

**UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA – SAN JOSE**

Larry Golden, *Pro Se* Plaintiff
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CLERK, U.S. DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA

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CIVIL CASE NO: _____

LARRY GOLDEN,

Plaintiff,

V.

SAMSUNG ELECTRONICS
AMERICA, INC.

Defendants.

JURY TRIAL DEMANDED

WHO

**(Direct Patent Infringement), (Induced
and Contributory Patent Infringement),
(Joint Patent Infringement)**

January 02, 2023

COMPLAINT FOR PATENT INFRINGEMENT

1. The Federal Circuit on 09/08/2022, in *Larry Golden v. Google LLC*; Case No. 22-1267 — “VACATED AND REMANDED” the relevant Case No: 22-1267 Document 15; back to the District Court “to be filed and request service of process”. **Exhibit A**

2. The Federal Circuit determined the complaint, “includes a detailed claim chart mapping features of an accused product, the Google Pixel 5 Smartphone, to independent claims from U.S. Patent Nos. 10,163,287, 9,589,439, and 9,069,189” ... “in a relatively straightforward manner” ... and that the [Circuit] “express no opinion as to the adequacy of the complaint or claim chart except that it is not facially frivolous.”

3. This is an action of alleged patent infringement, in which plaintiff Larry Golden (“Golden”, “Plaintiff” or “Patent Owner”), hereby asserts the following claims for alleged patent infringement of United States Patents-in-suit Nos. 10,163,287 (‘287 Patent), 9,589,439 (‘439 Patent), and 9,096,189 (‘189 Patent) (“patents-in-suit”), attached hereto as—**Exhibits B-D**—is filed against Defendant SAMSUNG ELECTRONICS AMERICA, INC (“Samsung” or “Defendant”), and alleges as follows:

4. This current complaint against Samsung “mirrors” the complaint against Google submitted for review at the Federal Circuit in *Larry Golden v. Google LLC*; Case No. 22-1267 — that was “vacated and remanded” back to the District Court after the Circuit reviewed the case under the pleading standards set forth in *Bell Atlantic Corp. v. Twombly*, 550 U.S. 544 (2007), and *Ashcroft v. Iqbal*, 556 U.S. 662 (2009). The panel’s “DISCUSSION in *Golden v. Google LLC*; CAFC Case No. 22-1267 states:

“Under the pleading standards set forth in *Bell Atlantic Corp. v. Twombly*, 550 U.S. 544 (2007), and *Ashcroft v. Iqbal*, 556 U.S. 662 (2009), a court must dismiss a complaint if it fails to allege “enough facts to state a claim to relief that is plausible on its face.” *Twombly*, 550 U.S. at 570 ... [T]his standard “requires more than labels and conclusions, and a formulaic recitation of the elements of a cause of action will not do.” *Id.* at 555 (citation omitted). A plaintiff must allege facts that give rise to “more than a sheer possibility that a defendant has acted unlawfully.” *Iqbal*, 556 U.S. at 678 (citation omitted) ... this court has explained that a plaintiff ... must plead ‘enough fact[s] to raise a reasonable expectation that discovery will reveal’ that the defendant is liable for the misconduct alleged.”

5. Samsung allegedly uses the same Android open-source architecture as Google; the same chipset provider (Qualcomm) for the USA as Google; the same allegedly infringing CPUs, or equivalent designed, manufactured for the smartphone as Google; the same standard smartphone sensors, or equivalent designed, manufactured for biosensor detection as Google; the same hazard-awareness-and-response tools (the Android Team Awareness Kit, ATAK), for chemical, biological, radiological, and nuclear (CBRN) plug-ins as Google; and, Samsung’s

smartphones are allegedly infringing the same patent claims and patents-in-suit asserted in the Google case (claim 5 of the '287 patent, claim 23 of the '439 patent, and claim 1 of the '189 patent).

6. The Federal Circuit in *Larry Golden v. Google LLC*; Case No. 22-1267 opinion on the relevant patents and claim charts:

“[I]n the Google case, the district court again concluded that Mr. Golden’s complaint was frivolous. Here, however, Mr. Golden’s complaint includes a detailed claim chart mapping features of an accused product, the Google Pixel 5 Smartphone, to independent claims from U.S. Patent Nos. 10,163,287, 9,589,439, and 9,096,189. The district court discounted this claim chart because it ‘contains the exact same language as the claim charts previously rejected by the Federal Circuit [in the 2019 case], although Google Pixel 5 Smartphone appears in the far-left column instead of Apple.’ But to the extent that the chart includes the ‘exact same language’ as previously rejected charts, it is simply the language of the independent claims being mapped to. The key column describing the infringing nature of the accused products is not the same as the complaint held frivolous in the 2019 case. It attempts—whether successfully or not—to map claim limitations to infringing product features, and it does so in a relatively straightforward manner ...”

“We conclude that the district court’s decision in the Google case is not correct with respect to at least the three claims mapped out in the claim chart. Mr. Golden has made efforts to identify exactly how the accused products meet the limitations of his claims in this chart. On remand, the district court should allow the complaint to be filed and request service of process. Our decision does not preclude subsequent motions to dismiss by the defendant for failure to state a claim or for summary judgment. We express no opinion as to the adequacy of the complaint or claim chart except that it is not facially frivolous.”

NATURE OF ACTION

7. This is an action for patent infringement of United States Patent Nos. 10,163,287 ('287 Patent), 9,589,439 ('439 Patent), and 9,096,189 ('189 Patent) (“patents-in-suit”), arising under the patent laws of the United States of America, Title 35 of the United States Code, and seeking damages and other relief under 35 U.S.C. § 271.

8. Upon information and belief, Plaintiff alleges the patents-in-suit, that were issued with the presumption of validity, under 35 U.S. Code § 282 – “Presumption of validity; (a) In General”: is Plaintiff’s evidence that Plaintiff owns the patent rights for a Communicating, Monitoring, Detecting, and Controlling (CMDC) device, that includes the smartphones of Samsung, alleged in this case as infringing Plaintiff’s patents.

9. On information and belief, Samsung and/or their affiliates, have directly infringed each Asserted Claims of the ‘287, ‘439, and ‘189 patents, by making, using, selling and offering to sell, and by inducing and contributing to others’ infringement through their sales, offers for sale, and use of Samsung Galaxy smartphones such as Galaxy S8, S8+, Note 8, S7, S7 Edge, and the latest Samsung Galaxy models such as Galaxy S22, S22+, S22 Ultra, Note 20, S20, S20+, S20 Ultra, and other products depicted on Defendants’ websites and sold on third party websites (“the Accused Products”) within the United States, such as the Galaxy S21 5G, and S21+ 5G; all without authorization or license from Plaintiff within the United States, less than six years before the filing of this Complaint, and prior to the April 05, 2026 expiration date of the ‘287, ‘439, and ‘189 patents (the “Relevant Time Period”).

THE PARTIES

10. Plaintiff Larry Golden is a citizen of South Carolina and has a principal place of business and residence at 740 Woodruff Road, #1102, Greenville, S.C. 29607.

11. Defendant SAMSUNG ELECTRONICS AMERICA, INC. (referred to individually herein as “SEA”) is a New York corporation, with its principal place of business at 85 Challenger Road, Ridgefield Park, New Jersey 07660. On information and belief, SEA was

formed in 1977 as a subsidiary of Samsung Electronics Corporation (“SEC”) and markets, sells, and/or offers for sale a variety of consumer electronics.

12. On information and belief, within Samsung’s Information Technology & Mobile Communications (“IM”) business division, SEA operates an office in Mountain View, California, located at 665 Clyde Avenue, as depicted below. On information and belief, within the IM business division, SEA imports into the United States, and distributes, markets, and sells mobile devices in the United States, including smartphones that operate on cellular networks in the United States.



13. On information and belief, there may be other corporate affiliates of Samsung who participated in the infringing acts complained of herein. The identities of such affiliates are currently unknown, because publicly available information does not permit the identification of

each affiliate who participated in the infringing acts. Plaintiff expects the identities of such affiliates to be revealed in discovery. Plaintiff reserves the right to amend this Complaint to name such affiliates, if necessary, once they have been revealed.

14. Samsung's Information Technology & Mobile Communications ("IM") business division is responsible for the design, manufacture, and sale of mobile devices, including smartphones that operate on cellular networks in the United States. According to Samsung, it "is one of the largest manufacturers of wireless communications devices in the world and has long focused on the United States as a critical market for its products." See *In the Matter of Certain Wireless Communications Equipment and Articles Therein*, USITC Inv. No. 337-TA-866, Complaint at ¶ 9 (Dec. 21, 2012)

STANDARD FOR REVIEW

15. IN THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF SOUTH CAROLINA GREENVILLE DIVISION *Larry Golden, Plaintiff, vs. Apple Inc.; Samsung Electronics USA; LG Electronics USA, Inc.; Qualcomm Inc., Motorola Solutions, Inc.; Panasonic Corporation; AT&T Inc.; Verizon Corporation Service Group; Sprint Corporation; T-Mobile USA, Inc.; Ford Global Technologies, LLC; Fairway Ford Lincoln of Greenville; General Motors Company; Kevin Whitaker Chevrolet; FCA US LLC; Big 'O' Dodge Chrysler Jeep Ram, Defendants*. No.: 6:20-cv-04353-JD-KFM Date Filed 11/02/21 Entry 26.

16. "Accordingly, after a thorough review of the Report and Recommendation and the record in this case, the Court adopts the Report and Recommendation as modified and incorporates it herein. IT IS, THEREFORE, ORDERED that Plaintiff's Complaint is dismissed without prejudice and without the issuance of service of process."

Dismissal “Without Prejudice”

17. Dismissal “without prejudice” occurs when a court dismisses a claim but leaves the plaintiff free to bring a subsequent suit based on the same grounds as the dismissed claim. *In Semtek Intern. Inc. v. Lockheed Martin Corp.*, the Supreme Court pointed out that one of the main features of dismissal without prejudice is that it does not prevent re-filing of the claim... “a case that is dismissed “without prejudice” is only dismissed temporarily. This temporary dismissal means that the plaintiff is allowed to re-file charges, alter the claim, or bring the case to another court.”

JURISDICTION AND VENUE

18. This is a civil action for patent infringement arising under the patent laws of the United States, Title 35 of the United States Code. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331, 1332(a) and 1338(a).

19. On May 22, 2017, the U.S. Supreme Court narrowed the scope of proper venue for patent infringement actions for domestic corporations. *See TC Heartland LLC v. Kraft Foods Grp. Brands LLC*, No. 16-341 (May 22, 2017). The *TC Heartland* decision reverses the approach to venue previously adopted by the U.S. Court of Appeals for the Federal Circuit, which had held for 27 years that a domestic corporation can be sued for patent infringement anywhere that corporation was subject to personal jurisdiction.

20. The special venue statute for patent infringement actions, 28 U.S.C. § 1400(b), has two provisions permitting venue: “[1] where the defendant resides, or [2] where the defendant has committed acts of infringement and has a regular and established place of business.”

21. Since the enactment of that statute, the Supreme Court consistently has interpreted Section 1400(b)'s first provision of proper venue — “where the defendant resides”. *E.g.*, *Fourco Glass Co. v. Transmirra Prods. Corp.*, 353 U.S. 222, 226 (1957). As a result, a domestic corporation may now be sued for patent infringement only in its state of incorporation or where it has committed acts of infringement and has a regular and established place of business.

22. Venue is proper over the Defendant in this judicial district under 28 U.S.C. §§1391 and/or 1400(b). Venue is proper within this District under 28 U.S.C. § 1391(b) and (c) because Samsung transacts business within this District and offers for sale in this District products that infringe the patents-in-suit. In addition, a substantial part of the events giving rise to the claims occurred in this District. Thus, venue is proper over Samsung under 28 U.S.C. § 1400(b), because Samsung resides in this district, has committed acts of infringement in this district, and has regular and established places of business in this district.

INTRADISTRICT ASSIGNMENT

23. This case is a patent infringement dispute that is appropriate for district-wide assignment. Assignment to the San Jose Division is appropriate because a substantial part of the events that gave rise to the claims asserted in this Complaint occurred in Santa Clara County.

NOTICE OF RELATED CASES

24. Pursuant to the California Rules of Court; Rule 3.300. Related cases: This pending civil case is related to two other pending cases [*Larry Golden v. Google LLC*, Case No. 4:22-cv-05246-HSG, and *Larry Golden v. Qualcomm, Inc.* 4:22-cv-03283-HSG] filed in the U.S. District Court for the Northern District of California.

25. All three cases involve the same Plaintiff and are based on the same or similar claims; arose from the same or substantially identical transactions, incidents, or events requiring the determination of the same or substantially identical questions of law or fact; involve claims of infringement, and damages to the same patents; and, are likely to require substantial duplication of judicial resources if heard by different judges.

STANDARD FOR REVIEW

26. The Rules of the COFC (“RCFC”) provide contractors at least two avenues for being heard at court. First, RCFC 14(b) allows parties to formally notify any interested third-party, such as an indemnitor, of the § 1498(a) complaint. A noticed party “may file an appropriate pleading setting forth the person’s interest in the subject matter of the litigation.” RCFC 14(c)(1)(a). Second, RCFC 24 allows interested parties to proactively intervene, permissively or by right.

27. In the COFC case *Larry Golden v. USA*; Case 1:13-cv-00307-EGB Document 224 Filed 03/31/21 Page 2 of 4; Samsung Electronics of America, Inc. was provided notice to appear to protect any interest Samsung may have in the case (**Exhibit E**). Samsung failed to appear to protect its interest. Claiming an interest in this current case is an indication Samsung deliberately defaulted on its responsibility to appear and defend any interest Samsung may have had in the case. It is a waste of judicial resources to allow Samsung the opportunity to defend against Plaintiff’s current claims of infringement; especially after the Federal Circuit’s decision in *Larry Golden v. Google LLC* Case No. 22-1267.

28. Under Rule 14(b) of the Rules of the United States Court of Federal Claims (RCFC), the court “may notify any person with the legal capacity to sue or to be sued who is

alleged to have an interest in the subject matter of the suit.” Further, a “person served with a notice issued . . . may file an appropriate pleading setting forth the person’s interest in the subject matter of the litigation.”

29. In resolving a petition for mandamus, the Federal Circuit held in *In re UUSI, LLC*, that a third party’s potential obligation to indemnify the government for any patent infringement liability provides “sufficient interest in litigation to offer evidence and advance legal arguments appropriate to protect its own interests. As the USCFC held in *Bowser, Inc. v. United States*:

“We think there is implicit in the whole plan and purpose of Subsection 14(b) a congressional intent that the issues of fact and law decided in a suit against the United States in the Court of Claims may not be retried in another court at the insistence of a third party, who had a “possible” interest in the case in this court but who failed to appear and protect his interest after timely notice or summons had been served upon him.” 420 F.2d 1057, 1060 (Ct. Cl. 1970).

COUNT I

(Infringement of the ‘287 Patent)

30. Golden realleges and incorporates herein the allegations set forth in ¶¶ 1-29.

31. On information and belief, Samsung is jointly, directly, indirectly and/or under the ‘doctrine of equivalents’, infringing at least independent claims 4, 5, and 6 of the ‘287 patent. The alleged infringing products are: Samsung Galaxy S8, S8+, Note 8, S7, S7 Edge, S22, S22+, S22 Ultra, Note 20, S20, S20+, S20 Ultra, and Galaxy S21 5G, and S21+ 5G.

32. As set forth in Golden’s preliminary infringement contentions, Samsung’s making, using, offering for sale, selling and/or importing Plaintiff’s patented devices, have at a minimum directly infringed the ‘287 patent and Samsung is thereby liable for infringement of the

'287 patent pursuant to 35 U.S.C. § 271. Samsung have caused damage to Golden, which infringement and damage will continue unless and until Samsung is enjoined.

33. The alleged infringement Golden has identified to this Court has caused irreparable injury to Golden for which remedies at law are inadequate. Considering the balance of the hardships between the parties, a remedy in equity, such as a permanent injunction is warranted and such a remedy would be in the public interest.

COUNT II

(Infringement of the '439 Patent)

34. Golden realleges and incorporates herein the allegations set forth in ¶¶ 1-33.

35. On information and belief, Samsung is jointly, directly, indirectly and/or under the 'doctrine of equivalents', infringing at least independent claims 13, 14, 15, and 23 of the '439 patent. The alleged infringing products are: Samsung Galaxy S8, S8+, Note 8, S7, S7 Edge, S22, S22+, S22 Ultra, Note 20, S20, S20+, S20 Ultra, and Galaxy S21 5G, and S21+ 5G.

36. As set forth in Golden's preliminary infringement contentions, Samsung's making, using, offering for sale, selling and/or importing Plaintiff's patented devices, have at a minimum directly infringed the '439 patent and Samsung is thereby liable for infringement of the '439 patent pursuant to 35 U.S.C. § 271. Samsung have caused damage to Golden, which infringement and damage will continue unless and until Samsung is enjoined.

37. The alleged infringement Golden has identified to this Court has caused irreparable injury to Golden for which remedies at law are inadequate. Considering the balance of the hardships between the parties, a remedy in equity, such as a permanent injunction is warranted and such a remedy would be in the public interest.

COUNT III

(Infringement of the '189 Patent)

38. Golden realleges and incorporates herein the allegations set forth in ¶¶ 1-37.

39. On information and belief, Samsung is jointly, directly, indirectly and/or under the 'doctrine of equivalents', infringing claims 1, 2 & 3 of the '189 patent. The alleged infringing products are: Samsung Galaxy S8, S8+, Note 8, S7, S7 Edge, S22, S22+, S22 Ultra, Note 20, S20, S20+, S20 Ultra, and Galaxy S21 5G, and S21+ 5G.

40. As set forth in Golden's preliminary infringement contentions, Samsung's making, using, offering for sale, selling and/or importing Plaintiff's patented devices, have at a minimum directly infringed the '189 patent and Samsung is thereby liable for infringement of the '189 patent pursuant to 35 U.S.C. § 271. Samsung have caused damage to Golden, which infringement and damage will continue unless and until Samsung is enjoined.

41. The alleged infringement Golden has identified to this Court has caused irreparable injury to Golden for which remedies at law are inadequate. Considering the balance of the hardships between the parties, a remedy in equity, such as a permanent injunction is warranted and such a remedy would be in the public interest.

ALLEGED INDUCED AND CONTRIBUTORY INFRINGEMENT

Plaintiff's Owns the Patent Rights on the CPUs Samsung uses with its Smartphones. The CPUs are Described as the "Brains" of the Smartphone.

42. The Central Processing Unit (CPU) is the programmable device capable of general-purpose computation. It is the engine of logic, as with the "brain", and the core piece of hardware in the Patent Owner's Communication, Monitoring Detecting, and Controlling

(CMDC) devices (i.e., new, improved upon, and useful desktop PCs, laptops, tablets, cell phones [smartphone], etc.)

43. The Patent Owner's CPU is capable of arithmetic operations such as add and divide and flow control operations such as conditionals. The Patent Owner's central processing unit (CPU) is the electronic circuitry within the CMDC device that is vital and essential to processing and executing program instructions.

44. The CPU, which controls all Programmable Logic Controllers (PLCs) consists of two basic sections: the central processing unit (CPU) and the input/output interface system. The input/output system is physically connected to field devices (e.g., sensors, etc.) and provides the interface between the CPU and the information providers (inputs) and controllable devices (outputs).

45. To operate, the CPU "reads" input data from connected field devices through the use of its input interfaces, and then "executes", or performs the control program that has been stored in its memory system. The CPU processes instructions in order to carry out certain functions that make the device operate properly. The CPUs are often described as the "brain" of computers, smartphones and tablets because of the central role they play in the functioning of the devices.

46. All of the different components that make up a computer's processor have to be condensed to fit in devices, such as a laptops and tablets, where they exist as a mobile application processor, Chipset, or a System-on-a-Chip (SoC). Mobile application processors are found in mobile devices, such as smartphones.

47. A core, or CPU core, is the "brain" of a CPU. It receives instructions, and performs calculations, or operations, to satisfy those instructions. A CPU can have multiple

cores. A CPU (processor) with two cores is called a dual-core processor; with four cores, a quad-core; six cores, hexa-core; eight cores, octa-core. [https://www.computerhope.com/jargon/c/core.htm#:~:text](https://www.computerhope.com/jargon/c/core.htm#:~:text=)

48. Plaintiff owns the patent rights to a new, improved upon, and useful cell phone; smartphone; and central processing unit designed specifically for Plaintiff's CMDC device (i.e., new, improved upon, and useful cell phone; smartphone, etc.)

49. Plaintiff filed his first Disclosure Document (No. 565732) with the USPTO on November 26, 2004; and his first patent application on April 05, 2006.

50. Following is a list of apparatuses, mechanisms, devices, and products (GPS, open-source architecture, internal sensor for C/B detection, external detector for CBRNE, fingerprint scanner, NFC), Samsung allegedly used for the assembly of their smartphones (i.e., Plaintiff's CMDC—smartphone—device); and, which antedates the same used by Samsung.

Samsung's First Smartphone Global Positioning System (GPS). (2007)

51. "Samsung's i550 mobile phone is seen in an undated handout image, released to Reuters on October 17, 2007. Mobile phone maker Samsung Electronics Co Ltd said on Tuesday it would launch its first-ever phone incorporating a Global Positioning System (GPS). The phone—called the i550 will use the operating software of Britain's Symbian ..." REUTERS/Samsung/ Handout. TECHNOLOGY NEWS, (2007, Oct. 16). *Samsung to launch its first-ever GPS phone* <https://www.reuters.com/article/us-samsung-phone/samsung-to-launch-its-first-ever-gps-phone-idUSL1664279020071017>

Samsung's First "Product Grouping" Platform for Smartphones (2007)

52. In late 2007, the Open Handset Alliance (OHA) announced its formation. The OHA was a coalition of more than 30 hardware, software and telecom-munications companies,

including Google, Qualcomm, Broadcom, HTC, Intel, Samsung, Motorola, Sprint, Texas Instruments and Japanese wireless carriers KDDI and NTT DoCoMo. The alliance's goal was to contribute to the development of the first open-source platform for mobile devices. Google released the public beta version of Android 1.0 for developers around the same time of the alliance's announcement, in November 2007. *Android OS* <https://www.techtarget.com/searchmobilecomputing/definition/Android-OS>. [*Product Grouping*: products grouped together by common features and design similarities].

53. The Samsung GT-I7500 Galaxy is a smartphone manufactured by Samsung that uses the open-source Android operating system. It was announced on 27 April 2009, [*"Samsung launches I7500, the company's first Android-powered mobile phone"*. *Innovator.samsungmobile.com*. Archived from the original on 2012-05-02. Retrieved 2010-12-16] and was released on 29 June 2009 as the first Android-powered device from Samsung Mobile, [*"Samsung Galaxy full specs – Phone Arena"*. *PhoneArena*. Retrieved 2017-04-26] and the first in what would become the long-running Galaxy series. It is succeeded by the Samsung Galaxy S.

Samsung's First "built-in" Smartphone Sensor for Chemical and/or Biological Detection (2008)

54. Samsung's camera lens in smartphones with microfluidic lens functions as cameras; "uses microscope to focus on a chemical sensor ... [a] megapixel camera captures the image from the array of nanopores uses fluid rather than bulky moving parts. The sensors contained in one array is determined by the pixel resolution phone camera. Megapixel resolution in cell phone cameras; probe a million different spots on the sensor simultaneously. *Tiny sensors tucked into cell phones could map airborne toxins in real time*. Source: [https://www.understanding nano.com/cell-phone-sensors-toxins.html](https://www.understandingnano.com/cell-phone-sensors-toxins.html)

Samsung’s First “remote” Smartphone Detectors for CBRNE Detection (2010)

55. Initially created in 2010 by the Air Force Research Laboratory: Through collaboration and innovation, the Defense Threat Reduction Agency has integrated its powerful, hazard-awareness-and-response tools into the *Android Tactical Assault Kit (or the Android Team Awareness Kit, ATAK)*. ATAK is a digital application available to warfighters throughout the DoD. Built on the Android operating system, ATAK offers warfighters geospatial mapping for situational awareness during combat — on an end-user device such as a smartphone or a tablet. With DTRA’s contribution, ATAK now includes chemical, biological, radiological, and nuclear (CBRN) plug-ins. As of 2020, ATAK has a growing base of 250,000 military and civilian users across numerous public safety agencies and US partner nations, and has seen the addition of 15 United States Department of Defense programs. “*ATAK Improves Situational Awareness for California Fire Department*”. Samsung Business Insights. 2019-10-16. Retrieved 2019-10-19.

Samsung’s First Smartphone Fingerprint Scanner (2010)

56. “The mid-2010s was when fingerprint scanners on smartphones really took off. The technology became a common feature for flagship smartphones. Apple’s first phone with the technology was the iPhone 5s, and Samsung’s was the Galaxy Note4.” *Fingerprint Scanners On Modern Smartphones*” <https://www.makeuseof.com/fingerprint-scanners-evolution/>

Samsung’s First Smartphone ‘Lock Disabling Mechanism’ that is Interconnected to the Fingerprint Scanner (2010)

57. “Samsung devices come with a range of security options, so that you can prevent unauthorized users from accessing your device. You can also set additional security measures that stop unauthorized users from resetting your device and its security methods ... [i]f you are locked out of your device and have not set up a remote unlock method, you will need to perform

a factory reset ...[t]here are several screen lock options available on Samsung devices. These will vary depending on your specific devices but can include: Swipe; Pattern; PIN; Password; Facial recognition; and Fingerprint recognition ... [i]f you can unlock your device using your biometric method (fingerprint or face recognition) but can't change your screen lock type because you've forgotten your PIN, pattern or password, use Find My Mobile to reset the unlock methods. This will remove all unlock data including PIN, pattern, password and biometric methods so that you can reset them again." *I can't unlock my Samsung phone & Remote unlock is off* <https://www.samsung.com/uk/support/mobile-devices/i-cant-unlock-my-device/>

Samsung's First Central Processing Unit (Chipset / System-on-a-chip) for the Smartphone (2010)

58. "Wanting to cement its position as a bonafide competitor in the SoC arena, Samsung started working on designing custom CPUs from scratch. It set up the Samsung Austin R&D Center (SARC) in 2010 and staffed it with chip industry veterans from the likes of Intel, AMD and ARM. Under Samsung's LSI division, the SARC was tasked with developing high-performance, low-power complex CPU architectures and designs ... Announced in November 2015, the Exynos 8 Octa 8890 was Samsung's first premium chipset with a custom-designed CPU and embedded LTE modem. It featured Mongoose 1 (M1) cores, the first in-house high-performance low-power ARM microarchitecture from Samsung. The company followed an aggressive 3-year design schedule for the custom CPU ..." *Samsung begins designing custom CPUs from scratch* <https://www.sammobile.com/samsung/exynos/#:~:text=Samsung%20introduced%20the%20industry%27s%20first,5%20Octa%205410%2C%20in%202013.>

Samsung's First Radio Frequency Near-Field Communication (NFC) for Smartphones (2010)

59. In 2010, the Samsung NEXUS S became the first Android with NFC support.

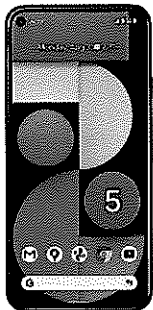

The *Nexus S 4G is a smartphone co-developed by Google and Samsung and manufactured by Samsung Electronics* for release in 2010. It first appeared in September 2011 in the U.S. on the Nexus S smartphone over the Sprint wireless network. The Samsung Galaxy S III launched in 2012 with NFC and S Beam (built on Android Beam) for data sharing. Samsung also launched tiny NFC TecTile tags in 2012 that can be programmed and rewritten by NFC devices. *The Evolution of Near Field Communication (NFC)* <https://www.techpats.com/evolution-near-field-communication-nfc/#:~:text=In%202010%2C%20the%20Samsung%20NEXUS,first%20Android%20with%20NFC%20support.>

Samsung's First Internet Mobile Web Browser for Smartphones (2012)

60. Samsung Internet replaced the stock Android browser as the default on Samsung Galaxy devices in 2012 “*Samsung Internet Overview*”, Samsung Developers. Retrieved 2018-04-08. Around early 2013, it was decided to base the browser on Chromium, and the first Chromium-based version was shipped with an S4 model later that year “*Samsung Internet browser will get ‘Smart Go Next’ for better form navigation, also coming to Chrome*”. Android Police. 10 October 2017. Retrieved 2018-04-08.

61. Samsung Internet is a mobile web browser for smartphones and tablets developed by Samsung Electronics. It is based on the open-source Chromium project. It comes pre-installed on Samsung Galaxy devices. Since 2015, it has been available for download from Google Play “*Introducing Samsung Internet v6.2 stable*”, Samsung Developers. Retrieved 2018-04-08; “*Get Samsung's Internet Browser on Almost Any Android Device*”, Gadget Hacks. Retrieved 2018-04-08; ... Samsung estimated that it had around 400 million monthly active users in 2016.

Samsung Galaxy S21 “mirrors” Google Pixel 5: “Literal Infringement”

Google Pixel 5 Smartphone	Samsung Galaxy S21 Smartphone	Claim 5 of the '287 Patent	Claim 23 of the '439 Patent	Claim 1 of the '189 Patent
		<p>A monitoring device, comprising:</p>	<p>A cell phone comprising:</p>	<p>A communication device of at least one of a cell phone, a smart phone, a desktop, a handheld, a PDA, a laptop, or a computer terminal for monitoring products, interconnected to a product for communication therebetween, comprising:</p>
<p>CPU: Octa-core (1 × 2.4 GHz Kryo 475 Prime & 1 × 2.2 GHz Kryo 475 Gold & 6 × 1.8 GHz Kryo 475 Silver) System-on-a-chip: Qualcomm Snapdragon 765G. OS: Android 11, upgradable to Android 13</p>	<p>CPU: Octa-core (1x2.84 GHz Cortex-X1 & 3x2.42 GHz Cortex-A78 & 4x1.80 GHz Cortex-A55) - USA/China. System-on-a-chip: Qualcomm SM8350 Snapdragon 888 5G (5 nm) - USA/China. OS: Android 11, upgradable to Android 13</p>	<p>at least one central processing unit (CPU);</p>	<p>a central processing unit (CPU) for executing and carrying out the instructions of a computer program;</p>	<p>at least one of a central processing unit (CPU) for executing and carrying out the instructions of a computer program, a network processor which is specifically targeted at the networking application domain, or a front-end processor for communication between a host computer and other devices;</p>
<p>Ambient Temperature sensor supported by the Android platform. Measures the ambient room temperature in degrees Celsius (°C). Monitoring air temperatures.</p>	<p>Ambient Temperature sensor supported by the Android platform. Measures the ambient room temperature in degrees Celsius (°C). Monitoring air temperatures.</p>	<p>at least one temperature sensor in communication with the at least one CPU for monitoring temperature;</p>	<p>X</p>	<p>X</p>

<p>Gravity sensor supported by the Android platform. Measures the force of gravity in m/s² that is applied to a device on all three physical axes (x, y, z). Motion detection (shake, tilt, etc.).</p>	<p>Gravity sensor supported by the Android platform. Measures the force of gravity in m/s² that is applied to a device on all three physical axes (x, y, z). Motion detection (shake, tilt, etc.).</p>	<p>at least one motion sensor in communication with the at least one CPU;</p>	<p>X</p>	<p>X</p>
<p>Light sensor supported by the Android platform. Measures the ambient light level (illumination) in lx. Controlling screen brightness. Screen: 6-inch flexible OLED display at 432 ppi</p>	<p>Light sensor supported by the Android platform. Measures the ambient light level (illumination) in lx. Controlling screen brightness. Screen: 6.2 inches flexible OLED display at 421 ppi</p>	<p>at least one viewing screen for monitoring in communication with the at least one CPU;</p>	<p>X</p>	<p>X</p>
<p>Connectivity: Wi-Fi 5 (a/b/g/n/ac) 2.4 + 5.0 GHz, Bluetooth 5.0 + LE, NFC, GPS (GLONASS, Galileo, BeiDou), eSIM capable</p>	<p>Connectivity: Wi-Fi 802.11 a/b/g/n/ac/6, dual-band, Wi-Fi Direct. Bluetooth 5.0, A2DP, LE. NFC, GPS, GLONASS, BDS, GALILEO. Nano-SIM and eSIM or Dual SIM</p>	<p>at least one global positioning system (GPS) connection in communication with the at least one CPU;</p>	<p>at least one of a satellite connection, Bluetooth connection, WiFi connection, internet connection, radio frequency (RF) connection, cellular connection, broadband connection, long range radio frequency (RF) connection, short range radio frequency (RF) connection, or GPS connection;</p>	<p>at least one satellite connection, Bluetooth connection, WiFi connection, internet connection, radio frequency (RF) connection, cellular connection, broadband connection, long and short-range radio frequency (RF) connection, or GPS connection;</p>

<p>Connectivity: Wi-Fi 5 (a/b/g/n/ac) 2.4 + 5.0 GHz, Bluetooth 5.0 + LE, NFC, GPS (GLONASS, Galileo, BeiDou), eSIM capable</p>	<p>Connectivity: Wi-Fi 802.11 a/b/g/n/ac/6, dual- band, Wi-Fi Direct. Bluetooth 5.0, A2DP, LE. NFC, GPS, GLONASS, BDS, GALILEO. Nano- SIM and eSIM or Dual SIM</p>	<p>at least one of an internet connection or a Wi-Fi connection in communication with the at least one CPU;</p>	<p>wherein at least one of... WiFi connection, internet connection, radio frequency (RF) connection, cellular connection... capable of signal communication with the transmitter or the receiver;</p>	<p>wherein the only type or types of communication with the transmitter and the receiver of the communication device and transceivers of the products is a type or types selected from the group... of satellite, Bluetooth, WiFi...</p>
<p>Connectivity: Wi-Fi 5 (a/b/g/n/ac) 2.4 + 5.0 GHz, Bluetooth 5.0 + LE, NFC, GPS (GLONASS, Galileo, BeiDou), eSIM capable</p>	<p>Connectivity: Wi-Fi 802.11 a/b/g/n/ac/6, dual- band, Wi-Fi Direct. Bluetooth 5.0, A2DP, LE. NFC, GPS, GLONASS, BDS, GALILEO. Nano- SIM and eSIM or Dual SIM</p>	<p>at least one of a Bluetooth connection, a cellular connection, or a satellite connection in communication with the at least one CPU;</p>	<p>at least one of a... Bluetooth connection, WiFi connection, internet connection... cellular connection... short range radio frequency (RF) connection, or GPS connection;</p>	<p>X</p>
<p>Google's Android operating system features a lock mechanism to secure your phone, known as pattern lock. To set, drag your finger along lines on the screen. To unlock the phone, replicate the pattern drawn. If you fail to solve the pattern too many times, the phone locks and cannot be unlocked without logging into the associated Google account.</p> <p>Google Nest × Yale Lock is connected to the Nest app; you can lock or unlock your door from your phone.</p>	<p>The Android operating system features a lock mechanism to secure your phone, known as pattern lock. To set, drag your finger along lines on the screen. To unlock the phone, replicate the pattern drawn. If you fail to solve the pattern too many times, the phone locks and cannot be unlocked without logging into the associated Google account.</p> <p>Samsung Smart Doorlock - Apps on Google Play. Google Nest ×Yale Lock is connected to the Nest app; you can lock or unlock your door from your phone.</p>	<p>at least one locking mechanism in communication with the at least one CPU for locking the communication device, the at least one locking mechanism configured to at least one of engage (lock) the communication device, disengage (unlock) the communication device, or disable (make unavailable) the communication device;</p>	<p>whereupon the cell phone is interconnected to the cell phone detection device to receive signals or send signals to lock or unlock doors, to activate or deactivate security systems, to activate or deactivate multi- sensor detection systems, or to activate or deactivate the cell phone detection device;</p>	<p>X</p>

<p>Pixel phones use USB-C with USB 2.0 power adapters and cables. To charge your phone with a USB-A power adapter, use a USB-C to USB-A cable.</p>	<p>Samsung USB-C Cable lets you charge your USB-C device as well as sync your data to your smartphone</p>	<p>at least one power source comprising at least one of a battery, electrical connection, or wireless connection, to provide power to the communication device;</p>	<p>X</p>	<p>X</p>
<p>BIOMETRICS: Biometric factors allow for secure authentication on the Android platform. The Android framework includes face and fingerprint biometric authentication. Android can be customized to support other forms of biometric authentication (such as Iris).</p>	<p>BIOMETRICS: Biometric factors allow for secure authentication on the Android platform. The Android framework includes face and fingerprint biometric authentication. Android can be customized to support other forms of biometric authentication (such as Iris).</p>	<p>at least one biometric sensor in communication with the at least once CPU for providing biometric authentication to access the communication device;</p>	<p>wherein the cell phone is equipped with a biometric lock disabler that incorporates at least one of a fingerprint recognition, voice recognition, face recognition, hand geometry, retina scan, iris scan, or signature such that the cell phone is locked by the biometric lock disabler to prevent unauthorized use; and</p>	<p>wherein the communication device is equipped with a biometric lock disabler that incorporates at least one of a fingerprint recognition, voice recognition, face recognition, hand geometry, retina scan, iris scan and signature such that the communication device that is at least one of the cell phone, the smart phone, the desktop, the handheld, the PDA, the laptop or the computer terminal is locked by the biometric lock disabler to prevent unauthorized use</p>

<p><i>Android Team Awareness Kit, ATAK (built on the Android operating system) provides a single interface for viewing and controlling different CBRN-sensing technologies, whether that is a wearable smartwatch that measures a warfighter’s vitals (e.g., heart rate) or a device mounted on a drone to detect chemical warfare agents.</i></p>	<p><i>Android Team Awareness Kit, ATAK (built on the Android operating system) provides a single interface for viewing and controlling different CBRN-sensing technologies, whether that is a wearable smartwatch that measures a warfighter’s vitals (e.g., heart rate) or a device mounted on a drone to detect chemical warfare agents.</i></p>	<p>at least one sensor for chemical, biological, or human detection in communication with the at least one CPU;</p>	<p>the cell phone is at least a fixed, portable or mobile communication device interconnected to the cell phone detection device, capable of wired or wireless communication therebetween; and</p>	<p>the communication device is at least a fixed, portable or mobile communication device interconnected to a fixed, portable or mobile product, capable of wired or wireless communication therebetween...</p>
<p><i>Android Team Awareness Kit, ATAK (built on the Android operating system) is a digital application available to warfighters throughout the DoD. ATAK offers warfighters geospatial mapping for situational awareness during combat — on an end-user device such as a smartphone or a tablet. With DTRA’s contribution, ATAK now includes chemical, biological, radiological, and nuclear (CBRN) plug-ins.</i></p>	<p><i>Android Team Awareness Kit, ATAK (built on the Android operating system) is a digital application available to warfighters throughout the DoD. ATAK offers warfighters geospatial mapping for situational awareness during combat — on an end-user device such as a smartphone or a tablet. With DTRA’s contribution, ATAK now includes chemical, biological, radiological, and nuclear (CBRN) plug-ins.</i></p>	<p>one or more detectors in communication with the at least one CPU for detecting at least one of chemical, biological, radiological, or explosive agents;</p>	<p>at least one of a chemical sensor, a biological sensor, an explosive sensor, a human sensor, a contraband sensor, or a radiological sensor capable of being disposed within, on, upon or adjacent the cell phone;</p>	<p>wherein the communication device receives a signal via any of one or more products listed in any of the plurality of product grouping categories;</p>

<p>Connectivity: Wi-Fi 5 (a/b/g/n/ac) 2.4 + 5.0 GHz, Bluetooth 5.0 + LE, NFC, GPS (GLONASS, Galileo, BeiDou), eSIM capable</p>	<p>Connectivity: Wi-Fi 802.11 a/b/g/n/ac/6, dual- band, Wi-Fi Direct. Bluetooth 5.0, A2DP, LE. NFC, GPS, GLONASS, BDS, GALILEO. Nano- SIM and eSIM or Dual SIM</p>	<p>at least one radio- frequency near-field communication (NFC) connection in communication with the at least one CPU...</p>	<p>X</p>	<p>X</p>
<p>Google Nest × Yale Lock is connected to the Nest app; you can lock or unlock your door from your phone.</p> <p><i>Android Team Awareness Kit,</i> ATAK (built on the Android operating system) provides a single interface for viewing and controlling different CBRN-sensing technologies</p>	<p>Samsung Smart Doorlock - Apps on Google Play. Google Nest × Yale Lock is connected to the Nest app; you can lock or unlock your door from your phone.</p> <p><i>Android Team Awareness Kit,</i> ATAK (built on the Android operating system) provides a single interface for viewing and controlling different CBRN-sensing technologies</p>	<p>at least one of a transmitter or a transceiver in communication with the at least one CPU configured to send signals to monitor at least one of a door, a vehicle, or a building, send signals to lock or unlock doors, send signals to control components of a vehicle, send signals to control components of a building, or... detect at least one of a chemical biological... agent such that the communication device is capable of communicating, monitoring, detecting, and controlling.</p>	<p>a transmitter for transmitting signals and messages to a cell phone detection device; a receiver for receiving signals from the cell phone detection device;</p>	<p>a transmitter for transmitting signals and messages to at least one of plurality product groups based on the categories of a multi-sensor detection device, a maritime cargo container, a cell phone detection device, or a locking device;</p> <p>a receiver for receiving signals, data or messages from at least one of plurality product groups based on the categories of a multi-sensor detection device, a maritime cargo container, a cell phone detection device, or a locking device;</p>

<p>Google Nest × Yale Lock is connected to the Nest app; you can lock or unlock your door from your phone.</p> <p><i>Android Team Awareness Kit, ATAK (built on the Android operating system) provides a single interface for viewing and controlling different CBRN-sensing technologies</i></p>	<p>Samsung Smart Doorlock - Apps on Google Play. Google Nest × Yale Lock is connected to the Nest app; you can lock or unlock your door from your phone.</p> <p><i>Android Team Awareness Kit, ATAK (built on the Android operating system) provides a single interface for viewing and controlling different CBRN-sensing technologies</i></p>	<p>X</p>	<p>X</p>	<p>whereupon the communication device, is interconnected to a product equipped to receive signals from or send signals to lock or unlock doors, activate or deactivate security systems, activate or deactivate multi-sensor detection systems, or to activate or deactivate cell phone detection systems</p>
<p><i>Android Team Awareness Kit, ATAK (built on the Android operating system) is a digital application available to warfighters throughout the DoD. ATAK offers warfighters geospatial mapping for situational awareness during combat — on an end-user device such as a smartphone or a tablet. With DTRA’s contribution, ATAK now includes chemical, biological, radiological, and nuclear (CBRN) plug-ins.</i></p>	<p><i>Android Team Awareness Kit, ATAK (built on the Android operating system) is a digital application available to warfighters throughout the DoD. ATAK offers warfighters geospatial mapping for situational awareness during combat — on an end-user device such as a smartphone or a tablet. With DTRA’s contribution, ATAK now includes chemical, biological, radiological, and nuclear (CBRN) plug-ins.</i></p>	<p>X</p>	<p>a transmitter for transmitting signals and messages to a cell phone detection device; a receiver for receiving signals from the cell phone detection device;</p>	<p>wherein at least one satellite connection, Bluetooth connection, WiFi connection, internet connection, radio frequency (RF) connection, cellular connection, broadband connection... short range radio frequency (RF) connection is capable of signal communication with the transmitter and the receiver of the communication device and transceivers of the products;</p>

<p><i>Android Team Awareness Kit</i>, ATAK (built on the Android operating system) is a digital application available to warfighters throughout the DoD. ATAK offers warfighters geospatial mapping for situational awareness during combat — on an end-user device such as a smartphone or a tablet. With DTRA’s contribution, ATAK now includes chemical, biological, radiological, and nuclear (CBRN) plug-ins.</p>	<p><i>Android Team Awareness Kit</i>, ATAK (built on the Android operating system) is a digital application available to warfighters throughout the DoD. ATAK offers warfighters geospatial mapping for situational awareness during combat — on an end-user device such as a smartphone or a tablet. With DTRA’s contribution, ATAK now includes chemical, biological, radiological, and nuclear (CBRN) plug-ins.</p>	<p>X</p>	<p>whereupon a signal sent to the receiver of the cell phone detection device from at least one of the chemical sensor, the biological sensor, the explosive sensor, the human sensor, the contraband sensor, or the radiological sensor, causes a signal that includes at least one of location data or sensor data to be sent to the cell phone.</p>	<p>X</p>
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62. To avoid infringing Plaintiff’s patents, Samsung must do the following: 1) discontinue using the open-source Android operating system; 2) block all software applications that are specific to integrating CBRNE sensors with Samsung’s mobile devices; 3) design mobile devices that does not include a port for CBRNE plug-ins; 4) design mobile devices that does not include cameras for CBRNE detecting; 5) design mobile devices that does not include the nine standard sensors illustrated in *Figure 4* below that are used as biosensors; or 6) settle previous damages with Plaintiff and negotiate a licensing agreement.

63. The devices, and products listed in the above “ALLEGED INDUCED AND CONTRIBUTORY INFRINGING PRODUCTS” section of this document are all included as limitations of claim 5 of the ‘287 patent (see claim chart above). Amendment is reserved.

Figure 1 shows the integration requirement of the three patent claims [5, 23, & 1] of the three patents [‘287, ‘439, & ‘189] asserted in this case.

Claim 5 of the 10,163,287 Patent	Claim 23 of the 9,589,439 Patent	Claim 1 of the 9,096,189 Patent
<p>A monitoring device, comprising:</p> <p>at least one sensor for chemical, biological, or human detection in communication with the at least one CPU;</p> <p>one or more detectors in communication with the at least one CPU for detecting at least one of chemical, biological, radiological, or explosive agents</p>	<p>A cell phone comprising:</p> <p>at least one of a chemical sensor, a biological sensor, an explosive sensor, a human sensor, a contraband sensor, or a radiological sensor capable of being disposed within, on, upon or adjacent the cell phone;</p> <p>... the chemical sensor, the biological sensor, the explosive sensor, the human sensor, the contraband sensor, or the radiological sensor, causes a signal that includes [] location data [] sent to the cell phone.</p>	<p>A communication device of [] a cell phone, a smart phone, a desktop, a handheld, a PDA, a laptop, or a computer terminal [] comprising:</p> <p>a transmitter for transmitting signals and messages to at least one of [] a multi-sensor detection device, [] a cell phone detection device...;</p> <p>a receiver for receiving signals, data or messages from at least one of [] a multi-sensor detection device, [] a cell phone detection device...;</p>

Figure 1

The patents’ written support can be found in Plaintiff’s patent specifications. Detector case is considered the “genus” to a group of products that represent the “species”. Included in the group are CBRNE-H sensors.

... detector cases that is mounted to, detector cases that is affixed to, detector cases that is outside of, detector cases that is inside of, and detector cases that is adjacent to; the products grouped into what may be referred to as Product grouping 4 (monitoring & communication devices) include, but are not limited to, mobile communication devices, mobile communication units, portable communication devices, portable communication equipment, wired communication devices, wireless communication devices, monitoring sites, monitoring terminals, web servers, desktop personal computers (PCs), notebook personal computers (PCs), laptops, [] cell phones, [] personal digital assistants (PDAs), [], handhelds.

Figure 2 shows how the smartphone cameras satisfies the requirements of the three patent claims [5, 23, & 1]. The camera is an addition or an alternative to the ATAK.

Google Pixel 5 Smartphone	Samsung Galaxy S21 Smartphone	Patent #: 10,163,287; Independent Claim 5	Patent #: 9,589,439; Independent Claim 23	Patent #: 9,096,189; Independent Claim 1
<p><i>Google Pixel 5: Dual - 12.2 MP (megapixel), OIS 16 MP (megapixel)</i> Camera lens in cell phone with microfluidic lens functions as camera; uses microscope to focus on a chemical sensor. A <i>megapixel</i> camera captures the image from the array of nanopores uses fluid rather than bulky moving parts. The sensors contained in one array is determined by the <i>pixel</i> resolution phone camera. <i>Megapixel</i> resolution in cell phone cameras; probe a million different spots on the sensor simultaneously. <i>Tiny sensors tucked into cell phones could map airborne toxins in real time.</i> Source: https://www.understandingnano.com/cell-phone-sensors-toxins.html</p>	<p><i>Samsung Galaxy S21: 12 MP (megapixel), Dual Pixel PDAF OIS 64 MP (megapixel)</i> Camera lens in cell phone with microfluidic lens functions as camera; uses microscope to focus on a chemical sensor. A <i>megapixel</i> camera captures the image from the array of nanopores uses fluid rather than bulky moving parts. The sensors contained in one array is determined by the <i>pixel</i> resolution phone camera. <i>Megapixel</i> resolution in cell phone cameras; probe a million different spots on the sensor simultaneously. <i>Tiny sensors tucked into cell phones could map airborne toxins in real time.</i> Source: https://www.understandingnano.com/cell-phone-sensors-toxins.html</p>	<p><i>Claim 5 limitation of the '287 Patent</i></p> <p>one or more detectors in communication with the at least one CPU for detecting at least one of chemical, biological, radiological, or explosive agents;</p>	<p><i>Claim 23 limitation of the '439 Patent</i></p> <p>at least one of a chemical sensor, a biological sensor, an explosive sensor, a human sensor, a contraband sensor, or a radiological sensor capable of being disposed within, on, upon or adjacent the cell phone;</p>	<p><i>Claim 1 limitation of the '189 Patent</i></p> <p>a transmitter for transmitting signals and messages to at least one of plurality product groups based on the categories of a multi-sensor detection device ... a cell phone detection device ...</p> <p>a receiver for receiving signals, data or messages from at least one of plurality product groups based on the categories of a multi-sensor detection device ... a cell phone detection device</p>

Figure 2

Figure 3 is a visual display of different ways the smartphone camera^{1 2} can be used for detecting Chem/Bio agents. For each different way used, it qualifies as an alternative to the ATAK.

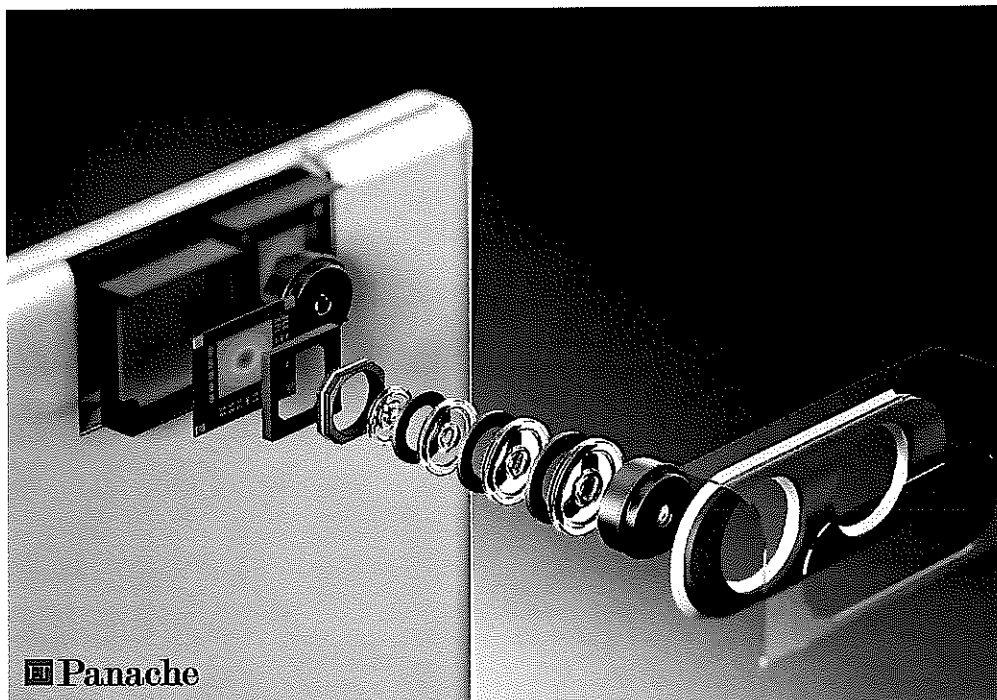


Figure 3

1 The camera captures the image from the array of nanopores that uses fluid rather than bulky moving parts. The sensors contained in one array is determined by the resolution phone camera. The resolution in cell phone cameras; probe a million different spots on the sensor simultaneously. *Tiny sensors tucked into cell phones could map airborne toxins in real time.* Source: <https://www.understandingnano.com/cell-phone-sensors-toxins.html>

2 Hyperspectral imaging scans for light frequencies that humans can't see in order to identify the unique chemical signatures of different substances. They say their device, which can be mass produced, is compatible with all standard smartphone cameras. *These New Smartphone Cameras Could Tell You What an Object Is Made of* <https://www.sciencealert.com/new-smartphone-cameras-could-tell-you-what-an-object-is-made-of>

Figure 4 describes how at least nine (9) standard sensors for the smartphone can be used as “biosensors”. For each different way used, it qualifies as an alternative to the ATAK.

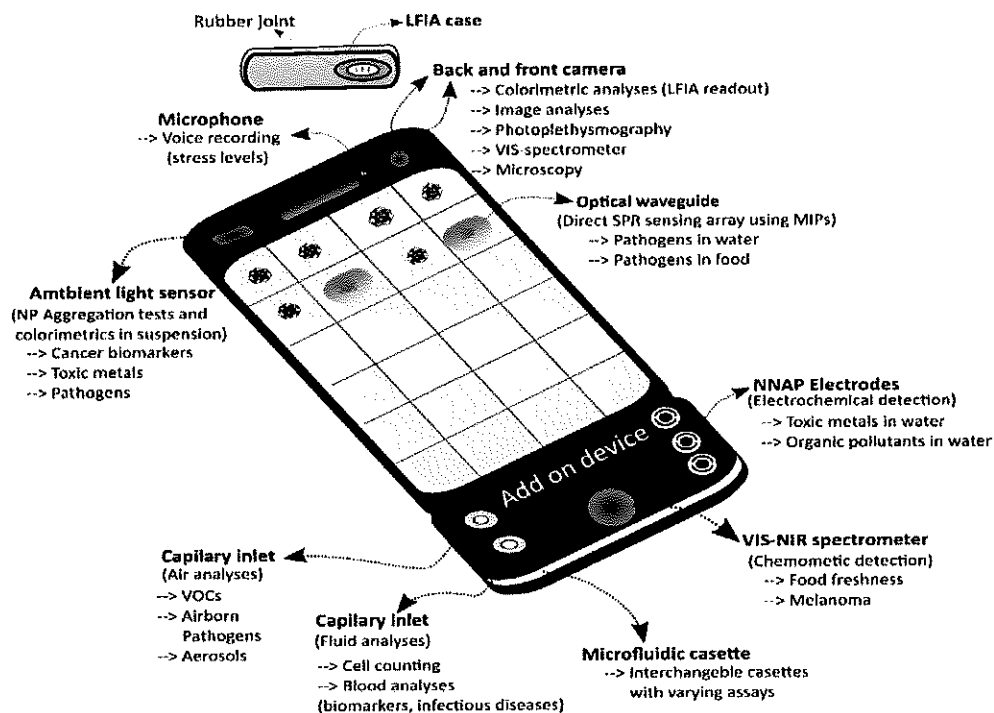


Figure 4

The Smartphones Biosensors:

1. Ambient light sensor: Cancer biomarkers; Toxic metals; Pathogens
2. Capillary inlet: (Air analysis). Airborne Pathogens; Aerosols
3. Capillary inlet: (Fluid analysis). Blood analysis; Biomarkers
4. Microfluidic cassette: Interchangeable cassettes with varying assays
5. VIS-NIR spectrometer: Food freshness; Melanoma
6. NNAP Electrodes: Toxic metals and Organic pollutants in water
7. Optical Waveguide: Pathogens in water and food
8. Back and front camera: Colorimetric analysis; Image analysis
9. Microphone: Voice recording stress levels

Figure 5 list some of the same standard sensors illustrated in Figure 4. The port on the smartphone below is used for the CBRN *plug-ins* included in ATAK.

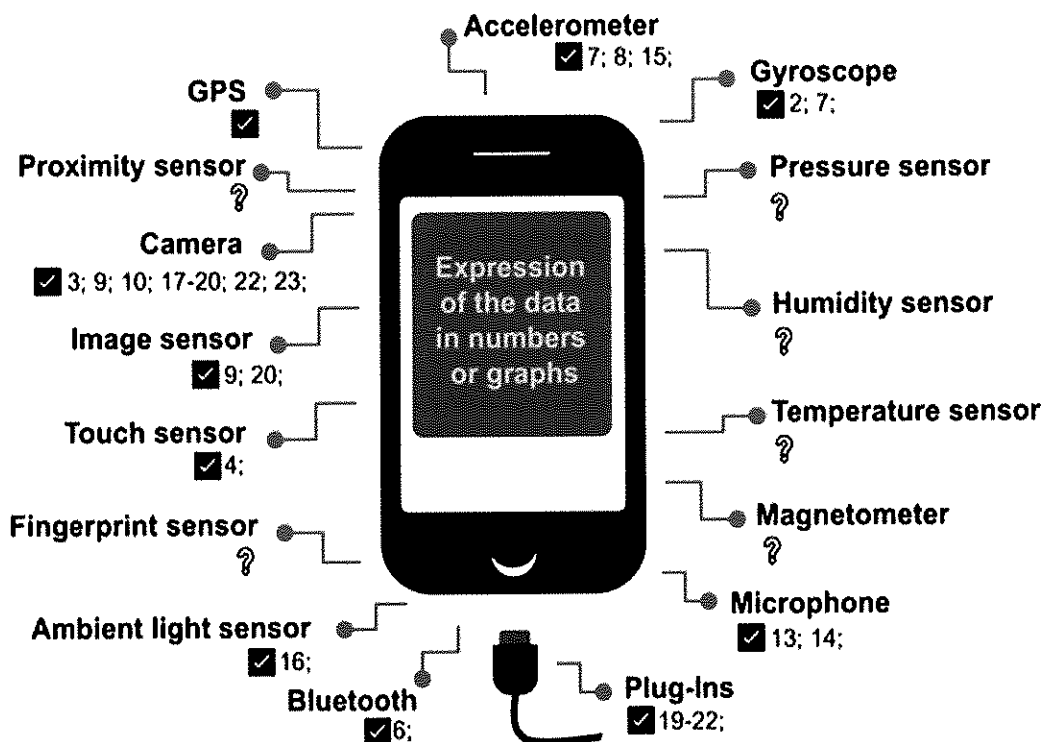


Figure 5

ATAK is a digital application available to warfighters throughout the DoD. Built on the Android operating system, ATAK offers warfighters geospatial mapping for situational awareness during combat — on an end-user device such as a smartphone or a tablet. With DTRA’s contribution, ATAK now includes chemical, biological, radiological, and nuclear (CBRN) *plug-ins*.

Just having a plug-in is not all that’s involved. There has to be an app specific software to sync the chemical, biological, radiological, and nuclear sensors to the smartphone plus the Google Android Operating System.

PRAYER FOR RELIEF

Wherefore, Golden respectfully requests that this Court enter:

A. A judgment in favor of Golden that the defendant has infringed at least one or more claims of the '287 Patent, the '439 Patent, and the '189 Patent as aforesaid;

B. A permanent injunction enjoining the defendant, its officers, directors, agents, servants, affiliates, employees, divisions, branches, subsidiaries, parents and all others acting in active concert or privity therewith from direct, indirect and/or joint infringement of the '287, '439, and '189 patents as aforesaid pursuant to 35 U.S.C. § 283;

C. A judgment and order requiring the defendant to pay Golden its damages with pre- and post-judgment interest thereon pursuant to 35 U.S.C. § 284;

D. As set forth in Golden's preliminary infringement contentions that the Defendant in this case is making, using, offering for sale, selling and/or importing the aforementioned alleged infringing devices that have at a minimum, directly infringed the '287, '439, and '189 patents. The Defendant is thereby liable for infringement of the '287, '439, and '189 patents pursuant to 35 U.S.C. § 271. The Defendant has caused damage to Golden, which infringement and damage will continue unless and until the Defendant is enjoined.

E. Any and all further relief to which the Court may deem Golden entitled.

DEMAND FOR JURY TRIAL

Golden requests a trial by jury on all issues so triable by right pursuant to Fed. R. Civ. P.

38. A right guaranteed under the Seventh Amendment of the United States Constitution.

Respectfully submitted,

S/  Date: 01 /02/2023

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