTE, Majesty Pro LTE, Maven, Maven 2, Maven 3, Max Blue LTE, Max +, Merit, Midnight Pro LTE, Obsidian, Overture 2, Overture 3, Paragon, Prelude 2, Prelude +, Prestige, Scend, Solar, Sonata 2, Sonata 3, Speed, Tempo, Tempo X, Unico, Warp 7, Warp Sync, Whirl 2, Z223, Z432, ZFive 2, Zinger, ZMax 2, ZMax Champ, ZMax Grand, and ZMax Pro. The above list is not exhaustive. Fractus' investigation of ZTE's Infringing Products is ongoing, and the above list will expand as warranted to include additional Infringing Products with similarly designed antennas.

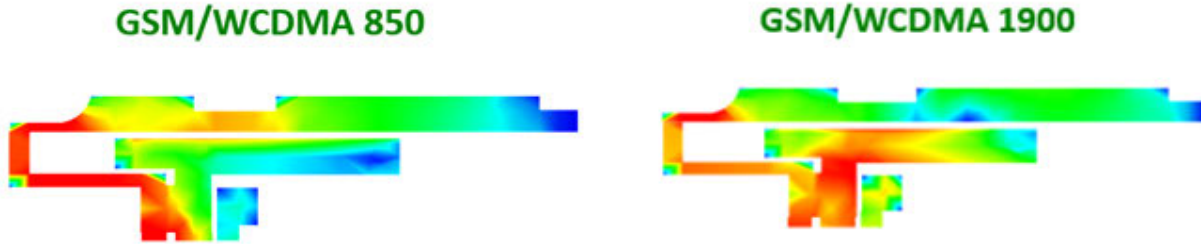
15. Each of the accused devices includes an internal, multiband antenna such as the



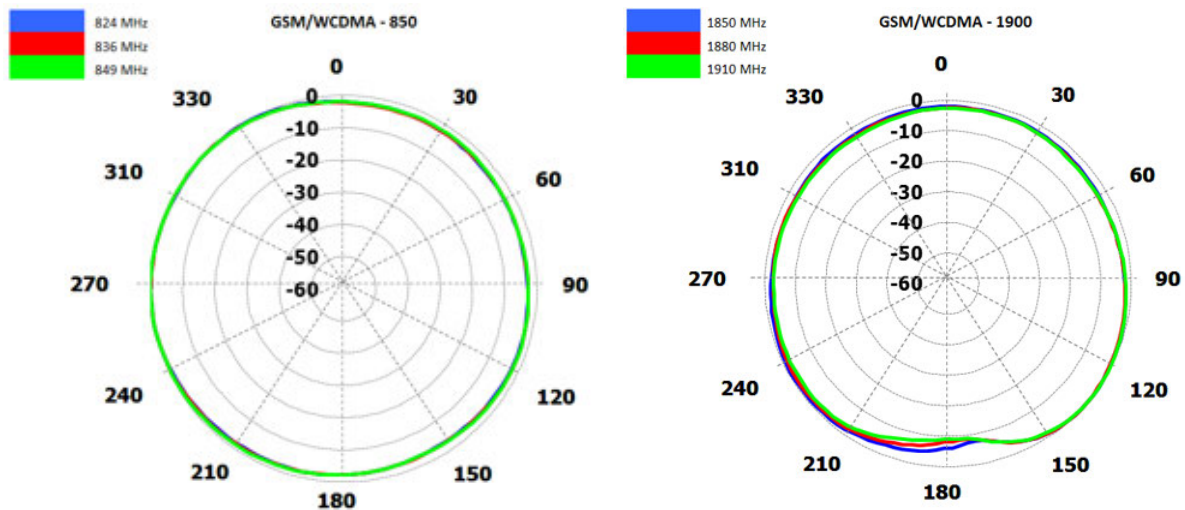
one depicted below from the Sonata 2.



16. The antennas in the Infringing Products are not fractal, but are made up of multiple levels of detail. The overall shape of the antenna is one level of detail. The overall shape is made up of another level of detail consisting of smaller electromagnetically connected elements of different sizes. As can be seen in the image above, the majority of the individual elements remain identifiable because at least 50 percent of their perimeters remain free. These electromagnetically connected elements form different paths or regions on which the currents associated with the multiple frequency bands flow while the antenna is operating. On information and belief, the associated currents flow in different regions of the antenna depending on the frequency band at which the antenna is operating, although there will always be some regions in common among the different frequency bands. Rather than having a separate antenna for each frequency band of operation, the antennas in the Infringing Products obtain multiband performance by reusing the same antenna regions across their multiple bands of operation. The simulation figures below show the active regions of the Sonata 2 antenna at two of its operational frequencies, 850 MHz and 1900 MHz, with blue colors indicating inactive regions. As can be seen, both frequencies reuse some of the same portions of the antenna during operation.

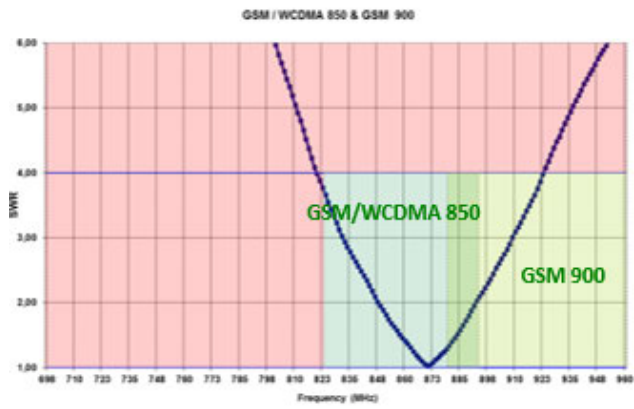


17. On information and belief, the radioelectric performance of the antennas is similar between the multiple frequency bands of operation. Cell phone antennas require omnidirectional radiation patterns to ensure proper operation regardless of the orientation of the cell phone in relation to the cell tower. Additionally, on information and belief, the impedance levels of the antennas must fall within certain ranges (typically measured using a standing wave ratio (SWR) of 4.0 or less) to ensure sufficient transmitting power and adequate battery life for the cell phone. The measured radiation patterns for the Sonata 2 antenna at two of its operational frequency bands are shown below. As can be seen, they are substantially similar and omnidirectional.

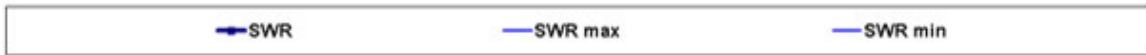
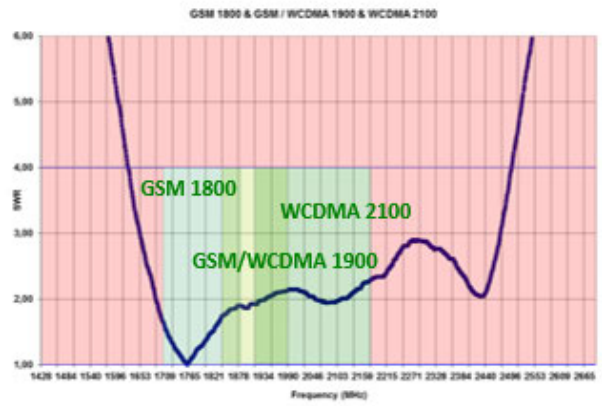


The measured SWR for the Sonata 2 antenna is also shown below, and is substantially similar across the operational frequency bands.

Low frequency range



High frequency range



**Notice & Willfulness**

18. On March 4, 2016, Fractus notified the Chief Legal Officer at ZTE Corp., Mr. Xiaoming Guo, by letter that Fractus believed ZTE was infringing its patents. FRACZTE0019887. The letter provided a list of Fractus' patent portfolio and specifically identified certain exemplary ZTE products and Fractus patents that those products were infringing, including several of the Patents-in-Suit. For example, the letter identifies '431 patent claims 14 and 30 and the '069 patent as being infringed by ZTE's products. It also identifies the ZTE Warp Sync and Zinger as infringing products.

Fractus' patents cover the antenna technology that is ubiquitously employed by sellers and manufacturers of wireless devices, such as ZTE. In fact, Fractus has analyzed some of ZTE's products and determined that ZTE infringes Fractus' patents. In particular, the following chart shows several examples of ZTE smartphones and mobile broadband peripherals that infringe specific claims of patents owned by Fractus:

PATENT AND CLAIMS	INFRINGING PRODUCT
ZL 99816960.9, claims 1 and 3	ZTE Q7-C (Blade S6 Lux)
ZL 200710185111.4, claims 1, 7, 14, 18, 26, 32, 33, 34, 35 and 43	ZTE Zui Xiang (Q806T)
ZL 00818542.5, claims 1 and 4	ZTE Axon Mini
ZL 200710104517.5, claims 1, 2, 5 and 7	ZTE Xiao Xian 2 (B880)
US 7,397,431, claims 14, 30, 38, 39, 40, 41, 42 and 43	ZTE Fanfare
US 8,212,726, claims 33, 34, 49 and 52	ZTE ZMax
US 8,471,772, claims 10, 13, 15, 18 and 19	ZTE Sonata 4G
US 8,610,627, claims 21, 22, 23 and 24	ZTE Warp Sync
US 8,976,069, claims 1, 2, 3, 15 and 27	ZTE Concord 2
US 9,000,985, claims 11 and 20	ZTE Zinger
EP 1,223,637, claims 1, 2, 4, 5, 7, 11, 23, 26, 32, 33, 34 and 36	ZTE MF910 (Mobile Hotspot)
EP 1,592,083, claims 1, 2, 6, 12, 14, 15, 16, 17, 18 and 19	ZTE Blade L2

19. Following the chart, the letter states:

To be very clear, the foregoing table only provides examples. Exhibit I to this letter provides a list of patents that are owned by Fractus and available for license to ZTE. In addition, Exhibit II to this letter lists several exemplary ZTE products that each infringes one or more patents listed in Exhibit I. Fractus believes that similar products likely also infringe, such as older or newer models using similar antenna technology.


20. Exhibit I to the letter lists a number of Fractus' patents, including the '431, '432, '069, '541, and '421 patents. Exhibit II lists 16 ZTE phones the letter describes as "exemplary ZTE products that each infringe[] one or more of the patents listed in Exhibit I." Included in the list are the ZTE Warp Sync, Zinger, Obsidian, and Whirl 2.

21. Fractus received confirmation from its courier that the March 3, 2016 notice letter was delivered and signed for by ZTE on March 7, 2016.

22. On April 29, 2016, representatives from Fractus met in-person with representatives from ZTE in Shenzhen, China. Ruben Bonet, Jordi Ilario, and Zhao Le attended on behalf of Fractus, and Yao ("Amy") Mi and Raojie ("Joseph") Yuan attended on behalf of ZTE. Ms. Mi and Mr. Yuan identified themselves as Licensing Managers.

23. At the meeting, Fractus presented a 23-page slide show highlighting the company and its patent portfolio. FRACZTE0019894. Slide 10 of the presentation stated that Fractus has 292 United States patent claims covering multilevel antennas, including "16 claims confirmed as patentable after Ex-Parte Reexamination of '431 and '432 patents."

**Strong Global Portfolio**




- **Multilevel - US:**
  - 292 claims drafted in view of prior-art from reexamination issued or allowed
  - 16 claims confirmed as patentable after Ex-Parte Reexamination of '431 and '432 patents
- **Space-filling - US:**
  - 186 claims drafted in view of prior-art from reexamination issued or allowed
  - 115 (of 186) claims have been issued after a communication to the examiner explaining how the claims are distinguishable over prior-art cited in re-examination
- **Patents in the most relevant European countries: UK, Germany, France, Spain, and Netherlands**
- **Patents in the principal Asian countries: China, India, Japan, and South Korea**

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24. Slide 18 identified “Current US ZTE products,” including the Zinger and Warp Sync.

## Current US ZTE products (II)





ZTE Zinger

- **Antenna Bands:**  
GSM 850/1900  
WCDMA 850/1700/1900
- **Announced:** Sep, 2014
- **Antenna:** Monopole + parasitic element

ZTE Warp Sync

- **Antenna Bands:**  
CDMA 800/850/1900  
LTE 850/1900/2500
- **Announced:** Jul, 2014
- **Antenna:** Monopole-IFA

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25. Slide 19 contained a chart mapping ZTE phones to specific claims of Fractus' multilevel patents, including claims of the '432, '431, '541, and '069 patents. The chart mapped the ZTE Zinger to claim 6 of the '432 patent, claims 14 and 30 of the '431 patent, and claim 17 of the '541 patent. The chart mapped the ZTE Warp Sync to claim 6 of the '432 patent, claims 14 and 30 of the '431 patent, and claim 17 of the '541 patent. The chart mapped the ZTE Whirl 2 to claim 17 of the '541 patent.





28. ZTE's willful infringement is further highlighted by its continued sales of infringing products after its April 29, 2016 meeting with Fractus. At that meeting, Fractus identified specific claims of five of the Patents-in-Suit that were infringed by specific ZTE phones. Fractus also notified ZTE that two of the Patents-in-Suit had undergone reexamination. ZTE chose not to modify its behavior in response to Fractus' allegations. ZTE's continued sale of these phones (and others with similar antennas) despite its knowledge that the phones infringed Fractus' patents was deliberate, egregious, consciously wrongful, and willful, well beyond a typical infringement case.

#### **INFRINGEMENT OF U.S. PATENT NO. 7,394,432**

29. On July 1, 2008, United States Patent No. 7,394,432 was duly and legally issued for an invention entitled "Multilevel Antenna." The claims of the '432 patent were amended during an *ex parte* reexamination that was initiated by Samsung, and a Reexamination Certificate was issued for the claims in their current form on April 7, 2015.

30. The '432 Patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code.

31. ZTE has directly infringed and continues to infringe at least claim 6 of the '432 patent by its manufacture, use, sale, importation, and/or offer for sale of Infringing Products, including but not limited to certain mobile phones with internal antennas such as those described above in paragraphs 14-17.

32. Defendant has knowledge of the '432 Patent and has also indirectly infringed at least claim 6 of the '432 Patent by active inducement under 35 U.S.C. § 271(b). Defendant has induced, caused, urged, encouraged, aided and abetted its direct and indirect customers to make, use, sell, offer for sale and/or import Infringing Products. Defendant has done so by acts including but not limited to selling Infringing Products to its customers; marketing Infringing Products; and

providing instructions, technical support, and direct links to vendor websites (available via <https://www.zteusa.com/products/all-phones/> and [https://www.zteusa.com/support\\_page/](https://www.zteusa.com/support_page/), for instance) for the use of Infringing Products. Such conduct by Defendant was intended to and actually resulted in direct infringement, including the making, using, selling, offering for sale, and/or importation of Infringing Products in the United States.

33. As of at least March 4, 2016, Defendant's infringement of the '432 Patent has been willful.

34. The acts of infringement by Defendant have caused damage to Fractus, and Fractus is entitled to recover from Defendant the damages sustained by Fractus as a result of Defendant's wrongful acts in an amount subject to proof at trial. The infringement of Fractus' exclusive rights under the '432 Patent by Defendant has damaged and will continue to damage Fractus, causing irreparable harm, for which there is no adequate remedy at law, unless enjoined by this Court.

#### **INFRINGEMENT OF U.S. PATENT NO. 7,397,431**

35. On July 8, 2008, United States Patent No. 7,397,431 was duly and legally issued for an invention entitled "Multilevel Antennae." The claims of the '431 patent were amended during an *ex parte* reexamination that was initiated by Samsung, and a Reexamination Certificate was issued for the claims in their current form on March 31, 2015.

36. The '431 Patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code.

37. ZTE has directly infringed and continues to infringe at least claim 14 of the '431 patent by its manufacture, use, sale, importation, and/or offer for sale of Infringing Products, including but not limited to certain mobile phones with internal antennas such as those described above in paragraphs 14-17.

38. Defendant has knowledge of the '431 Patent and indirectly infringes at least claim 14 of the '431 Patent by active inducement under 35 U.S.C. § 271(b). Defendant has induced, caused, urged, encouraged, aided and abetted its direct and indirect customers to make, use, sell, offer for sale and/or import Infringing Products. Defendant has done so by acts including but not limited to selling Infringing Products to its customers; marketing Infringing Products; and providing instructions, technical support, and direct links to vendor websites (available via <https://www.zteusa.com/products/all-phones/> and [https://www.zteusa.com/support\\_page/](https://www.zteusa.com/support_page/), for instance) for the use of Infringing Products. Such conduct by Defendant was intended to and actually resulted in direct infringement, including the making, using, selling, offering for sale, and/or importation of Infringing Products in the United States.

39. As of at least March 4, 2016, Defendant's infringement of the '431 Patent has been willful.

40. The acts of infringement by Defendant have caused damage to Fractus, and Fractus is entitled to recover from Defendant the damages sustained by Fractus as a result of Defendant's wrongful acts in an amount subject to proof at trial. The infringement of Fractus' exclusive rights under the '431 Patent by Defendant has damaged and will continue to damage Fractus, causing irreparable harm, for which there is no adequate remedy at law, unless enjoined by this Court.

#### **INFRINGEMENT OF U.S. PATENT NO. 8,941,541**

41. On January 27, 2015, United States Patent No. 8,941,541 was duly and legally issued for an invention entitled "Multilevel Antennae."

42. The '541 Patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code.

43. ZTE has directly infringed and continues to infringe at least claim 17 of the

'541 patent by its manufacture, use, sale, importation, and/or offer for sale of Infringing Products, including but not limited to certain mobile phones with internal antennas such as those described above in paragraphs 14-17.

44. Defendant has knowledge of the '541 Patent and indirectly infringes at least claim 17 of the '541 Patent by active inducement under 35 U.S.C. § 271(b). Defendant has induced, caused, urged, encouraged, aided and abetted its direct and indirect customers to make, use, sell, offer for sale and/or import Infringing Products. Defendant has done so by acts including but not limited to selling Infringing Products to its customers; marketing Infringing Products; and providing instructions, technical support, and direct links to vendor websites (available via <https://www.zteusa.com/products/all-phones/> and [https://www.zteusa.com/support\\_page/](https://www.zteusa.com/support_page/), for instance) for the use of Infringing Products. Such conduct by Defendant was intended to and actually resulted in direct infringement, including the making, using, selling, offering for sale, and/or importation of Infringing Products in the United States.

45. As of at least March 4, 2016, Defendant's infringement of the '541 Patent has been willful.

46. The acts of infringement by Defendant have caused damage to Fractus, and Fractus is entitled to recover from Defendant the damages sustained by Fractus as a result of Defendant's wrongful acts in an amount subject to proof at trial. The infringement of Fractus' exclusive rights under the '541 Patent by Defendant has damaged and will continue to damage Fractus, causing irreparable harm, for which there is no adequate remedy at law, unless enjoined by this Court.

#### **INFRINGEMENT OF U.S. PATENT NO. 8,976,069**

47. On March 10, 2015, United States Patent No. 8,976,069 was duly and legally issued for an invention entitled "Multilevel Antennae."

48. The '069 Patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code.

49. ZTE has directly infringed and continues to infringe at least claim 32 of the '069 patent by its manufacture, use, sale, importation, and/or offer for sale of Infringing Products, including but not limited to certain mobile phones with internal antennas such as those described above in paragraphs 14-17.

50. Defendant has knowledge of the '069 Patent and indirectly infringes at least claim 32 of the '069 Patent by active inducement under 35 U.S.C. § 271(b). Defendant has induced, caused, urged, encouraged, aided and abetted its direct and indirect customers to make, use, sell, offer for sale and/or import Infringing Products. Defendant has done so by acts including but not limited to selling Infringing Products to its customers; marketing Infringing Products; and providing instructions, technical support, and direct links to vendor websites (available via <https://www.zteusa.com/products/all-phones/> and [https://www.zteusa.com/support\\_page/](https://www.zteusa.com/support_page/), for instance) for the use of Infringing Products. Such conduct by Defendant was intended to and actually resulted in direct infringement, including the making, using, selling, offering for sale, and/or importation of Infringing Products in the United States.

51. As of at least March 4, 2016, Defendant's infringement of the '069 Patent has been willful.

52. The acts of infringement by Defendant have caused damage to Fractus, and Fractus is entitled to recover from Defendant the damages sustained by Fractus as a result of Defendant's wrongful acts in an amount subject to proof at trial. The infringement of Fractus' exclusive rights under the '069 Patent by Defendant has damaged and will continue to damage Fractus, causing irreparable harm, for which there is no adequate remedy at law, unless enjoined

by this Court.

**INFRINGEMENT OF U.S. PATENT NO. 9,054,421**

53. On June 9, 2015, United States Patent No. 9,054,421 was duly and legally issued for an invention entitled “Multilevel Antennae.”

54. The '421 Patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code.

55. ZTE has directly infringed and continues to infringe at least claim 1 of the '421 patent by its manufacture, use, sale, importation, and/or offer for sale of Infringing Products, including but not limited to certain mobile phones with internal antennas such as those described above in paragraphs 14-17.

56. Defendant has knowledge of the '421 Patent and indirectly infringes at least claim 1 of the '421 Patent by active inducement under 35 U.S.C. § 271(b). Defendant has induced, caused, urged, encouraged, aided and abetted its direct and indirect customers to make, use, sell, offer for sale and/or import Infringing Products. Defendant has done so by acts including but not limited to selling Infringing Products to its customers; marketing Infringing Products; and providing instructions, technical support, and direct links to vendor websites (available via <https://www.zteusa.com/products/all-phones/> and [https://www.zteusa.com/support\\_page/](https://www.zteusa.com/support_page/), for instance) for the use of Infringing Products. Such conduct by Defendant was intended to and actually resulted in direct infringement, including the making, using, selling, offering for sale, and/or importation of Infringing Products in the United States.

57. As of at least March 4, 2016, Defendant's infringement of the '421 Patent has been willful.

58. The acts of infringement by Defendant have caused damage to Fractus, and Fractus is entitled to recover from Defendant the damages sustained by Fractus as a result of

Defendant's wrongful acts in an amount subject to proof at trial. The infringement of Fractus' exclusive rights under the '421 Patent by Defendant has damaged and will continue to damage Fractus, causing irreparable harm, for which there is no adequate remedy at law, unless enjoined by this Court.

### **INFRINGEMENT OF U.S. PATENT NO. 9,240,632**

59. On January 19, 2016, United States Patent No. 9,240,632 was duly and legally issued for an invention entitled "Multilevel Antennae."

60. The '632 Patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code.

61. ZTE has directly infringed and continues to infringe at least claim 17 of the '632 patent by its manufacture, use, sale, importation, and/or offer for sale of Infringing Products, including but not limited to certain mobile phones with internal antennas such as those described above in paragraphs 14-17.

62. Defendant has knowledge of the '632 Patent and indirectly infringes at least claim 17 of the '632 Patent by active inducement under 35 U.S.C. § 271(b). Defendant has induced, caused, urged, encouraged, aided and abetted its direct and indirect customers to make, use, sell, offer for sale and/or import Infringing Products. Defendant has done so by acts including but not limited to selling Infringing Products to its customers; marketing Infringing Products; and providing instructions, technical support, and direct links to vendor websites (available via <https://www.zteusa.com/products/all-phones/> and [https://www.zteusa.com/support\\_page/](https://www.zteusa.com/support_page/), for instance) for the use of Infringing Products. Such conduct by Defendant was intended to and actually resulted in direct infringement, including the making, using, selling, offering for sale, and/or importation of Infringing Products in the United States.

63. As of at least the filing of this lawsuit, Defendant's infringement of the '632 Patent

has been willful.

64. The acts of infringement by Defendant have caused damage to Fractus, and Fractus is entitled to recover from Defendant the damages sustained by Fractus as a result of Defendant's wrongful acts in an amount subject to proof at trial. The infringement of Fractus' exclusive rights under the '632 Patent by Defendant has damaged and will continue to damage Fractus, causing irreparable harm, for which there is no adequate remedy at law, unless enjoined by this Court.

#### **INFRINGEMENT OF U.S. PATENT NO. 9,362,617**

65. On June 7, 2016, United States Patent No. 9,362,617 was duly and legally issued for an invention entitled "Multilevel Antennae."

66. The '617 Patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code.

67. ZTE has directly infringed and continues to infringe at least claim 17 of the '617 patent by its manufacture, use, sale, importation, and/or offer for sale of Infringing Products, including but not limited to certain mobile phones with internal antennas such as those described above in paragraphs 14-17.

68. Defendant has knowledge of the '617 Patent and indirectly infringes at least claim 17 of the '617 Patent by active inducement under 35 U.S.C. § 271(b). Defendant has induced, caused, urged, encouraged, aided and abetted its direct and indirect customers to make, use, sell, offer for sale and/or import Infringing Products. Defendant has done so by acts including but not limited to selling Infringing Products to its customers; marketing Infringing Products; and providing instructions, technical support, and direct links to vendor websites (available via <https://www.zteusa.com/products/all-phones/> and [https://www.zteusa.com/support\\_page/](https://www.zteusa.com/support_page/), for instance) for the use of Infringing Products. Such conduct by Defendant was intended to and



actually resulted in direct infringement, including the making, using, selling, offering for sale, and/or importation of Infringing Products in the United States.

69. As of at least the filing of this lawsuit, Defendant's infringement of the '617 Patent has been willful.

70. The acts of infringement by Defendant have caused damage to Fractus, and Fractus is entitled to recover from Defendant the damages sustained by Fractus as a result of Defendant's wrongful acts in an amount subject to proof at trial. The infringement of Fractus' exclusive rights under the '617 Patent by Defendant has damaged and will continue to damage Fractus, causing irreparable harm, for which there is no adequate remedy at law, unless enjoined by this Court.

#### **PRAYER FOR RELIEF**

WHEREFORE, Fractus prays for judgment against ZTE as follows:

71. A judgment in favor of Fractus that Defendant has infringed and is infringing, either literally and/or under the doctrine of equivalents, the Patents-in-Suit;

72. A judgment in favor of Fractus that Defendant's infringement has been and continues to be willful;

73. An Order permanently enjoining Defendant, its respective officers, agents, employees, and those acting in privity with them, from further direct and/or indirect infringement of the Patents-in-Suit;

74. An award of damages to Fractus arising out of Defendant's infringement of the Patents-in-Suit, including supplemental damages for any continuing post-verdict infringement up until entry of the final judgment, with an accounting, as needed, and enhanced damages pursuant to 35 U.S.C. § 284, together with prejudgment and post-judgment interest, in an amount according to proof;

75. An award of an ongoing royalty for Defendant's post-judgment infringement in an amount according to proof in the event that a permanent injunction preventing future acts of infringement is not granted;

76. An award of attorneys' fees pursuant to 35 U.S.C. § 285 or as otherwise permitted by law; and

77. Granting Fractus its costs and further relief as the Court may deem just and proper.

**DEMAND FOR JURY TRIAL**

78. Pursuant to Federal Rule of Civil Procedure 38(b), Fractus hereby demands a trial by jury on all issues triable by jury.

Dated: May 16, 2018

Respectfully submitted,

/s/ Blaine Larson

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**ATTORNEYS FOR FRACTUS, S.A.**

**CERTIFICATE OF SERVICE**

I hereby certify that the underlying motion has been served to all counsel of record via  
CM/ECF.

/s/ Blaine Larson  
Blaine Larson