UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

UBER TECHNOLOGIES, INC.,
Petitioner,

v.

ENOVSYS LLC,
Patent Owner.

Case IPR2024-00827
Patent 6,756,918

PATENT OWNER ENOVSYS, LLC'S PRELIMINARY RESPONSE PURSUANT TO 37 C.F.R. § 42.107(a)

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I. INTRODUCTION

Patent Owner, Enovsys, LLC ("Enovsys"), submits this Preliminary Response ("POPR") pursuant to 37 C.F.R. § 42.107(a) to the Inter Partes Review ("IPR") petition ("Petition") filed by Uber Technologies, Inc. ("Petitioner" or "Uber") for Claims 1, 2, 15, and 22 of U.S. Patent 6,756,918 (the "'918 Patent"). The Board should deny institution.

The patented technology requires requesting the location of a cellular phone or pager ("PRU") within a specific pollable geographic boundary of telecommunication networks in the wireless industry to make proximity and tracking determinations amongst such devices so that location-based services can be scalably and efficiently provided in networks that may have tens of millions of customers across the nation and even internationally.

Participating wireless customers reporting their cell phone locations to the system specify a **pollable** geographic boundary within the coverage area of the network, and send a query **within that pollable boundary** for the location of cell phones of another participating wireless customer currently within the boundary. In this manner, the network efficiently facilitates the identification of the location of nearby wireless customer's cell phones. The system also applies a specific tracking algorithm that determines that two cell phones within the same **pollable** geographic boundary of the network are moving in tandem with each other within a pre-defined

distance of each other over a pre-specified tracking distance during a pre-specified tracking time period.

In contrast, each of the asserted references either poll only individual units or poll all units and instruct them to report their location back to the network if and when they meet a location criterion and none disclose the specific tracking methodology of the ’918 Patent, which is directed to determining whether two cell phones are moving in tandem during a tracking period.

The Petition contains numerous additional flaws.

First, the Petition fails to construe key claim terms such as “portable remote unit” (and other terms used interchangeably therewith) and “geographic region of the network” that further distinguish the claims from the asserted art.

Second, the Petition relies on references that describe different networks than the network claimed in the ’918 Patent with fundamental structural differences—both from the claimed invention of the ’918 Patent as well as each other. The ’918 Patent improves the provision of location-based services in wireless cellular telecommunication networks. In contrast, the main prior art systems are radio based offender/victim or crime/offender law enforcement systems (*Layson*’757/*Layson*’213), fleet management systems (*Wang*), and monitoring devices (*Taylor, Fast*).

Third, the Petition mischaracterizes the disclosures of certain references. For example, contrary to Uber's assertions, none of the references limit polling to only those units currently within a specified boundary.

Fourth, the Petition fails to provide a reasonable motivation for modifying the reference in the manner proposed, which the Petition admits is a necessary step in making its combination. For example, neither of the *Layson* systems requires proximity or tracking determinations between unrelated offenders and victims because offenders do not have location constraints imposed upon them relative to the locations of unrelated victims. Likewise, Uber cannot establish a need to modify *Layson* to completely eliminate location reporting in an exclusion zone.

Fifth, the Petitions fails to show that the proposed combination arrives at the claimed invention without undue experimentation. For example, Uber proposes that the combined *Layson* system could be further combined with *IllinoisLaw* to arrive at the specific tracking algorithm taught and claimed in the '918 Patent but fails to show how *IllinoisLaw* teaches that algorithm.

Sixth, the Petition does not provide adequate support and illogical motivations for combining systems. For example, Uber asserts an unnecessary modification of *Layson'757* without supporting why a POSITA would go through the effort to make the system more complex in light of the concocted edge case. Accordingly, Uber

does not establish that a POSITA would be motivated to modify *Layson'757* in such a manner without improper reliance on hindsight.

In short, the Petition asserts fundamentally different references and proposes modifications contrary to their purposes and teachings that no POSITA would have pursued.

Accordingly, the Petition should be denied.

II. SUMMARY OF THE '918 patent

A. Specification of the '918 patent

The '918 patent discloses and claims systems and methods for providing efficient and scalable location-based services using the cellular infrastructure in the wireless telecommunication industry, recognizing there will be a "wide range" of such services and in order to be successful the system must effectively "the remote unit must be able to obtain and relay its location information to other communication targets of the network requesting such information." (1:14-25). In such systems and methods, the network is dividing into "standard geographic areas", *e.g.* 201-204, that may be individually queried for the locations of PRUs therein to prevent overloading of shared network resources. *See* Fig. 3 and 2:17-19; 3:56-62; 4:24-38; 4:43-51, 4:61-5:3, 7:47-61; 8:26-37; 10:45-58. *See also,* Declaration of Joseph C. McAlexander III, Ex. 2001, ¶¶34-44. Thus, for instance,

if a distressed wireless customer wishes to have another wireless customer who is nearby help them, the network individually polls a nearby boundary for the locations of nearby wireless customers within proximity of the distressed wireless customer.

B. Level of Ordinary Skill in the Pertinent Art

For purposes of this proceeding only, Patent Owner does not dispute the proffered definition for a POSITA. Pet. at 6.

C. Claim Construction

Patent Owner submits the following proposed constructions:

1. ***"portable mobile remote unit"/"mobile remote unit"/"portable communication unit"/"remote unit"/"communication unit" (Claims 1, 2, 15, 22)***

Petitioner offers no constructions for these terms. A POSITA would understand from the claims and speciation that these terms are used interchangeably in the claims. For example, Claim 1 refers to "portable mobile remote units" interchangeably with "communication units" and "mobile remote units" *Compare, e.g.,* Ex-1001, 11:57 ("a portable remote unit") *with* 11:58 ("a network of communication units") *and* 11:64-67 ("means to provide the location of the *portable mobile remote unit* to the network upon determination that the *portable mobile remote unit* is within the geographic boundary obtained at the

network") *with* 12:1-4 ("means to determine and report to the system upon request that, another *mobile remote unit* of the network has tracked *the portable mobile remote unit* over a period of time."). Claim 2 depends from Claim 1 and refers to the same things as a "remote unit". *Id.,* 12:5-8. Claim 15, likewise, uses "portable remote unit" interchangeably with "portable communication unit." *Compare,* 14:3-7 ("A method for method for determining that a *first portable remote unit* of a wireless consumer associated with a network is being tracked by at least *a second portable remote unit* that is in motion with the first portable remote unit over a tracking period") *with* 14:8-19 (steps (i), (ii) and (iii) interchangeably using "portable remote unit" with "portable communication unit"). *See also*, Claim 22, 15:25-37 ("communication units that provide location information to the network for a time while in motion"). *See,* EX.2001, ¶49.

Each of these terms refer to one and the same thing in the specification, "cell phones or other hand-carried wireless telecommunication devices to communicate via cellular telecommunication networks available to the general public." Ex-1001, Figure 1 (depicting the portable remote units 501-508 of the '918 patent are cell phones using cellular infrastructure with wireless consumer subscribers 701-709 with their cell phones 501-509 located in different cells 201-204 of the cellular

network serviced by different cell towers 401-404 and other cellular telecommunication infrastructure 802 (as also described 4:24-43). *See also,* 1:14-19 (describing the system is directed to "telecommunication services and systems" in the "wireless industry"), 1:66-2:5 (referring to "wireless consumers"), 2:17-23 (referring to "mobile users"), 2:31-48 (referring to "wireless subscribers"); 3:4-22 (referring to a "mobile telecommunication system"). Ex.2001, ¶50.

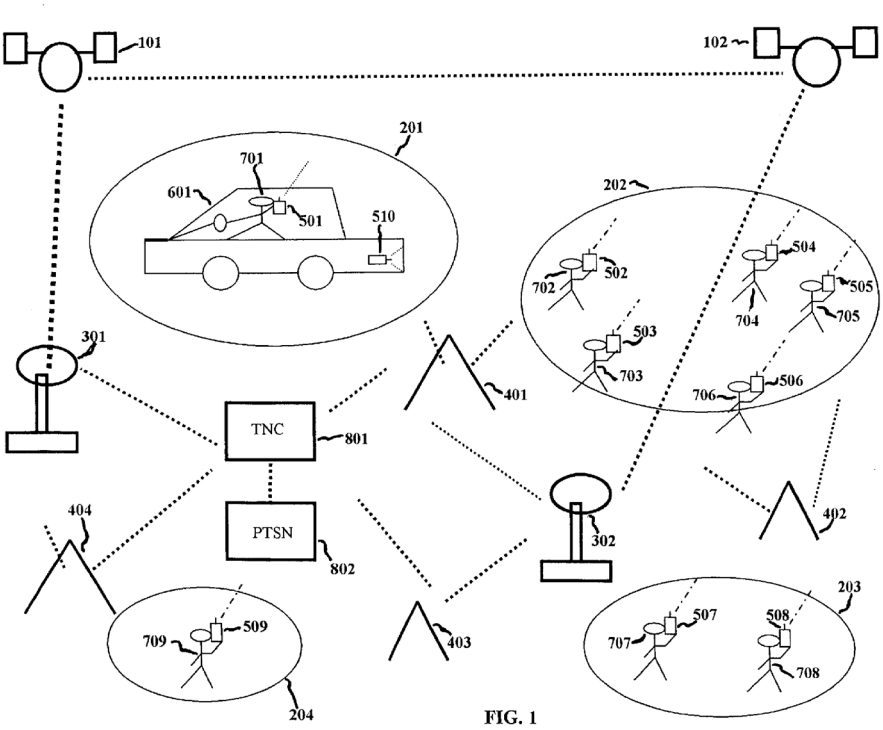


FIG. 1

The '918 patent direct to the "wireless industry [that] is currently gearing towards the provision of a wide range of location based services…utilizing the location of a subscriber's portable remote unit" (*Id.,* 1:17-20). It explains further that "in today's market, such mobile units are usually small, compact and

lightweight" and "could easily be concealed to reveal the location of a mobile user" (*Id.,* 1:62-66). Giving the example of someone placing their mobile phone into someone else's car or luggage to surreptitiously track the individual's location, the specification observes "[t]he risk of abuse clearly exists and must be handled appropriately by wireless vendors" (*Id.,* 2:4-5). Likewise, the specification gives an example how the methods and systems can be used to provide assistance to a subscribed mobile phone user by using the location of their PRU to page PRU in the same geographic area of the network to locate another subscriber's PRU who can help and provide their location. (*Id.,* 2:17-30). Ex.2001, ¶51.

2. "geographic region of a wireless network" (Claim 1)

Petitioner offers no construction of this term. However, a POSITA would understand this term to refer to "a specific coverage area of a wireless network that may be individually queried for PRU information, such as location." This is consent with the specification. As the '918 Patent explains, for example, "[a] PRU may choose to instruct the network to relay certain information to mobile units in a specific geographic region. That information would then be appended to the geographic boundary information and beamed in the specified geographic region." (*Id.*, 10:45-49). A POSITA reading the '918 Patent would understand that

"beamed in the specified geographic region" refers to the message being transmitted for consumption within a specific coverage area of the network, such as the area within the range of a specific cell tower utilized by the network. Ex.2001, ¶52.

3. "means to obtain the location of the portable mobile remote unit" (Claim 1)

The function of this claim element is "to obtain the location of the portable remote unit." The minimum structure for performing the recited function is "a control unit programmed to collect location data of a portable remote unit, and equivalents thereof." Such an interpretation is supported by the '918 Patent's specification and the required function being performed at a control unit of the network. As shown in Fig. 5 (reference 3) and Fig. 6 (reference 2); 4:14-17, 10:21-38 (the PRU may obtain location information and report it to network); 4:61-5:4 (control unit controls the action of the PRU and interacts with transceiver and antenna); 11:2-6 (the network may perform any function of the PRU). *See,* EX.2001, ¶53.

The PRU itself already includes an antenna that could be used to receive GPS and cell tower signals as well as operating system programming to determine its current location (*e.g.*, longitude and latitude coordinates) from such signals and also the hardware to store the GPS coordinates, and a transceiver. *See* Ex-1001,

Fig. 2 (receiver circuity 21 and memory means 26 used by control unit 22) and 4:61-5:1 (explaining that the control unit 22 processes the information whereas the transceiver 21 receives and transmits information to the network via the PRU's antenna 20); Fig. 7 (programming algorithm used by a control unit to query specific geographic boundaries of the network). The specification is also very clear that the PRU can obtain its location from "whatever technique" (6:4-7), which may or may not require an antenna, and the basic function of obtaining a location by a network control unit does not require an antenna. Therefore, to implement the means-plus-function claim elements in the '918 Patent's claims, including this claim element, a POSITA would understand that they only need to add a control unit programmed to perform the function according to the algorithms described in the '918 specification. A transceiver is not needed because the control unit at the PRU or at the network can obtain the stored location information via a wired line. *See,* Ex.2001, ¶54.

4. "means to obtain geographic boundary information in order to disclose a global location at the network" (Claim 1)

This claim element functions "to obtain geographic boundary information in order to disclose a global location to the network." The minimum structure for performing the recited function is "a control unit programmed to receive information that identifies a contiguous area on earth, within the coverage area of

the network, that can be individually queried to disclose a PRU's global location located within that coverage area of the network, and equivalents thereof." Ex-1001, Fig 6, reference 1, Fig. reference 1 shows a basic function to obtain geographic boundary information by a control unit that is programmed to do so. (*Id.,* 6:65-7:1). Also Fig. 7, at reference 1, shows such support as well. *See,* EX.2001, ¶55.

The '918 Patent's specification describes that the network polls specific areas of the network so that query or search only involves the PRUs currently located in such areas and not all the PRUs participating in the network wherever they may be located. For example, a distressed wireless customer may wish to have another wireless customer who is nearby pick them up. The network can send a message only to those wireless customers that are serviced by the same or adjacent cell phone towers. *See, e.g.,* Ex-1001, 7:47:59 ("The user could initiate a page from their PRU **for the closest available PRUs that could be found in that geographic jurisdiction**. … As stated earlier, appropriate terrestrial technology will be scattered in that region **to serve the PRUs in that area** as shown in FIG. 1. "); 8:26-37 ("The first page will cover cell C_1 or grid G_1. As no units are available in the area a second page will be sent to cover cell C_2, or grid G_2. **Examining FIG. 3, the next PRUs exist only in cell C_3 or grid G_3. Once a**

page is sent out for cell C_3. PRU, M_2, and M_3 will respond."); 10:45-58 ("That information would then be appended to the geographic boundary information and **beamed in the specified geographic region**.") (emphasis added in all instances). Ex.2001, ¶52

The required function may be performed at a control unit of the system. *Id.*, 11:2-6 ("In situations where a PRU cannot perform any of the tasks … the required functions [are] performed at the network and forwarded to the appropriate communication target on completion."). Ex.2001, ¶57.

The claimed function is not "to transmit location information," but to obtain information that identifies a geographic boundary which can be individually polled to disclose a PRU's location, which does not necessitate transmitting the location information. Therefore, this claim element does not require "transceiver circuitry" since that circuitry is used for another purpose, to receive or send wireless signals. Ex.2001, ¶58.

5. "means to provide the location of the portable mobile remote unit to the network upon determination that the portable mobile remote unit is within the geographic boundary obtained at the network" (Claim 1)

The function of this claim element is "to provide the location of the portable mobile remote unit to the network upon determination that the portable mobile remote unit is within the geographic boundary obtained at the network." *See,*

EX.2001, ¶59. The minimum necessary structure for performing the recited function is "a controller programmed to determine whether the location of a portable remote unit is within a specified contiguous area on earth and, upon such determination, provide the location of the portable remote unit to another network component, and equivalents thereof." Such an interpretation is supported by the '918 Patent's specification. A programmed control unit in the system perform this basic function. *See,* Ex-1001, Fig 7 at ref 4 and 8:57-9:12, esp. 9:4-6, and Fig. 6 at reference 1,3,7. A POSITA reading the '918 Patent's specification would thus understand that the required function may be performed at a control unit. Moreover, nothing in this claim element requires there to be "transceiver circuitry" because a POSITA would understand that this claim element does not require a limitation that is drawn to the structure used for communication of the position information. Additionally, a POSITA understands that one control unit can provide the location to another control unit, which can utilize, for example, a hardwire connection between the two control units. This claim element does not distinguish between the two forms of transmissions or the location which constitutes the source of the information to the network. Moreover, that the claim requires "the geographic boundary" is "obtained at the network" further suggests to the POSITA that this element may be entirely performed by a control unit at the

control station. *See,* EX.2001*,* ¶¶72

6. "means to determine and report to the system upon request that, another mobile remote unit of the network has tracked the portable mobile remote over a period of time" (Claim 1)

The function of this claim element is to "to determine and report to the system upon request that, [*sic*] another mobile remote unit of the network has tracked the portable mobile remote over a period of time." The minimum necessary structure to perform the recited function is "a control unit programmed to identify and report to another control unit of the system that another PRU within the same network boundary as the PRU has moved together with the PRU over a pre-specified distance while maintaining a pre-specified radius of it over a pre-defined time period, and equivalents thereof." A control unit of the network is programmed to perform this function. (*Id.*, Fig. 5 at ref 10, 11, and 12 with 6:1-6:19). This is consistent with the algorithm described in the '918 Patent's specification. *See, e.g.,* Ex-1001, Fig. 5 (reproduced below) and at 5:37-64; *see also, id.,* 6:1-47 (reiterating that any tracking PRUs are within the set of PRU units whose locations were polled in a specific geographic boundary of the wireless network). Ex.2001, ¶61.

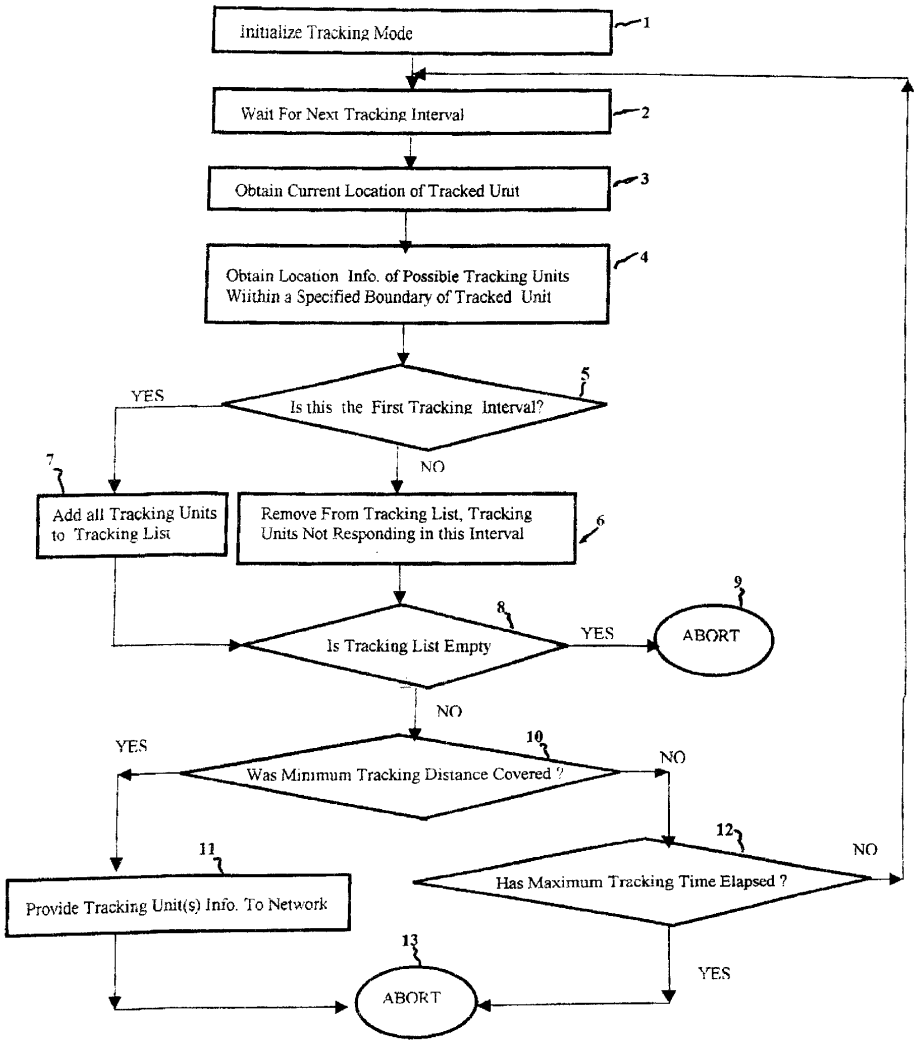


FIG. 5

Mr. Andrews' step (3) (Ex-1002, ¶243) seems to mistakenly conflate the network boundary being polled with the tracking radius used for making a tracking determination. This interpretation is contrary to the specification and illogical because simply being located within the same polled network boundary as another

PRU does not establish that one PRU is tracking the other. A POSITA would understand from the '918 specification that the page is first directed to a specific region of the network to identify possible tracking candidates. From that set, determinations are then made to assess whether a PRU within the network boundary maintains a tracking radius of the tracked PRU over a pre-defined period while both are in motion over a pre-defined distance. Ex.2001, ¶62.

The minimum necessary structure does not require a transmitter to the extent that such a term implies wireless transmission because a POSITA would understand that determining and reporting to the system, upon request that another mobile remote unit of the network has tracked the portable mobile remote over a period of time, takes place at the network control center and that the claimed reporting may be from one control unit at the network control center to another control unit located therein. Therefore, the minimum required structure does not require a "transmitter." Ex.2001, ¶63.

7. "means to further determine if location disclosure for the remote unit is prohibited at a specific geographic boundary before sending its location to the network" (Claim 2)

The function of this claim element is "to determine if location disclosure for the remote unit is prohibited at a specific geographic boundary before sending its location to the network." The minimum necessary structure to perform the recited

function is a control unit programmed to: prior to sending a location of a remote unit to another network component, determining if the location of the remote unit is within a specified contiguous area on earth where disclosure of the remote unit's location is prohibited, and equivalents thereof. (*Id.*, Fig. 6 and 10:21-36, especially references 3, 4, 5, 6, and 7). Ex.2001, ¶64.

8. "means to request whether the at least second communication unit is tracking the at least first communication unit" (Claim 22)

The function of this claim element is to "request whether the at least second communication unit is tracking the at least first communication unit." The minimum necessary structure to perform the recited function is "a control unit programmed to make a tracking request, and equivalents thereof." This is consistent with the algorithm described in the '918 Patent's specification. *See, e.g.,* Ex-1001, Fig. 5 (element 1) and at 5:37-64. *See*, Ex.2001, ¶65.

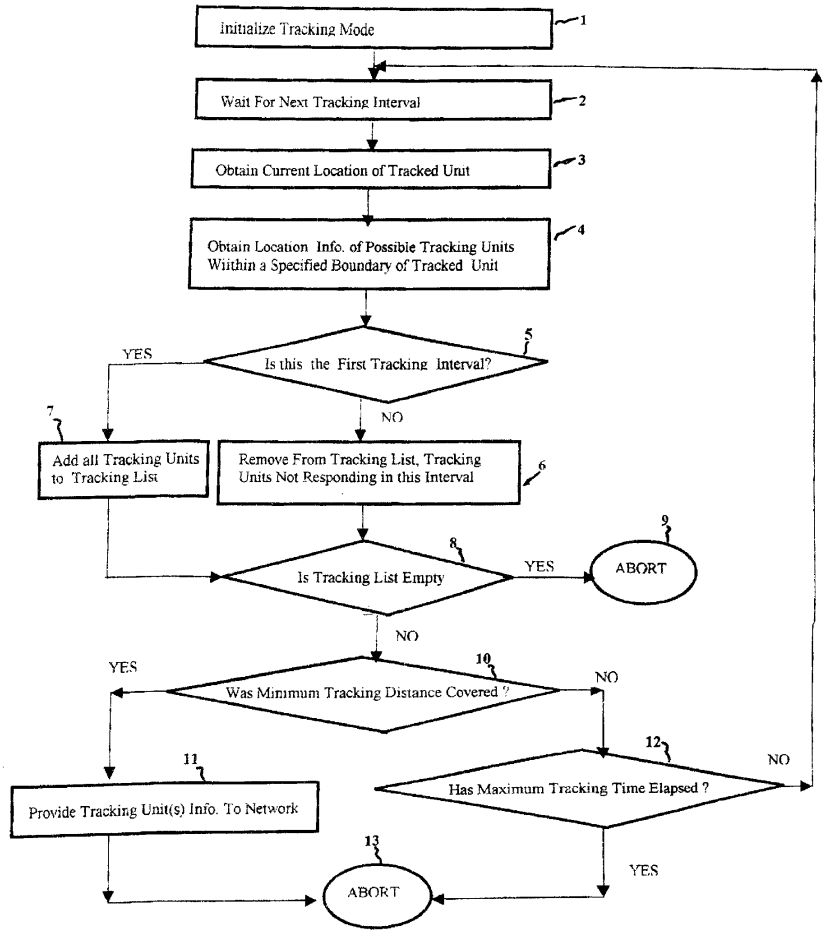


FIG. 5

As with the other "means" claim terms, and for the same reasons, this claim element does not require a transmitter configured to transmit a message identifying such a PRU because the specification explains that this function may be performed by a control unit at the control station, which may be requesting the tracking determination from another control unit at the network such as through a hardwire connection. Therefore, the minimum required structure does not require a

"transmitter. *Id.*, ¶66.

9. "means to determine from said location provided (ii) that the at least first and second communication unit maintained proximity while in motion during said time" (Claim 22)

The function of this claim element is to "determine from said location provided (ii) that the at least first and second communication unit maintained proximity while in motion during said time." The minimum necessary structure to perform the recited function is "a control unit programmed to identify that a second PRU has moved together with the first PRU within a pre-defined tracking radius of it over a pre-defined time period, and equivalents thereof." Again, a control unit of the system is programmed to provide this function. *See* Ex-1001, Fig. 5, references 10-12 and 6:1-47. This is consistent with the algorithm described in the '918 Patent's specification. *See, e.g., id.*, 5:37-64; *see also, id.,* 6:1-47 (reiterating that any tracking PRUs are within the set of PRU units whose locations were polled in a specific geographic boundary of the wireless network). Therefore, Mr. Andrews' step (3) improperly conflates the network boundary that is being polled with the tracking radius that is used to make the tracking determination. This is contrary to the specification and is not logical because one PRU simply being located within the same polled network boundary as another PRU, so that the former can be considered by the network as a possible tracking

candidate, does not in itself establish that the former is tracking the latter. A POSITA would understand from the '918 specification that, first, the page is directed to a specific region of the network for possible candidates and, second, from that set of candidates determinations are made as to whether one PRU within that network boundary is also maintaining a tracking radius of the tracked PRU over a pre-defined period of time while both are in motion over a pre-defined distance. *See*, Ex.2001, ¶67.

10. "means to provide result of the determination (iv) to the requestor of (iii)" (Claim 22)

The function of this claim element is to "provide the result of the determination (iv) to the requestor of (iii)." The minimum necessary structure to perform the recited function is "a control unit programmed to provide the result of the determination (iv) to the requestor of (iii)." This is consistent with the '918 Patent's specification. *See, e.g.,* Ex-1001, Fig. 5, especially reference 11, 6:48-64 and 11:2-6. Ex.2001, ¶68.

The minimum necessary structure does not require a transmitter because a POSITA would understand that requesting may take place at the network control center and that the claimed reporting may be from one control unit at the network control center to another control unit located therein via a hardwire connection.

Therefore, the minimum required structure does not require a "transmitter." Ex.2001, ¶69.

III. SUMMARY OF THE PRIOR ART

A. U.S. Patent No. 5,731,757 (*Layson'757*) (Ex-1007)

Layson'757 is directed to an offender/victim correlation system to prevent crimes by alerting victims, offenders and law enforcement when an associated offender is within a certain perimeter of a specific victim. This system enhances traditional electronic monitoring, which was previously limited to fixed locations such as residences. Ex.1007, Abstract. A portable tracking device 12 receives communication signals from a global position satellite (GPS) 14 to determine the location of the subject (offender 16 or victim 18). The offender 16 is fitted with a non-removable body-worn device 20. An associated victim 18 who wishes to report their location to the system is provided a portable tracking device 12 and a garment clip-on version of the body-worn device 20. Ex.1007, 2:45-57; Ex.2001, ¶77.

Both offender and victim device continuously report their location at periodic intervals. The offender's device is also provided with schedule rules and location constraints, which may be dynamically updated based upon reported victim location. The offender's device is programed to compare its GPS coordinates with the location constraints and notifies the network when a location constraint is violated. The

central database system also analyzes the offender's current position relative to the associated victim's position to determine if any alarms to law enforcement, corrections or commands to the offender, or warnings to the victim are required. Ex.1007, 3:3-27, 7:3-14, 8:9-20; Ex.2001, ¶80.

Layson'757's network differs significantly from the network of the '918 Patent. Unlike the '752 Patent, *Layson*'757 describes a system in which a parameter is sent to a specific device, which notifies the network when that parameter is violated. *Layson*'757 does not describe a network that polls specific geographic areas of the network's coverage area for the location information of PRUs currently located therein.

B. U.S. Patent No. 6,405,213 ("*Layson'213*") (Ex.1008)

Layson'213 is a crime/offender location correlation system that correlates the locations and times of crimes to identify possible offender suspects. The system includes a computer to correlate crime incident data with the locations of subjects. By inputting information about the location and time of crimes and the locations of various offenders at different times into a correlation database, the system can determine if any of the offenders are likely suspects. This determination is based on whether an offender was near the crime scene at the time the crime occurred. (Ex-1008, Abstract). The system supports investigative queries by matching location

histories with crime data. The device transfers movement data to a central database via a residence interface unit connected to a landline at the subject's residence or other locations in the community. (*Id.*, 1:20-42).

The crime incident/offender location correlation database 1 (FIG. 1) is a relational database that receives crime incident data 2 and offender location data 3 on a continuous basis. (*Id.*, 8:27-31). Crime incident data 2 is comprised of crime incident dispatch data 7 obtained from computer aided dispatch (CAD) 6 systems and crime incident investigative data 9 from record management systems (RMS) 8 within law enforcement agencies. (*Id.*, 8:39-43).

Each offender's data from an offender location monitoring system 220 is correlated against any violations of exclusion zone criteria 221 from offender sentencing data in IMS 34 and exclusion zone violations reported by the offender location monitoring system 220. (*Id.*, 19:45-50). Each offender's data from an offender location monitoring system 220 is correlated against any crime incidents 225 from CAD 6 and RMS 8 systems. (*Id.*, 19:61-63). Law enforcement and corrections/community supervision agency personnel use the query terminal 37, 39 for structured queries. (*Id.*, 20:40-42). Ex.2001, ¶86.

C. U.S. Patent No. 5,365,451 ("*Wang*") (Ex.1009)

Wang teaches a location monitoring system wherein the fleet vehicle provides its location to the central station more frequently the closer the vehicle is to a state line so that the central station can determine precisely when the vehicle has crossed the state line where new regulations or tariffs may apply. This conserves power and network resources. *See* Ex.1009, 1:38-52 and 3:50-56, 6:20-24; Ex.2001, ¶87.

Wang's network differs significantly from the network of the '726 Patent. he vehicle reports its current location to a central network. Based upon how far that location is to a state line, the central station sends the vehicle a fixed perimeter "border." The farther away the vehicle is from the state line, the larger the new border; the closer the vehicle is to the state line, the smaller the border. Ex.2001, ¶87. When the vehicle has moved outside of that "border," it again reports its location to the central station and receives a new border. *Id.*

D. 720 Ill. Comp. Stat. Ann. 5/12-7.3, as amended by 1995 Ill. Legis. Serv. P.A. 89-377 (H.B. 1792), eff. Aug. 18, 1995 ("*IllinoisLaw*") (Ex.1010)

IllinoisLaw is a portion of a legal code that defines criminal conduct. It is not a technical reference for which a POSITA would have knowledge. Ex.2001, ¶88. Of interest here, it defines "places a person under surveillance" as "remaining present outside the person's school, place of employment, vehicle, other place

occupied by the person, or residence other than the residence of the defendant." Ex.1010. It also defines "follows another person" as (i) to move in relative proximity to a person as that person moves from place to place or (ii) to remain in relative proximity to a person who is stationary or whose movements are confined to a small area. *Id.* It also exempts from the definition "following within the residence of the defendant." *Id.*

E. U.S. Patent No. 6,160,481 ("*Taylor*") (Ex-1011)

Taylor teaches a monitoring system that includes a portable monitoring device 30, a central location 32, a transmission tower 34 and a receiving tower 36 that forms the monitoring system 38. (Ex-1011, Fig. 1 and 5:32-34). The system intervenes to dissuade certain behaviors, either by delivering medication or an electrical shock. Additionally, it can notify authorities if a person moves outside a set perimeter, enabling remote monitoring without requiring confinement to a single location. The system also compares the positions of multiple monitored persons to ensure they remain at an appropriate distance from one another, thus assisting in scenarios like crime deterrence or medical monitoring. (*Id.,* Abstract).

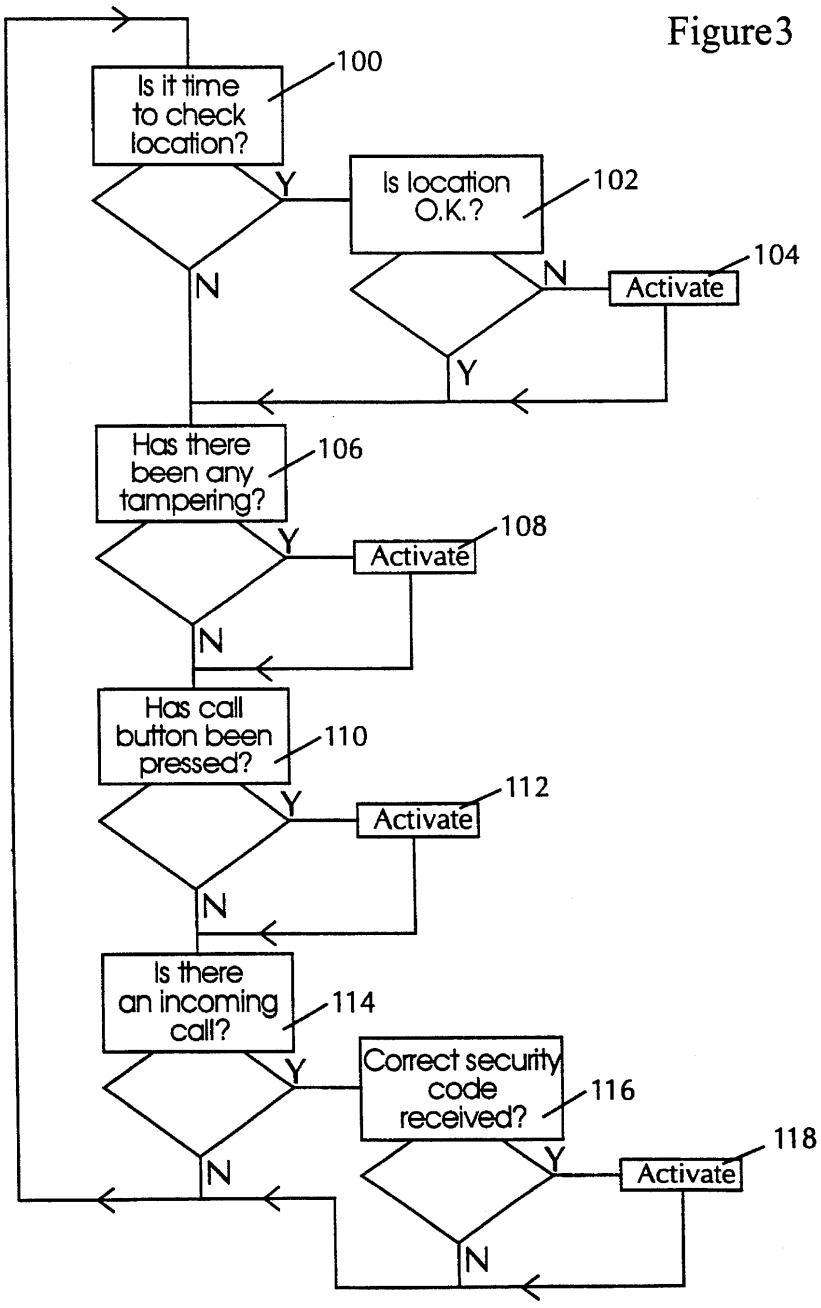
More particularly, the portable device communicates with a secondary transportable device 48. The latter has a long-range antennas, 70,72 to communicate with the central location. (*Id.,* 8:1-15). The portable device may monitor bodily

functions such as blood pressure, heart rate, respiration, temperature blood alcohol and blood oxygen. (*Id.,* 12:15-21). The portable device also has mechanisms to obtain and report its global coordinates to the central location. Like the *Layson'757* system, this system may include an offender ("restrictee") portable monitoring device 310 and an associated victim ("restrictor") portable device 312, whereby a perimeter may be established around the restrictor device such that an intervention may be activated to disable the restrictee in the event of a perimeter violation (*id.,* 16:39-60). The restrictee may have fixed boundaries representing allowed and excluded areas whereby the portable device will report an exclusion area violation when it determines its location in an excluded area. (*Id.,* 18:67-19:16).

F. U.S. Patent No. 5,497,149 ("*Fast*") (Ex-1012)

Fast teaches a global security system that sends location messages to a monitoring message center at predetermined times or under an alert condition, such as when it is outside an allowed safe zone for more than a defined time period. (Ex-1012, Abstract). *Fast's* fundamental algorithm is shown in Fig. 3, in particular reference 102 where it checks "is location O.K.?":

Figure3



Fast's system protects individuals by allowing them to "wear" a device that locates its own position independent of a monitoring terminal and will transmit that

information to the monitoring terminal when activated. The device may be activated manually, by pressing a button, or can happen automatically if the wearer is leaving a predefined zone. Anti tampering circuitry activates if removal or destruction of the device is attempted. The same technology can also be applied to detect theft of vehicles and other mobile or stationary valuable property. The fact that the protected person or item's location can be tracked allows a rapid rescue or recovery. (*Id.,* 1:36-49).

G. General Observations Regarding *Layson'757*, *Layson'213*, *IllinoisLaw*, *Wang*, *Taylor* & *Fast*

None of the asserted systems disclose a network providing location-based services to wireless customers, where one customer can specify a geographic boundary within the network's coverage area to query the location of another customer. The asserted references do not describe dividing the network into individually pollable geographic boundaries to identify the location of nearby cell phones. Furthermore, none of the references disclose a tracking algorithm that determines whether two cell phones within the same network boundary are moving within a pre-defined distance of each other over a specified tracking distance and time period. In summary, none of the prior art references, individually or collectively, offer systems and methods that poll only PRUs within a specific geographic boundary for proximity and tracking determinations, enabling scalable

and efficient location-based services in wireless communication networks with tens of millions of customers nationally and internationally. *See,* EX.2001, ¶93.

IV. THE PETITION FAILS TO SHOW THAT THERE IS A REASONABLE LIKELIHOOD THAT THE PETITION WILL PREVAIL ON ANY CLAIM

A. Standard For Granting *Inter Partes* Review

The Board may only grant institution on a petition for *Inter Partes* Review where "the information presented in the petition . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition." 35 U.S.C. § 314(a); 37 C.F.R. § 42.108(c). The Petitioners bear the burden of showing that this statutory threshold is met. *See* Trial Practice Guide, 77 Fed. Reg. 48,756 (Aug. 14, 2012).

"It is impermissible to use the claimed invention as an instruction manual or 'template' to piece together the teachings of the prior art so that the claimed invention is rendered obvious. This court has previously stated that '[o]ne cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.'" *In re Fritch*, 972 F.2d 1260, 1266 (Fed. Cir. 1992) (quoting *In re Fine*, 837 F.2d 1071, 1075 (Fed. Cir. 1988)).

As shown below, Petitioner concocts Frankenstein's monster with a patchwork of references whose sole motivation to combine is the hindsight

reconstruction of the patent inventions. Moreover, even the concocted combinations do not arrive at the claimed inventions. Denial of institution is warranted for all asserted Grounds.

B. A POSITA Would Not Have Arrived at the Claimed Inventions Given the State of the Art

The patented technology requires requesting the location of a cellular phone or pager within a specific pollable geographic boundary of a wireless carrier's telecommunication network to make proximity and tracking determinations amongst such devices so that location-based services can be efficiently provided to wireless consumers of such networks. Ex.2001, ¶71.

However, at the time of the invention, the ability to request the location of a wireless customer's cellular phone or pager from a carrier's network was not readily or uniformly available. In 1996, the FCC mandated that all US wireless telecommunication carriers to enable requests for the location of a cellular phone or pager from their networks for at least emergency purposes by 2001.[1] Ex.2001, ¶74

[1] On July 26, 1996, the FCC issued a Report and Order and Further Notice of Proposed Rulemaking. 11 FCC Rcd 18676, 18678, 1996 FCC LEXIS 3966, *1, 3 Comm. Reg. (P & F) 967. *Accessible at*: https://transition.fcc.gov/Bureaus/Wireless/Orders/1996/fcc96264.txt ("Report & Order"). The Report & Order recognized that, at the time, wireless carriers did not yet have the equipment or infrastructure that would allow them to reliably determine the precise location of a mobile device within their networks and report that location

& n.1. Further, the Location Interoperability Forum was created in 2000 by the world's 12 largest telecom operators to provide standards to make such requests possible.[2] *Id.*, ¶74 & n.2.

Uber asserts that a POSITA, with only *a bachelor's degree in electrical engineering, computer engineering,* computer *science, or a related field, and at least two years of experience in the research, design, development, and/or testing of GPS and related location tracking techniques, or the equivalent* would have found obvious the claimed inventions obvious based upon references that did not and could not have used the systems and methods of the Challenged Patents and had no description of how individual polling of network boundaries could be implemented. Ex.2001, ¶75. The asserted references did not teach a POSITA the methods and systems of the Challenged Claims given the state of the art and the fact that these systems did not use cellular infrastructure in the manner disclosed in the Challenged Patents. *Id.*

to emergency services. The Report & Order required covered carriers to achieve the capability to identify and accommodate requests for the latitude and longitude of a mobile unit making a 911 call, within a radius of no more than 125 meters in 67 percent of all cases.

[2] *See* https://www.zdnet.com/article/forum-sets-standards-for-location-based-services/

H. Claim 15 is not rendered obvious over *Layson'757* in view of *Layson'213* (Ground 1)

1. Independent Claim 15

Petitioner argues that Independent Claim 15 is rendered obvious by *Layson'757* in view of *Layson'213*. Patent Owner disagrees for the reasons below.

1. *Element 15[pre]: A method for determining that a first portable remote unit of a wireless consumer associated with a network is being tracked by at least a second portable remote unit that is in motion with the first portable remote unit over a tracking period comprising:*

The preamble of claim 15 is limiting because a POSITA would find the preamble provides structure or steps that are necessary to give the claim life, meaning and vitality. For example, the preamble explains to a POSITA that the claimed method determines that *a first portable remote unit of a wireless consumer* associated with a network *is being tracked by at least a second portable remote unit that is in motion with the first portable remote unit over a tracking period. See,* Ex.2001, ¶100.

The '918 Patent focuses on providing location-based services to wireless consumers using portable cell phones that interact with the network through cellular infrastructure. Ex.2001, ¶181. This is depicted in Figure 1 of the patent, and supported by the descriptions throughout the patent of the system as related to

"telecommunication services and systems" in the "wireless industry" and involving "wireless consumers" and "mobile telecommunication systems." Ex.2001, ¶181. In contrast, the *Layson*, *Taylor*, and *Fast* systems and devices utilize specialized tracking devices for law enforcement, health, and safety monitoring. These systems involve devices designed specifically for tracking offenders, victims, and other monitored persons, distinct from the wireless cell phone-based system described in the ’918 Patent. *See,* Ex.2001, ¶101.

A POSITA reading the ’918 Patent understands that for one unit to be considered to "track" another, it must move in tandem with the tracked unit while staying within a pre-specified radius of it and traveling a minimum distance over a defined time period. This is detailed in the patent's description of the tracking mode, where a PRU (portable remote unit) alerts when another PRU has remained within a specific radius of the tracked PRU and both have traveled a minimum distance, such as over a 1-mile stretch. The tracking determination involves sending a page to all location-reporting units within a defined geographic boundary around the tracked PRU to gather relevant location information. *See,* Ex.2001, 102.

Layson’757-Layson’213 does not teach a tracking method where a tracking unit must move in tandem with a tracked unit while maintaining a specified proximity over a defined period. Instead, it describes a system where an offender's

portable tracking device reports an alert if a location constraint is violated. While Layson's system can dynamically update location constraints based on the victim's position, it lacks the requirement for the offender and victim to move together within a specified proximity over a tracking period, a concept central to the '918 Patent. The "loiter time" mentioned in Layson's system is not equivalent to the tracking period described in the '918 Patent. *See,* Ex.2001, ¶¶102-103.

2. *Element 15[A]: i) obtaining the location information of the first portable mobile remote unit, said location information provided at intervals during said tracking period;*

Layson'757-Layson'213 does not disclose the element requiring tracking units to move together within a specified proximity over a tracking period. The portable tracking devices in Layson's patents are not the same as the claimed portable remote units in the '918 Patent. Furthermore, while Layson's system provides continuous location reporting of offender and victim devices, it does not include a "tracking period" during which it is assessed whether the devices moved together within a predefined proximity. The '918 Patent specifies that one PRU is considered to track another if it remains within a specified radius while both move over a tracking period. The patent describes a method where the tracked PRU's location is polled and location-reporting units within a specified geographic boundary are paged at predefined intervals. If a tracking unit responds at the first

interval but not subsequent ones, it is eliminated from consideration. The process continues until either the tracking list is empty or the units have traveled the required distance within the tracking period. If the list is not empty and the units meet the distance criteria, they are reported as tracking units. If not, and the maximum tracking time elapses, the process is aborted. This mechanism ensures tracking units move together within a defined timeframe and proximity, which is not disclosed in *Layson*'s patents. *See,* Ex.2001, ¶¶102-103.

In contrast, *Layson'757* only discloses the victim's device will report its location to the central database system, which in turn uses that location to update the location constraint of an associated offender and sends the updated location constraint to the offender's device. The offender's device then compares its location to the updated location constraint and immediately alerts the system if and when it detects a location constraint violation. (*Id*., 7:3-14, 8:28-30, 9:45-50). *See,* Ex.2001, ¶104.

Therefore, the proposed combination does not disclose the central database obtaining the victim device's location at intervals during "a tracking period."

3. *Element 15[B]: ii) obtaining the location information of the at least second portable communication unit that is within a specified geographic boundary of the first portable remote unit, said location information provided at intervals during said tracking period;*

Layson'757-Layson'213 does not disclose obtaining the offender's location at intervals within a tracking period while within a specified geographic boundary of the tracked unit, as required by Element 15[B]. *Layson'757*'s system reports the offender's location continuously at fixed intervals but does not define a "tracking period" as needed for Elements 15[pre] and 15[A]. Although the offender's device sends alerts for location constraint violations, there is no indication that these alerts include location information or are sent at intervals during a "tracking period." Even if the device sent its location during constraint alerts, there is no disclosure of it sending alerts at time intervals throughout a tracking period. Additionally, while *Layson'757* may update the offender's location constraint based on the victim's location, it does not describe a tracking period where the system compares time-interval reported locations of two units to determine if they were within the same geographic boundary. *See,* Ex.2001, ¶109.

Rather, if the offender unit continually violates each updated location constraint, *Layson'757* only reveals that the offender's device will alert the system

for further actions. Ex-1007, 9:48-54 (the device notifies the central database system immediately upon a violation, and the system follows guidelines for notifications based on the violation). *Layson'757* does not determine if the victim remains within their buffer zone. *See,* Ex.2001, ¶¶110-112. This demonstrates the superiority of the '918 Patent system, as *Layson'757*'s approach is cumbersome and significantly different.

In sum, *Layson'757-Layson'213* does not teach obtaining the location information of the at least second portable communication unit that is within a specified geographic boundary of the first portable remote unit wherein said location information is provided at intervals during a tracking period.

4. ***Element 15[C]: iii) using the location obtained according to step (i) and (ii) to verify whether the first portable remote unit and second portable remote unit have maintained relative proximity during the tracking period;***

Layson'757-Layson'213 does not teach Element 15[C], which requires determining that two units (1) are within the same geographic boundary and (2) have maintained relative proximity during the tracking period. Mr. Andrews does not address *Layson'757-Layson'213*'s lack of dividing the network into individually pollable boundaries for tracking within those boundaries. His analysis focuses on whether the offender device remained in the victim's buffer zone but fails to show

that the victim and offender units maintained relative proximity within the same buffer zone during a tracking period (which doesn't exist in *Layson'757-Layson'213*). The "loiter time" proposed by Mr. Andrews only addresses whether the offender device remains in the buffer zone for a minimum period, without any analysis of how both units move together within the buffer zone. *See* Ex.2001, ¶¶114-115.

5. *Element 15[D]: iv) forwarding the result of the verification to a network requestor at the end of the tracking period.*

Layson'757-Layson'213 does not disclose forwarding the result of the verification to the network requestor at the end of the tracking period as required by Element 15[D].

Layson'757 does not have a system that alerts victims to "any nearby offenders"—it only notifies a victim of an associated offender if there is a buffer zone violation, as only the associated offender has a location constraint relative to the victim. Ex.2001, ¶¶ 118. Second, being alerted to the associated offender is not the same as making a tracking request. *Id.* So there is no mechanism for requesting an offender location. *Id.*

Further, sending alerts to law enforcement or *Layson'213*'s crime-offender correlational database (Ex.1002, ¶198) does not address the issue of tracking

determination, which is fundamentally different from merely alerting geographic boundary violations. *See* Ex.2001, ¶119. Additionally, even if tracking determination were present, Mr. Andrews does not clarify how his combined Layson system would provide tracking results after the tracking period ends. *Id.* The system's queries are performed separately from the "tracking period," which may not align with the tracking period required by the claim. For example, a query might be done on Monday for data from the previous Saturday and Sunday, which does not correspond to the required tracking period. *See* Ex.2001, ¶¶ 105.

In sum, *Layson'757-Layson'213* does not disclose Claim 15 of the '918 Patent, nor render it obvious, Mr. Andrews' suppositions notwithstanding.

* * *

For all the foregoing reasons, Petitioner's Ground 1 is not likely to succeed and the Petition should be denied.

I. Claims 1 and 22 are not rendered obvious by *Layson'757*, *Layson'213* in view of *IllinoisLaw* (Ground 2)

Although *Layson'213* does suggest that offender location data from *Layson'757* could be transferred to the correlation database, including exclusion zone violation alerts that are considered crimes, there is no reason that a POSITA would have also entered victim location data into the correlation database to enable

the combined system to identify potential stalkers from the set of offenders whose location data is stored. *See* Ex.2001, ¶121.

Layson'213 does not describe its correlation database storing victims' locations but rather correlates reported crimes with offender' locations. *See* Ex.2001, ¶122. *Layson'213* correlates crime incident data comprises dispatch data obtained from computer-aided dispatch (CAD) systems, investigative data from record management systems (RMS) within law enforcement agencies, and offenders' locations to identify possible suspects. *See id*. A victim's location is not considered a "crime," and the system's complexity would significantly increase if it had to compare every offender's location with every victim's location to identify potential stalking. *See* Ex.2001, ¶123. It is unrealistic to expect that a victim would release their location data simply for such comparisons, and there is no reasonable basis for a POSITA to modify Layson's system in this manner. *Id.,* ¶¶123-124. Such a modification would contradict Layson's teachings and common sense, particularly the notion that an offender's location constraints are managed by a supervising agency, and would conflict with Layson's goal of cost reduction by distributing processing away from the network. *Id.,* ¶124.

Even if the POSITA were motivated to make such a modification, it would not lead to the practice of the claimed invention because *IllinoisLaw* does not teach

the tracking algorithm of the ’918 Patent. *Id.,* ¶¶127-128. This patent requires that both units be in the same geographic boundary of the network and move together within a pre-specified distance over a tracking period within that boundary. In contrast, adding the victim’s location to the correlation database as a crime incident location would result in the network comparing the victim’s location to all offender locations over open-ended distances and periods. *Id.,* ¶128.

Mr. Andrews’ speculative analysis fails to demonstrate that *IllinoisLaw* teaches the ’918 Patent’s specific tracking determination of one wireless customer using their cell phone to track another wireless customer, providing a technical solution in which the system determines that both are moving together in the same geographic area and have maintained proximity over a specific distance during the tracking period.. Ex.2001, ¶¶127-128.

6. Independent Claim 1

1. *Element 1[pre]: A communication system comprising:*

Patent Owner does not dispute that *Layson’757-Layson’213-IllinoisLaw* teaches a communication system.

2. *Element 1[A]: a portable mobile remote unit;*

A POSITA reading the ’918 patent understands that the portable mobile remote units are cell phones or other hand-carried devices used by wireless

consumers to communicate via the cellular infrastructure in the wireless industry available to the general public, as discussed above. In contrast, *Layson'757*'s devices are not the claimed portable mobile remote unit, but rather specialized offender/victim portable tracking devices for law enforcement systems. *See* Ex-1007, 2:46-65 and generally 3:29-6:52, 9:10-28 (describing the specifications of the portable tracking devices and their associated body-worn devices for the law enforcement system). *See*, Ex.2001, ¶131.

3. *Element 1[B]: a network of communication units;*

Layson'757-Layson'213-IllinoisLaw does not disclose Element 1[B] for the same reason as it does not disclose Element 1[A], the network of communication units being comprised of portable mobile remote units. *See*, Ex.2001, ¶132.

4. *Element 1[C]: means to obtain the location of the portable mobile remote unit;*

Layson'757-Layson'213-IllinoisLaw does not discloses Element 1[C] because the tracking devices in Layson are not "portable mobile remote units" as that term would be understood by a POSITA in light of the '918 Patent's specification as discussed with regard to element 1[A]. For this reason, the claim element is not met even though the network includes control units programmed to obtain the locations of the offender and victim devices *See* Ex.2001, ¶133.

5. *Element 1[D]: means to obtain geographic boundary information in order to disclose a global location at the network;*

Layson'757-Layson'213-IllinoisLaw does not teach Element 1[D]. The '918 Patent discloses individually pollable network boundaries that can send notice and be queried for the location of devices within them. *See*, Ex.2001, ¶134. The asserted combination lacks such a disclosure of "a control unit programmed to receive information that identifies a contiguous area on earth, within the network's coverage area, that can be individually queried to disclose a PRU's global location within that coverage area." *See* Ex.2001, ¶134.

There is no suggestion in Layson that a victim's PRU has or receives any location constraints, and such would be inconsistent with the fact that the victim has not had his freedom limited. *See* Ex.2001, ¶135. Therefore, Mr. Andrews' assertion that "the victim device would receive the associated offender's location and 'buffer zone' around that location" (Ex.-1002, ¶234) is unfounded. *See* Ex.2001, ¶136.

Layson'757 buffer zone around the victim that the offender cannot violate, although dynamically updated based upon the victim's location, is not a location constraint on the victim that has to be disclosed at the network. *See* Ex.2001, ¶135-140. There is no good reason for a POSITA to be motivated to modify the combined Layson system to place a location constraint on the victim based upon the offender's

location, particularly since the scenario is either an error condition or could be addressed with more frequent victim location updates—if actually a problem worthy of addressing. *Id.*, ¶139. Moreover, it is not clear that a location constraint violation alert sent by the offender's device actually provides a location. *Id.*, ¶140. There is nothing expressly in Layson that states such. *Id.* Rather, *Layson'757* explains that the victim's and associated offender's respective locations are routinely provided to the network and that the alert is to give advance notice of a location violation for the network to decide how to act upon it. *See* Ex.-1007, 8:1-20; Ex.2001, ¶140.

6. *Element 1[E]: means to provide the location of the portable mobile remote unit to the network upon determination that the portable mobile remote unit is within the geographic boundary obtained at the network;*

Layson'757-Layson'213-IllinoisLaw does not teach a system that includes means to provide the location of the portable mobile remote unit to the network upon determining that the portable mobile remote unit is within the geographic boundary obtained at the network, as required by Element 1[E]. Mr. Andrews relies on the same theories as under Claim Element 1[D] to recreate this limitation (Ex-1002, ¶¶239-241). However, there is no disclosure in Layson of "location constraints provided to the victim's portable tracking device," let alone those that "include the [associated offender's] location." Such constraints are unnecessary since a buffer

zone around the victim's location is already provided continuously by the system to the offender's device, instantly alerting the system of any buffer zone violation. *See* Ex-1007, 8:28-29; Ex.2001, ¶143. Moreover, there is no suggestion in Layson that any location constraint violation notice is sent twice, even by the offender's device. Ex.2001, ¶144. Once alerted by the offender's device of a buffer zone violation, the system follows its own procedure to determine the next steps (Ex-1007, 9:50-54). Thus, Mr. Andrews' assertion that "the victim's device provides its location to the central database [system] at intervals when the offender and victim are in proximity" (Ex-1002, ¶240) is unfounded. *Layson'757* only teaches interval reporting of the victim's location independently of the offender's device, and vice versa, with no indication of a shared interval reporting mechanism based on proximity. *See* Ex.2001, ¶144.

7. *Element 1[F]: means to determine and report to the system upon request that, another mobile remote unit of the network has tracked the portable mobile remote over a period of time.*

Layson'757-Layson'213-IllinoisLaw does not teach means to determine and report to the system upon request that another mobile remote unit of the network has tracked the portable mobile remote over a period of time as required by Element 1[F].

As discussed above, a POSITA would understand that the necessary structure to perform the recited function is "a control unit programmed to identify and report to another control unit of the system that another PRU within the same network boundary as the PRU has moved together with the PRU over a pre-specified distance while maintaining a pre-specified radius of it over a pre-defined time period, and equivalents thereof." Mr. Andrews' step (3) appears to conflate the network boundary being polled to locate the candidate device with the tracking radius used to make the tracking determination. *See* Ex.2001, ¶147.

Patent Owner agrees that *Layson'757*'s central database system is a control unit of the network and continuously receives at intervals the respective locations of participating offender and victim PRUs. However, it does not "receive the location of the victim portable tracking device ('tracked' unit) at intervals when an offender device is in proximity of the victim device" (Ex-1002, ¶ 244), nor receive "the locations of offender tracking devices ('other' mobile units) during such intervals," nor "maintain[] a list of offenders tracking devices (such 'other' units) located within a buffer region surrounding the victim tracking device" or determine "that such offender devices maintained close proximity to the victim device while the devices traveled a minimum distance threshold, for a period of time, to identify and report potential stalking behavior" (Ex-1002, ¶ 244). Ex.2001, ¶148. All of this is fiction.

Layson'757 discloses only that an offender device receives a buffer zone, which can be dynamically updated based on the victim's current location, compares its location with the updated buffer zone, and alerts the system if located within it. *Id.*

Providing the victim's location to *Layson'213*'s correlation database for correlation and reporting (Ex-1002, ¶246) is not disclosed in *Layson'757* or *Layson'213*. Ex.2001, ¶149. Only offender device locations are reported for correlation to reported crime incidents (Ex-1008, Fig. 9A, element 1; 8:28-31); Ex.2001, ¶149. Offender exclusion zone violations are from a structured database query applied to that offender's data (Ex-1008, 23:39-41) and the "loiter time" described in *Layson'213* is a structured query parameter so that the query does not result in an exclusion zone violation being reported when the offender is only briefly in the exclusion zone (Ex-1008, Fig. 13, 23:9-41). *See* Ex.2001, ¶149.

There is no evidence of the victim's location being part of the correlation database and there would be no reason to import that data from the *Layson'757* system because *Layson'757* uses a buffer zone violation to prevent crime, whereas *Layson'213* helps solve a crime after it has occurred by identifying offenders who were near a reported crime incident as per their location history. *See* Ex.2001, ¶150.

Layson'213's disclosure of loiter time does not teach this claim element. Loiter time is only a minimum time period used to search the crime incident-offender

location database to determine whether an offender was in a restricted area for an unacceptable time. *See* Ex.2001, ¶150. This does not teach that the offender and victim moved together during the same time period for a minimum amount of time over a minimum distance. *Id.* Moreover, *IllinoisLaw* does not specify this claim element because stalking can take place with the stalker following the victim, moving at different intervals so they are not moving together during the same pre-specified time period over a pre-specified distance. *Id.*

Mr. Andrews asserts that the central database may determine that offender devices maintained close proximity to the victim device while traveling a minimum distance threshold to identify and report potential stalking behavior (Ex-1002, ¶247). But this is unsupported by the prior analysis, and the *Layson'757* system, at best, would report to the *Layson'213* database that a particular offender previously committed an exclusion zone violation relative to an associated victim. *See* Ex.2001, ¶152. This does not support a continuous flow of victim location or the suggested comparisons between unrelated victims and offenders. *Id.* Nor does it suggest a modification to provide a location constraint on the victim. *Id.*

2. Independent Claim 22

1. *Element 22[pre]: A communication system comprising:*

Layson'757-Layson'213-IllinoisLaw teaches a communication system, but not the claimed communication system, as set forth in the element-by-element below.

2. *Element 22[A]: (i) a network of communication units;*

Patent Owner does not dispute that *Layson'757-Layson'213-IllinoisLaw* teaches Element 22[A].

3. *Element 22[B]: (ii) at least a first communication unit and at least a second communication unit able to provide location information to the network for a time while in motion;*

Patent Owner disputes that *Layson'757-Layson'213-IllinoisLaw* teaches the claimed "communication units" of Element 22[B], for the same reason discussed above for Element 1[A].

4. *Element 22[C]: (iii) means to request whether the at least second communication unit is tracking the at least first communication unit;*

Layson'757-Layson'213-IllinoisLaw does not teach a system which comprises at least "a control unit programmed to make a tracking request, and

equivalents thereof." *See* Ex.2001, ¶157. This tracking request determines whether two PRUs within the same geographic boundary of the network are moving together within a specified radius over a set distance and time period. *Id.*

Layson'213 does not show any such tracking request query, and *Layson'757* does not disclose any request being made to either the offender's device or the central database system. *See* Ex.2001, ¶158. There is no request from the victim's device in *Layson'757*, and location reporting from the victim's device does not constitute a tracking request. *See* Ex.2001, ¶159. Mr. Andrews' claim that location transmissions correspond to a tracking request for the central database lacks basis. *Id.* Moreover, *Layson'213* does not describe criteria to compare any arbitrary offender's location with any arbitrary victim's location for identifying potential stalkers, nor does it make actual tracking determinations. *See* Ex.2001, ¶160. There is no motivation or practical reason to add the complexity of comparing arbitrary offender and victim locations. *Id.* The proposed combination, therefore, makes no sense. *Id.*

5. *Element 22[D]: (iv) means to determine from said location provided (ii) that the at least first and second communication unit maintained proximity while in motion during said time;*

Layson'757-Layson'213-IllinoisLaw does not teach Element 22[D]. Neither Layson system discloses a "a control unit programmed to identify that a second PRU

has moved together with the first PRU within a pre-defined tracking radius of it over a pre-defined time period." Ex.2001, ¶163. When *Layson'757* sends a location constraint (buffer zone around a specific victim's location) to a specific offender device associated with that victim, the offender device may not be located in the buffer zone (within a pre-defined radius) when it receives the location constraint. *Id.* It does not poll a specific boundary of the network to maintain a list of offender tracking devices within that boundary that are within a certain radius for a pre-defined period of time. Ex.2001, ¶164.

Similarly, *Layson'213* does not disclose using a series of victim locations to perform a correlation database query for identifying potential stalkers based on proximity over time and there is no motivation to compare all offender and victim locations since most offenders have no location constraints that would make proximity to victims a legal concern. Ex.2001, ¶165. *IllinoisLaw*, in turn, does not address the specific tracking algorithm of the '918 Patent, which is tailored for location-based services in the wireless industry. Ex.2001, ¶166. The broad definition of stalking under *IllinoisLaw* does not necessitate that a victim and offender move together over a predefined distance and time while maintaining a tracking radius within the same network boundary. *Id.*

6. *Element 22[E]: (vi) means to provide result of the determination (iv) to the requestor of (iii).*

Layson'757-Layson'213-IllinoisLaw does not provide the result of the determination to the requestor at the end of the tracking period as required by Element 22[E]. There is no requestor, as discussed above. Also, for the same reason previously addressed in connection with Element 15[D], *Layson'757*'s reporting of buffer zone violation is not determining and reporting the claimed tracking. Ex.2001, ¶170. *Layson'213*' does not disclose that its correlation database may be used to generate a report of suspect offenders who maintained proximity with the victim while in motion. Ex.2001, ¶171.

* * *

For all the foregoing reasons, Petitioner's Ground 2 is not likely to succeed, and the Petition should be denied.

J. Claim 2 is not rendered obvious by *Layson'757*, *Layson'213*, *IllinoisLaw*, and *Wang* (Ground 3)

A POSITA would not be motivated to incorporate *Wang*'s "borders" to stop location reporting if the offender is within an "allowed region," like their home or work. Ex.2001, ¶172. There is no evidence indicating that completely halting location reporting would benefit the offender/victim system. *Id.* Even if efficiency were a concern, a POSITA could simply adjust the reporting interval for locations

within an allowed region, rather than eliminating reporting altogether. *Id.* Additionally, *Wang* does not teach non-reporting zones; it only reports location once per zone. *Id.* *Wang* is also not analogous to the Layson systems. While *Wang* is a fleet management system designed to minimize reporting based on vehicle location relative to state lines, Layson systems are law enforcement tools requiring continuous location reporting. *Id.* The differences in purpose and design between fleet management and law enforcement systems make *Wang* incompatible with the Layson systems. *Id*.

1. **Claim 2: The portable mobile remote according to claim 1, having means to further determine if location disclosure for the remote unit is prohibited at a specific geographic boundary before sending its location to the network.**

Adding *Wang*'s system does not enable the practice of the claimed invention. *Wang* introduces a "border" that is sent to a fleet vehicle's remote device after it reports its location to a central station. *Wang*'s border size (essentially a circle with a defined radius) that decreases as a vehicle approaches a state line increases reporting frequency as the vehicle nears the state line, but the vehicle is always within the border at the time of reporting. Ex.2001, ¶174. Consequently, *Wang*'s system does not result in non-reporting of location when the remote device is within the border; instead, it ensures reporting occurs as the device moves relative to the

state line. *Id.* Thus, *Wang*'s approach does not align with or fulfill the claim's requirements.

Layson'757's lack of disclosure of constraints for victims is discussed above. *Layson'757* does not disclose such constraints for victims and there is no legal basis for imposing location constraints on victims or disclosing an offender's address or work location to them. Ex.2001, ¶175. The term "subject" in *Layson'757* refers to offenders, not victims, as clarified in the later part of the same paragraph (Ex-1007, 9:50-54). *See,* Ex.2001, ¶176

A POSITA motivated to reduce transmission bandwidth in *Layson'757* could achieve this by programming the offender's device for less frequent reporting when in an inclusion zone, rather than relying on *Wang*'s single-location reporting. Ex.2001, ¶177. In summary, the prior art cited against claims 1 and 2 does not address the large-scale challenges of location-based services for millions of wireless consumers. Ex.2001, ¶178. None of the cited references offer a solution for efficiently making tracking determinations or teach the specific tracking algorithm used in the '918 Patent. *Id.* They do not address the problems of dividing networks into individually pollable boundaries or making tracking determinations within those boundaries. *Id.*

* * *

For all the foregoing reasons, Petitioner's Ground 3 is not likely to succeed and the Petition should be denied.

K. Claim 15 is not rendered obvious by *Taylor* in view of *Fast*. (Ground 4)

Claim 15 is not made obvious by combining *Taylor* with *Fast*, as neither reference provides a substantive difference from *Layson'757* and *Layson'213* in meeting the requirements of Claim 15. Ex.2001, ¶179. *Taylor* discusses providing an offender with one or more perimeters relative to a victim, alerting the system when the offender is within a given perimeter, and escalating responses to "disable" the offender based on their location. *Id.* *Fast* introduces a "loiter time" feature to notify a system when two units are in proximity for a specified time, which is used to enforce restraining orders. *Id.* Even if a POSITA were motivated to incorporate *Fast*'s loiter time into *Taylor*'s system, the combination would still not meet Claim 15 because it does not address or incorporate the tracking algorithm specifically outlined in Claim 15. *Id.*

1. Independent Claim 15

1. *Element 15[pre]: A method for determining that a first portable remote unit of a wireless consumer associated with a network is being tracked by at least a second portable remote unit that is in motion with the first portable remote unit over a tracking period comprising;*

The preamble of claim 15 is limiting, as discussed above.

A POSITA reading the '918 Patent understands that it focuses on providing location-based services to wireless consumers using portable cell phones (portable remote units) that interact with the network through cellular infrastructure, as discussed above. In contrast, *Taylors* restrictee/restrictor monitoring devices are specialized devices designed for *Taylor*'s system that are "attached to the person which includes mechanisms to provide for an intervention to dissuade the person from the course of action. The intervention may be in the form of delivery of either a medication or an electrical shock to the person." Ex-1011, Abstract. *See also,* Figs. 1 & 2, element 30 and Fig. 4, element 48 (reproduced below) and accompanying description: *See* Ex.2001, ¶182.

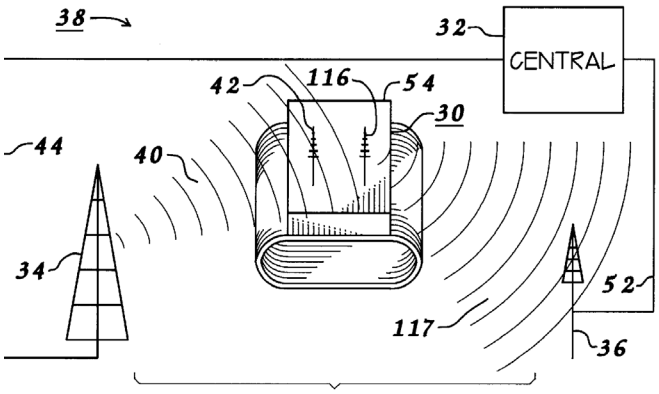


FIG. 1

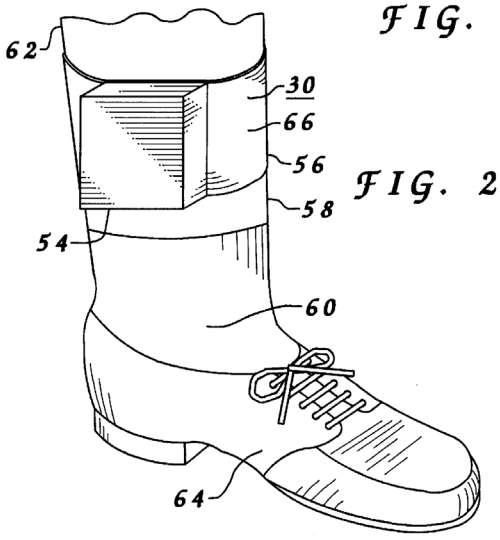


FIG. 2

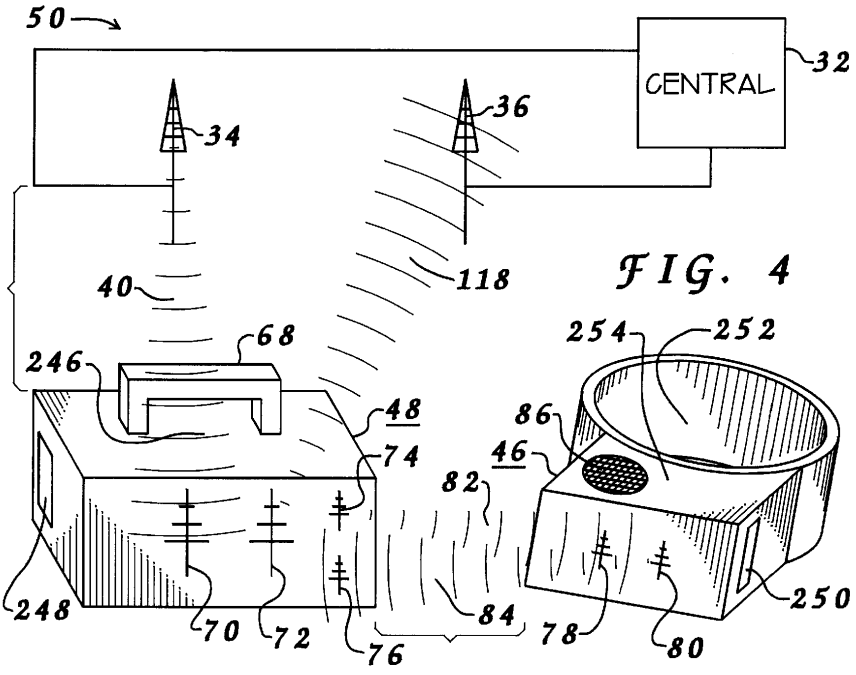


FIG. 4

Therefore, the "restrictees" or "monitored persons," are not members of the "general public" that consume location based services provided on cellular networks in the "wireless industry," but rather people subject to both physical restrictions on their freedom of movement and physical interventions to their bodies, such as convicted criminals. *See,* Ex.2001, ¶183

Taylor's system does not have one unit to "track" another by moving in tandem while maintaining a specified distance within a pre-specified radius over a defined distance and tracking period. Ex.2001, ¶184. *Taylor*'s system updates the location constraint dynamically based on the victim's location but does not require the offender and victim to move in tandem within a specified proximity over a set distance during a tracking period. *Id.* *Taylor*'s disclosure lacks a "tracking period" and focuses instead on dynamic perimeters around the restricted person. *Id.*

Moreover, the "predetermined" Mr. Andrews discusses regarding Element 15[C] is not a tracking period, as will be discussed in connection with element.

2. *Element 15[A]: i) obtaining the location information of the first portable mobile remote unit, said location information provided at intervals during said tracking period;*

Taylor-Fast does not disclose this element. First, as discussed in connection with Element 15[pre], the portable tracking devices in question are not the claimed portable mobile remote units. Ex.2001, ¶187. While *Taylor* and *Fast* involve

location reporting of both the restrictor and restrictee devices, they do not address a "tracking period" as defined in the ’918 Patent. Ex.2001, ¶187-188. The tracking period requires that the first unit be tracked by a second unit moving in tandem with it, maintaining a specified tracking radius during this period. *Id.* The ’918 Patent addresses this problem by comparing the locations of the two PRUs at intervals during the tracking period to confirm they are moving together within the specified radius. *Id.* *Taylor* does not disclose such a tracking period. Even if *Fast*’s “pre-determined time limit” is considered, it merely delays system notification of a perimeter violation rather than establishing a tracking period. *Id.* Reporting locations a few times before alerting authorities does not equate to a “tracking period.” *Id.* Additionally, *Taylor*’s continuous reporting is incompatible with *Fast*’s method, where beacons report location only when they enter an unpermitted area and go into emergency mode. Ex.2001, ¶¶189-190. *Taylor*’s system, which requires continuous location reporting for tracking and violation recording, does not align with *Fast*’s approach of emergency reporting only when boundaries are breached. *Id.* Thus, a POSITA would not have been motivated to combine these references in a way that meets the ’918 Patent’s tracking requirements. *Id.*

3. *Element 15[B]: ii) obtaining the location information of the at least second portable communication unit that is within a specified geographic boundary of the first portable remote unit, said location information provided at intervals during said tracking period;*

Taylor-Fast does not teach this element. In *Taylor*, the restrictee device reports its location to the network at fixed intervals. However, this does not fulfill the requirement for a "tracking period" as discussed above in Elements 15[pre] and 15[A]. *Taylor*'s dynamic update of the restrictee's location constraint based on changes in the restrictor's location does not use a mechanism for comparing the locations of two units over a tracking period to determine if they were within the same geographic boundary during that time. *See,* Ex.2001, ¶194.

Rather, *Taylor* only discloses that the restrictee's device will receive one or more perimeters to compare its location against and alert the system if and when there is a perimeter violation. *See,* Ex.2001, ¶194. Neither the restrictee's device nor the system confirms at the time of the alert whether the restrictor unit is still within the same perimeter(s). *Id.* Indeed, the superiority of the ''918 Patent system is demonstrated by the fact that *Taylor*'s system is cumbersome because of its very different approach. *Id.*

While *Taylor* allows for updates to the restrictee's location constraints based on the restrictor's location, the restrictee's device might report an alert after entering a perimeter zone. Ex.2001, ¶196. By this time, the restrictor might have already moved out of the perimeter, making tracking ineffective. Ex.2001, ¶196. Mr. Andrews' suggestion to combine *Taylor* with *Fast*'s location reporting only when within the perimeter would conflict with *Taylor*'s intended use, and thus, it is unlikely a POSITA would make this change. *See,* Ex.2001, ¶197.

4. *Element 15[C]: iii) using the location obtained according to step (i) and (ii) to verify whether the first portable remote unit and second portable remote unit have maintained relative proximity during the tracking period;*

Taylor-Fast does not teach Element 15[C], which requires determining that two units (1) are within the same geographic boundary and (2) have maintained relative proximity during the tracking period. Mr. Andrews does not address *Taylor-Fast's* lack of dividing the network into individually pollable boundaries for tracking within those boundaries. Ex.2001, ¶¶199-200. A POSITA would not incorporate *Fast*'s "predetermined time limit" into *Taylor*'s system because it contradicts *Taylor*'s requirement for continuous location reporting. Ex.2001, ¶200. *Taylor*'s system relies on ongoing updates to the perimeter and tracking of exclusion zone violations for legal purposes, whereas *Fast*'s system only reports location data upon

perimeter violation. *Id.* Even if a POSITA were to integrate *Fast*'s time delay into *Taylor*, this modification would not enable the determination of whether two units maintained relative proximity during a tracking period while in motion. Ex.2001, ¶201. At best, it would only confirm that the units were within the same perimeter, not that they moved together within it. *Id.* Mr. Andrews' analysis fails to show that adding a time limit would result in tracking the relative motion of the units, as required by the claim. *Id.* His suggestion that a time limit could cover multiple intervals to address transient violations does not meet the requirement for assessing proximity during movement. *Id.* Thus, even with a time limit, *Taylor*'s system would not address the proximity and movement tracking necessary to fulfill the claim's requirements. *Id.*

5. *Element 15[D]: iv) forwarding the result of the verification to a network requestor at the end of the tracking period.*

Taylor-Fast does not disclose forward the result of the verification to the network requestor at the end of the tracking period as required by Element 15[D].

Mr. Andrews' assertion that this element is met because "the restrictor's voluntary enrollment in the monitoring system and transmission of their location coordinates to the central location" and "a POSITA would have understood that

Taylor's central location notifies the oversight authority of violations at its request, based on its use of *Taylor*'s system" (Ex-1002, ¶315) is erroneous. No system in *Taylor* "tracks proximately-located restrictees" and "alerts the restrictor to their presence." Ex.2001, ¶204. The system only determines whether the restrictee was in the perimeter of the associated restrictor, not whether the also two maintained proximity while moving together over a tracking period. *Id.* Here again, Mr. Andrews conflates the separate requirements of 15[B] and 15[C].

* * *

For all the foregoing reasons, Petitioner's Ground 4 is not likely to succeed and the Petition should be denied.

L. Claims 1, 2 and 22 are not rendered obvious by *Taylor*, and *Fast* in view of *IllinoisLaw* (Ground 5)

A POSITA would not be motivated to combine *Taylor* and *Fast* because of a fundamental incompatibility, as previously discussed. Ex.2001, ¶206. Even if a POSITA were motivated to integrate *Fast*'s "predetermined time limit" into *Taylor*, it would not result in the required "tracking period" or tracking determination as specified in the claims. *Id.* Additionally, incorporating *IllinoisLaw* does not lead to the claimed tracking determination for similar reasons discussed with the *Layson* systems. *Id. IllinoisLaw*'s broad definition of stalking does not direct a POSITA to the specific tracking algorithm of the '918 Patent, which focuses on tracking whether

two cell phones are within the same network boundary, moving together in tandem within a defined proximity during a tracking period over a minimum distance.. *Id.* Following a victim "from place to place" does not require that the offender move together with the victim within a certain radius of the victim during the tracking period. *See* Ex.2001, ¶208.

1. Independent Claim 1

1. *Element 1[pre]: A communication system comprising:*

Patent Owner does not dispute that *Taylor-Fast-IllinoisLaw* teaches a communication system.

2. *Element 1[A]: a portable mobile remote unit;*

For similar reasons discussed in connection with 1[A] of Ground 1, the *Taylor-Fast* monitoring devices in question are not the claimed portable mobile remote units. Ex.2001, ¶¶210-212.

Therefore, *Taylor-Fast-IllinoisLaw* does not teach this claim limitation.

3. *Element 1[B]: a network of communication units;*

Taylor-Fast -IllinoisLaw does not disclose Element 1[B] for the same reason as it does not disclose Element 1[A], the network of communication units being comprised of portable mobile remote units.

4. *Element 1[C]: means to obtain the location of the portable mobile remote unit;*

Taylor-Fast-IllinoisLaw does not discloses Element 1[C] because the tracking devices in Layson are not "portable remote units" as that term would be understood by a POSITA in light of the '918 Patent's specification as discussed with regard to element 1[A]. For this reason, the claim element is not met even though the network includes control units programmed to obtain the locations of the restrictee and restrictor devices. *See*, Ex.2001, ¶214.

5. *Element 1[D]: means to obtain geographic boundary information in order to disclose a global location at the network;*

Taylor-Fast-IllinoisLaw does not teach Element 1[D].

Taylor's restrictor and restrictee devices do not query individually pollable network boundaries that can be queried to disclose a PRU's location within a specific coverage area, as detailed previously. *See*, Ex.2001, ¶216. Mr. Andrews' suggestion that *Taylor*'s restrictor and restrictee devices exchange geographic boundary information to identify and report perimeter violations in real-time is flawed because *Taylor* requires continuous reporting to dynamically update perimeters and compare with other exclusion zone information, which makes eliminating such reporting impractical. Ex.2001, ¶217. *Fast*, on the other hand, is designed to locate persons or things only when they are outside predefined zones, focusing on protection rather

than continuous tracking or dynamic perimeter updating. Ex.2001, ¶218. Its specification emphasizes protection systems rather than continuous location tracking, making it incompatible with *Taylor*'s approach and providing no motivation to combine the two. *See* Ex.2001, ¶218-219.

Second, a POSITA would not be motivated to have the restrictor and restrictee devices directly communicate their current locations, as suggested by Mr. Andrews (Ex-1002, ¶339) because such exchanges could potentially lead to security issues, as the restrictee could learn the restrictor's location, undermining the system's purpose of avoiding such risks. *See* Ex.2001, ¶220. Uber does not identify any specific improvement or problem in *Taylor* that would be addressed by the proposed modifications. Ex.2001, ¶221. Finally, even if there were motivation to combine the systems, the combination would still not disclose a control unit programmed to receive information identifying a contiguous area within the network's coverage, which can be queried for a PRU's global location. Ex.2001, ¶222.

6. *Element 1[E]: means to provide the location of the portable mobile remote unit to the network upon determination that the portable mobile remote unit is within the geographic boundary obtained at the network;*

Taylor-Fast-IllinoisLaw does not teach 1[E] because it lacks "a controller programmed to determine whether the location of a portable remote unit is within a

specified contiguous area on earth and, upon such determination, provide the location of the portable remote unit to another network component, and equivalents thereof." Ex.2001, ¶¶223-225.

At ¶¶341-343, Mr. Andrews relies on the same theories as discussed for Claim Element 1[D]. As previously addressed, a POSITA would not be motivated to modify *Taylor* to enable the restrictor and restrictee devices to exchange geographic boundary information and trigger location reporting as per *Fast*, due to the reasons outlined earlier. *See* Ex.2001, ¶226.

7. *Element 1[F]: means to determine and report to the system upon request that, another mobile remote unit of the network has tracked the portable mobile remote over a period of time.*

Taylor-Fast-IllinoisLaw does not teach "a control unit programmed to identify and report to another control unit of the system that another PRU within the same network boundary as the PRU has moved together with the PRU over a pre-specified distance while maintaining a pre-specified radius of it over a pre-defined time period." *See* Ex.2001, ¶229.

Taylor's central location includes a control unit that receives location updates from the restrictor and restrictee devices at intervals, but this does not disclose a control unit programmed to perform the function required by this claim element, nor

does Mr. Andrews provide evidence to the contrary. *See* Ex.2001, ¶230. Mr. Andrews' analysis from Section XIII.E.1 relies on hindsight-driven speculations and an improper combination of *Taylor* and *Fast*. *See* Ex.2001, ¶231. A POSITA would not have been motivated to combine these references, and adding *Fast*'s "predetermined time limit" would not result in a determination of whether the restrictor remained in the perimeter during that time; it would only confirm the restrictee's presence in the perimeter. *See* Ex.2001, ¶232. Additionally, combining *Taylor-Fast* with *IllinoisLaw*'s broad definition of stalking does not necessitate that the stalker and victim move in tandem over a predefined distance during a tracking period. *See* Ex.2001, ¶233.

2. Dependent Claim 2

Claim 2 recites as follow:

> The portable mobile remote according to claim 1, having means to further determine if location disclosure for the remote unit is prohibited at a specific geographic boundary before sending its location information to the network

Here again, Mr. Andrews relies upon combining the two disparate approaches of *Taylor* and *Fast*, by having *Taylor*'s device only report locations only when there is a perimeter violation, contrary to *Taylor*'s requirements. For the reasons previously explained, a POSITA would not have been motivated to make the asserted modification to *Taylor*.

3. Independent Claim 22

1. *Element 22[pre]: A communication system comprising:*

Patent Owner does not dispute that *Taylor-Fast-IllinoisLaw* teaches Element 22[pre].

2. *Element 22[A]: (i) a network of communication units;*

Taylor-Fast-IllinoisLaw does not teach Element 22[A] for the same reason it does not disclose Element [1][A] because "communication units" are synonymous with "portable remote units" in the '918 patent, as previously discussed.

3. *Element 22[B]: (ii) at least a first communication unit and at least a second communication unit able to provide location information to the network for a time while in motion;*

Taylor-Fast-IllinoisLaw does not teach Element 22[B] for the same reason it does not disclose Element [1][A] because "communication units" are synonymous with "portable remote units" in the '918 patent, as previously discussed.

4. *Element 22[C]: (iii) means to request whether the at least second communication unit is tracking the at least first communication unit;*

The *Taylor-Fast-IllinoisLaw* combination does not disclose "a control unit programmed to make a tracking request. *See* Ex.2001, ¶241.

The transmission of location coordinates from the restrictee device in *Taylor* does not trigger a tracking request as defined by the claim as argued by Mr. Andrews (Ex-1002, ¶362); it merely updates the location constraint perimeter, which prompts the restrictee device to notify the system if it enters the perimeter. Ex.2001, ¶¶242-243. This system does not perform the specific tracking determination required by the claim, as it does not involve both the restrictor and restrictee moving in tandem over a specified distance during a tracking period. *Id.* Additionally, the system does not pick up any proximately located restrictees, as it only provides perimeter data relevant to specific restrictors, similar to how *Layson'757* limits location constraints to associated victims. *Id.*

5. *Element 22[D]: (iv) means to determine from said location provided (ii) that the at least first and second communication unit maintained proximity while in motion during said time;*

Taylor-Fast-IllinoisLaw does not disclose Element 22[D] for the same reasons *Layson'757-Layson'213-IllinoisLaw* does not disclose Element 1[F]. Ex.2001, ¶246-248.

6. *Element 22[E]: (vi) means to provide result of the determination (iv) to the requestor of (iii).*

Layson'757-Layson'213-IllinoisLaw does not teach Element 22[E] as it does not provide the result of the determination to the requestor at the end of the tracking

period as required by Element 22[E]. The minimum necessary structure to perform this function is "a control unit programmed to provide the result of the determination (iv) to the requestor of (iii)," which is not disclosed in *Taylor*. Ex.2001, ¶¶249-251.

* * *

For all the foregoing reasons, Petitioner's Ground 5 is not likely to succeed, and the Petition should be denied.

I. CONCLUSION

The Board should therefore deny institution of trial in this matter.

Dated: August 22, 2024

Respectfully submitted,

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CERTIFICATE OF COMPLIANCE

Patent Owner certifies that Patent Owner's Preliminary Response contains **[13927]** words exclusive of a table of contents, a table of authorities, mandatory notices under § 42.8, a certificate of service or word count, or appendix of exhibits or claim listing, according to Microsoft Word.

Dated: August 22, 2024

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