

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS CO., LTD., and
SAMSUNG ELECTRONICS, AMERICA, INC.,

Petitioners

v.

FENDGO, LLC,

Patent Owner

Case IPR2024-00114

U.S. Patent No. 11,265,404

**DECLARATION OF WILLIAM R. MICHALSON, PH.D. IN SUPPORT
OF PETITION FOR INTER PARTES REVIEW
OF U.S. PATENT NO. 11,265,404**

Samsung v. Fendgo IPR2024-00114 Exhibit 1002
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I, William R. Michalson of Douglas, Massachusetts, declare that:

I. ASSIGNMENT

1. I have been retained on behalf of Samsung Electronics Co., Ltd. and Samsung Electronics America, Inc. (together, “Samsung”), to offer technical opinions related to U.S. Patent No 11,265,404 (“the ’404 patent”) (EX1001). I understand that Samsung is requesting that the Patent Trial and Appeal Board (“PTAB” or “Board”) institute an *inter partes* review (“IPR”) proceeding of the ’404 patent.

2. I have been asked to provide my independent analysis of the ’404 patent based on the prior art publications cited in this declaration.

3. I am not and never have been, an employee of Samsung. I received no compensation for this declaration beyond my normal hourly compensation based on my time actually spent analyzing the ’404 patent, the prior art publications cited below, and issues related thereto, and I will not receive any added compensation based on the outcome of any IPR or other proceeding involving the ’404 patent.

II. QUALIFICATIONS

4. I am over the age of 18 and am competent to write this declaration. I have personal knowledge, or have developed knowledge, of these technologies based upon education, training, or experience of the matters set forth herein.

5. I earned a B.S. in Electrical Engineering from Syracuse University in 1981, and an M.S. and a Ph.D. in Electrical Engineering from the Worcester Polytechnic Institute (WPI) in 1985 and 1989, respectively.

6. I am currently a tenured Professor in Robotics Engineering in the Robotics Engineering Department of WPI. I also hold appointments as a Professor of Computer Science, a Professor of Electrical and Computer Engineering, and as a Professor of Mechanical Engineering. At WPI, I perform research and teach in the areas of navigation, communications, and computer system design. I supervised the WPI Center for Advanced Integrated Radio Navigation (CAIRN), where I was developing a Public Safety Integration Center focused on the integration of communications, navigation, and information technologies for public safety applications. Currently I direct the Robot Communication and Navigation Laboratory where my research focuses on the development, testing, and evaluation of systems for both civilian and military applications with a special emphasis on techniques focused on indoor, underground, or otherwise GPS-denied situations. My interests in communication, navigation, and computing have led me to play an active role in the development of the Robotics Program at WPI, where I teach robotics courses at the graduate and undergraduate level.

7. Prior to joining the faculty of WPI, I worked at the Raytheon Company from 1981-1991, with a leave of absence between 1985-1988 to complete my Doctoral Degree (Ph.D.) in Electrical Engineering from the Worcester Polytechnic Institute. Prior to my leave of absence, I worked as an Engineer in the Cursive Displays Department and VLSI Design Department of the Computer and Displays Laboratory within Raytheon's Equipment Division. After receiving my Ph.D., I returned to the Equipment Division of the Raytheon Company where I was promoted to the title of Engineer, Design and Development. I was subsequently selected to sit on the engineering staff of the newly-formed System Engineering Department of the Division's Computer and Displays Laboratory. In this capacity, I acted primarily as a consultant to other departments within the laboratory, and my responsibilities ranged from leading the hardware and software development of supercomputer-class computer systems to performing applied research into the exploitation of new technology.

8. I have more than 40 years of experience in the field of computer technology, specifically in the specialized field of signal and data processing. I have consulted and served, including being qualified by courts, as an expert for numerous patent cases, including in patent cases involving motion sensing, positioning, map navigation technologies, and wireless communications a listing of which is set forth in my current curriculum vitae which is attached to this

Declaration as Appendix A. I hold a commercial General Radio Operator's license (with Ship RADAR Endorsement), an Extra Class Amateur Radio operator's license, and have held a Commercial Radiotelegraph Operators license. I was first licensed as a Radio Amateur in 1974 and have been involved in the design, implementation, and repair of radio systems, including radio-controlled systems, since that time.

9. I have been involved with numerous projects involving the tracking and control of remote objects, including objects traveling in the air, on the ground, and in the water. Starting with my work at Raytheon Company I was involved with the tracking of aircraft in both military and civilian air traffic control systems. I have worked on the guidance and control systems for multiple missile systems as well as the guidance and tracking systems for fire control systems and on spaceborne systems for tracking ballistic missiles. In my work at WPI, I have been involved with numerous projects related to tracking land, sea, and air vehicles using the GPS, inertial guidance systems, including using augmentations to the GPS. As outlined in my CV, I have decades of experience using cellular and other radio technologies for passing telemetry (such as audio, video, location, and other information relevant to understanding the status of a system), performing remote control, and performing geolocation.

10. I am a named inventor on nine patents, including patents on map navigation devices, geolocation systems, and high resolution and precision location systems. I have authored, or co-authored, over 100 journal papers and conference publications, including papers and publications regarding positioning and navigation systems and methods. I am also the co-author of a chapter entitled “An Approach for Implementing a Reconfigurable Optical Interconnection Network for Massively Parallel Computers” in Optical Interconnection – Foundations and Approaches by C. Tocci and H. J. Caulfield Eds., Artech House, 1994. I am currently under contract to write a book tentatively entitled “Radionavigation and the Global Positioning System,” which covers the physical principles upon which radionavigation system are based as well as the hardware and software required to perform navigation. At WPI I have taught courses in Sensors, Circuits, and Systems, Digital Circuit Design, Embedded Computing, Computer Architecture, Computer, and Navigation. In addition, I have advised projects involving computer systems, navigation, and communications for a large variety of applications in the air, on land, and on the sea.

11. I have received numerous awards and recognition for my work, including becoming a Senior Member of the IEEE. In addition, I was awarded the Joseph Samuel Satin Distinguished Fellowship for the 1994-1995 academic

year, and the Aldo Miccioli Fellowship from the Raytheon Company's Equipment Division. I am also a member of the Institute of Navigation, the Royal Institute of Navigation, the American Society of Engineering Educators, the Society of Automotive Engineers, the National Marine Electronics Association, the Academy of Model Aeronautics, and the National Academy of Inventors.

12. My curriculum vitae, attached as Exhibit A, includes a list of publications on which I am a named author. It contains further details regarding my experience, education, publications, and other qualifications provide to an expert opinion in connection with this proceeding.

III. SUMMARY OF CONCLUSIONS FORMED

13. This Declaration explains the conclusions that I have formed based on my analysis. To summarize, as discussed below in Ground 1, based upon my knowledge and experience and my review of the prior art publications in this declaration, I believe that claims 1-8 of the '404 patent are made obvious by *DiPerna*964 (EX1028) in view of *Strack* (EX1029).

IV. LEVEL OF ORDINARY SKILL IN THE ART

14. I have been informed by Petitioners' counsel that a person of ordinary skill in the art is a hypothetical person who is presumed to have the skill and experience of an ordinary worker in the field at the time of the priority

date of the challenged patent. I have been asked to assume for the purposes of this Petition that the priority date is January 30, 2019.

15. Based on my knowledge and experience in the field and my review of the '404 patent and file history, I believe that a person of ordinary skill in the art in this matter would have had at least a Bachelor's of Science Degree (or equivalent) in an academic area emphasizing electrical engineering, computer engineering, computer science, or a related technical field, and about 1-2 years of experience working with telematics systems (e.g. familiarity with wireless communications, geolocation systems, and human-computer interfaces). A greater amount of education in an academic area emphasizing electrical engineering, computer engineering, computer science, or a related technical field, would compensate for fewer years of work experience, and more years of work experience would compensate for less education.

16. Based on my experiences, I have at least the skills of a person having ordinary skill in the art as well as a good understanding of the capabilities of a person having ordinary skill in the art. To be clear, all of my opinions in this declaration are from the perspective of one of ordinary skill in the art as I have defined it here during the relevant timeframe.

V. LEGAL PRINCIPLES

17. I am not an attorney and offer no legal opinions, but in the course of my work, I have had experience studying and analyzing patents and patent claims from the perspective of a person skilled in the art.

18. For the purposes of this declaration, I have been informed about certain aspects of the law that are relevant to forming my opinions. My understanding of the law is as follows.

19. Petitioner's counsel has informed me that for the prior art to inherently disclose a claimed limitation, the prior art need not expressly disclose the limitation, so long as the claimed limitation necessarily flows from a disclosure in the prior art. I also understand that it is acceptable to examine evidence outside the prior art reference (extrinsic evidence) in determining whether a feature, while not expressly discussed in the reference, is necessarily present in that reference.

20. Petitioner's counsel has informed me that a patent claim can be considered to have been obvious to a person of ordinary skill in the art at the time the application was filed. I am informed that this means that, even if all of the requirements of a claim are not found in a single prior art reference, the claim is not patentable if the differences between the subject matter in the prior

art and the subject matter in the claim would have been obvious to a person of ordinary skill in the art at the time of the invention.

21. I have been informed by Petitioners' counsel that a determination of whether a claim would have been obvious should be based upon several factors, including, among others:

- the level of ordinary skill in the art at the time the application was filed;
- the scope and content of the prior art; and
- what differences, if any, existed between the claimed invention and the prior art.

22. I have been informed by Petitioners' counsel that a single reference can render a patent claim obvious if any differences between that reference and the claims would have been obvious to a person of ordinary skill in the art.

Alternatively, I understand that the teachings of two or more references may be combined in the same way as disclosed in the claims, if such a combination would have been obvious to one having ordinary skill in the art. In determining whether a combination based on either a single reference or multiple references would have been obvious, it is appropriate to consider, among other factors:

- whether the teachings of the prior art references disclose known concepts combined in familiar ways, and when combined, would yield predictable results;

- whether a person of ordinary skill in the art could implement a predictable variation, and would see the benefit of doing so;
- whether the claimed elements represent one of a limited number of known design choices, and would have a reasonable expectation of success by those skilled in the art;
- whether a person of ordinary skill would have recognized a reason to combine known elements in the manner described in the claim;
- whether there is some teaching or suggestion in the prior art to make the modification or combination of elements claimed in the patent; and
- whether the innovation applies a known technique that had been used to improve a similar device or method in a similar way.

23. I have been informed by Petitioners' counsel that one of ordinary skill in the art has ordinary creativity and is not an automaton. Petitioner's counsel has also informed me that in considering obviousness, obviousness may not be determined using the benefit of hindsight, including hindsight derived from the patent being considered.

24. I have been informed by Petitioners' counsel that for a patent claim in a later-filed application to be entitled to the priority date of an earlier-filed application, the specification of the earlier-filed application must adequately support the patent claim of the later-filed application. This means that the

specification of the earlier-filed application must provide an adequate written description of the invention claimed in the later-filed application.

25. I have been informed by Petitioners' counsel that the written description requirement is met if the applicant conveys in the specification with reasonable clarity to those skilled in the art that he or she possessed the claimed invention as of the filing date of the application. An applicant shows that one is "in possession" of the invention by describing the invention, with all its claimed limitations, not merely that which makes it obvious. A description that merely renders the later-filed claim obvious is not sufficient. One may satisfy the written description requirement with words, structures, figures, diagrams, and/or formulas that fully set forth the claimed invention. Although the exact terms of the claim need not be recited verbatim in the specification, the specification must contain an equivalent description of the claimed subject matter.

26. I am also informed that the failure to include in the written description aspects of the claimed invention that would be routinely known and understood by one of ordinary skill in the art when the application was filed will not be fatal to the validity of the claim if such aspects are inherent to what was disclosed. To be inherent, the missing descriptive matter must necessarily be present in the specification such that one skilled in the art would recognize such a disclosure.

VI. MATERIALS CONSIDERED

27. My analysis and conclusions set forth in this declaration are based on my educational background and experiences in the field (see Section II).

Based on my knowledge and experience, I believe that I am considered to be an expert in the field. Also, based on my knowledge and experience, I understand and know of the capabilities of persons of ordinary skill in the field since the early 2000s, and I taught, participated in organizations, and worked closely with many such persons in the field during that time frame.

28. As part of my independent analysis for this declaration, I have considered the following: the background knowledge/technologies that were commonly known to persons of ordinary skill in this art during the time before the earliest claimed priority date for the '404 patent; my own knowledge and experiences gained from my work experience in the field of the '404 patent and related disciplines; and my experience in working with others involved in this field and related disciplines.

29. In addition, I have analyzed the following publications and materials:

- U.S. Patent No. 11,265,404 to DiPerna (“the '404 Patent”) (EX1001);
- The Prosecution History of the '404 Patent (“the Prosecution History”) (EX1004);

- U.S. Provisional Application No. 60/643,865 (EX1005);
- U.S. Application No. 13/897,353 (EX1006);
- U.S. Publication 20040121756A1 (“*Griffin*”) (EX1025)
- U.S. Publication 2004/0137938A1 (“*Deubler*”) (EX1026);
- U.S. Patent 7515900B2 (“*Van Camp*”) (EX1027);
- U.S. Publication 2006/0201964 (“*DiPerna964*”) (EX1028);
- U.S. Patent 10,460,590 (“*Strack*”) (EX1029);
- U.S. Patent 10,089,842 (“*Fadell*”) (EX1030);
- U.S. Patent 8,032,108 (“*Kuz*”) (EX1031);

and any other materials I refer to in this declaration in support of my opinions.

30. My analysis and conclusions set forth in this declaration are based on the perspective of a person having ordinary skill in the art.

VII. OVERVIEW OF THE '404 PATENT

A. THE SPECIFICATION

31. The '404 Patent is titled “Emergency personal protection system integrated with mobile devices.” It “relates generally to the field of personal safety devices.” EX1001, 1:21-22. The alleged invention “provides a self-defense device which is integrated with or used with a mobile phone/device” in which a “self-defense mechanism” is “attached to a mobile phone/device.” *Id.*,

4:52-56. “[T]he self-defense mechanism can be a separate panic button.” *Id.*, 5:40-42.

32. “[W]hen the self-defense mechanism is activated, a camera built into the mobile phone/device takes an image of the attacker, and the mobile phone/device sends image data and audio data to the authorities along with specific information such as, for example, the name and description of the owner of the self-defense device, location information, a time and date stamp, etc.” *Id.*, 3:4-13. “In this way, the present invention utilizes a built-in camera to take still or moving images of the attacker and send the image and/or audio data to the authorities along with the specific information.” *Id.*, 3:13-16.

33. The ’404 patent discloses “a mobile device, comprising a camera unit, adapted to obtain at least one of image data and audio data; a location unit, adapted to obtain location data; a transmitting unit, adapted to transmit at least one of the image data, the audio data, and the location data; and a panic button, adapted to activate the camera, the location unit, and the transmitting unit.” *Id.*, 3:51-58.

34. The ’404 patent explains:

In one example, pushing a “panic button” on the mobile phone/device of the present invention can result in a still image or moving video being taken, as well as an audio recording being obtained. The present invention then wraps the data up and

transmits it to an emergency service with the x-y coordinates. This enables the emergency service to have image and/or audio data as well as the relevant location information. ... For example, panic button can trigger the image/audio data and location information being obtained.

Id., 7:8-17.

35. The panic button may be activated in various ways:

The panic button may be activated by at least one of: (1) a depressing or series of depressions of the panic button, (2) a depressing of the panic button for a predetermined time period, (3) a depressing of the panic button together with another button, and (4) a codeword.

Id., 3:60-65.

36. The '404 patent discloses implementing a "safeguard against falsely triggering the device" such as "a button sequence, the number of times a button is depressed, etc." *Id.*, 7:54-57.

37. The '404 patent discloses using "a number of ways to send image data and audio data." *Id.*, 6:44-45. The '404 patent disclose using TCP/IP:

The present invention in one embodiment communicates the emergency information (image information, location information, owner information, etc.) through a TCP/IP (Transmission Control Protocol/internet Protocol) connection on the phone or mobile device, or through another such as WAP (Wireless Application Protocol). TCP/IP is a communications protocol that is used to

connect hosts on the Internet, and TCP/IP is the de facto standard for transmitting data over networks.

Id., 6:20-28.

38. The '404 patent discloses using Multimedia Messaging Service (“MMS”):

The present invention may also use an MMS (Multimedia Message Service) system, which is a mix between internet protocol and e-mail protocol. More specifically, MMS is a store-and-forward method of transmitting graphics, video clips, sound files, and short text messages over wireless networks using WAP. MMS implementations also support e-mail addressing, so that the device can send e-mails directly to an e-mail address. The presentation of the MMS message is coded into the presentation file so that images, sounds, and text are displayed in a predetermined order as one singular message. The most common use of MMS is for communication between mobile phones/devices. MMS is one method enabling the present invention to obtain video/audio information and send the data to a specified location. Of course, the present invention is not limited to using protocols such as TCP/IP and MMS.

Id., 6:28-43.

39. The '404 patent also discloses using “regular e-mail” or a “web service.” *Id.*, 6:47-51.

B. THE CLAIMS

40. The table below includes identifiers for the '404 patent claims and limitations, which are referenced throughout.

Claim 1	
1[pre]	A mobile device, comprising:
1[a]	a camera unit, adapted to obtain at least one of image data and audio data;
1[b]	a location unit, adapted to obtain location data;
1[c]	a transmitting unit, adapted to transmit the image data, the audio data, and the location data as emergency information to a specified location, along with specific information including owner identification information; and
1[d]	a panic button, adapted to, when activated, ready itself to perform the following panic button functions: (1) dialing a public or private network for an emergency purpose and (2) activating the transmitting unit,
1[e]	wherein the panic button is activated by a depressing of the panic button together with another button at substantially the same initial time such that no panic button function is activated unless both buttons are depressed.
Claim 2	
2	A mobile device as set forth in claim 1, wherein the specific information includes a time and date stamp.
Claim 3	
3	A mobile device as set forth in claim 1, wherein the specific information includes a pre-recorded personal warning message if the panic button is activated during a predetermined time period.
Claim 4	
4	A mobile device as set forth in claim 1, wherein the panic button is silent.
Claim 5	
5	A mobile device as set forth in claim 1, wherein the panic button activates an audible warning message, wherein the audible warning message includes words.

Claim 6	
6	The mobile device as set forth in claim 1, wherein the panic button activates an audible alarm.
Claim 7	
7	The mobile device as set forth in claim 1, further comprising a safety switch that, upon being moved into position, readies the panic button to contact the public or private network for emergency purposes when the panic button is activated.
Claim 8	
8	A mobile device as set forth in claim 1, wherein the owner identification information includes a name and a description of the owner of the mobile device.

C. THE PROSECUTION HISTORY

41. In an Office Action dated June 10, 2021, the Office rejected application claim 7 (which issued as independent claim 1) as obvious. EX1004 at 147, 155.

Office Action Summary	Application No. 16/262,835	Applicant(s) DiPerna et al.	
	Examiner PING Y HSIEH	Art Unit 2664	AIA (FITF) Status No
<i>-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --</i> Period for Reply A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION. - Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication. - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication. - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). - Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b). Status 1) ☒ Responsive to communication(s) filed on 3/22/21. ☐ A declaration(s)/affidavit(s) under 37 CFR 1.130(b) was/were filed on ____. 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final. 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____, the restriction requirement and election have been incorporated into this action. 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under <i>Ex parte Quayle</i>, 1935 C.D. 11, 453 O.G. 213. Disposition of Claims* 5) ☒ Claim(s) <u>7-9,16-19,22,24,26-30 and 32-37</u> is/are pending in the application. 5a) Of the above claim(s) ____ is/are withdrawn from consideration. 6) ☐ Claim(s) ____ is/are allowed. 7) ☒ Claim(s) <u>7-9,16-19,22,24,26-30 and 32-37</u> is/are rejected. 8) ☐ Claim(s) ____ is/are objected to. 9) ☐ Claim(s) ____ are subject to restriction and/or election requirement * If any claims have been determined allowable, you may be eligible to benefit from the Patent Prosecution Highway program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/oph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.			

EX1004 at 147 (annotated).¹

¹ All emphases and annotations are added unless otherwise noted.

Claim 7, 16-19, 26, 28, and 35 is/are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Van Camp (U.S. PATENT NO. 7,515,900) in view of Griffin (U.S. PG-PUB NO. 2004/0121756) and further in view of Deubler (U.S. PG-PUB NO. 2004/0137938).

EX1004 at 155 (annotated).

42. In a response dated September 10, 2021, the applicant amended application claim 7, as shown in the clip below.

7. (Currently Amended) A mobile device, comprising:

- a camera unit, adapted to obtain at least one of image data and audio data;
- a location unit, adapted to obtain location data;
- a transmitting unit, adapted to transmit at least one of the image data, the audio data, and the location data as emergency information to a specified location, along with specific information including owner identification information; and
- a panic button, adapted to, when activated, ready itself to perform at least one of the following panic button functions: (1) dialing a public or private network for emergency purposes or (2) activating the transmitting unit,

wherein the panic button is activated by a depressing of the panic button together with another button at substantially the same initial time such that no panic button function is activated unless both buttons are depressed.

EX1004 at 122.

43. As shown above, application claim 7 was amended to require that the panic button is adapted to, when activated, “ready itself to” perform certain functions. In the remarks accompanying the amendments, the applicant did not

explain or provide specification support for the “ready itself” amendment.
EX1004 at 128, 130-132.

REMARKS

Introduction and status of the claims

Claims 7-9, 16-19, 22, 24, 26-30, 33, and 35-39 are now presented for examination.

Claims 7, 16, and 35-37 have been amended.

Claims 32 and 34 have been canceled without prejudice or disclaimer of subject matter.

Claims 38 and 39 have been added.

Claims 7, 16, and 35-37 are in independent form.

EX1004 at 128.

Independent claim 7

Independent claim 7 as amended is directed to the following:

7. *A mobile device, comprising:*
a camera unit, adapted to obtain at least one of image data and audio data;
a location unit, adapted to obtain location data;
a transmitting unit, adapted to transmit at least one of the image data, the audio data, and the location data as emergency information to a specified location, along with specific information including owner identification information; and
a panic button, adapted to, when activated, ready itself to perform at least one of the following panic button functions: (1) dialing a public or private network for emergency purposes or (2) activating the transmitting unit,
wherein the panic button is activated by a depressing of the panic button together with another button at substantially the same initial time such that no panic button function is activated unless both buttons are depressed.

The general nature of Van Camp and Griffin has been discussed at length in previous papers and it is not believed to be necessary to repeat those discussions. In the **previous** Office Action dated September 18, 2020 the Examiner took the position that Van Camp (col. 10, lines 49-51) showed the feature in which the panic button is activated by a depressing of the panic button together with another button. In the response filed on March 22, 2021 Applicant argued in rebuttal as follows:

EX1004 at 130.

VIII. OVERVIEW OF THE PRIOR ART

A. *DIPERNA964*

44. *DiPerna964* is a publication of U.S. Patent Application No. 11/333,809, which, as reflected in the snip from the cover of the '404 patent below, is the publication of the earliest non-provisional application in the priority chain of the '404 patent. The specification of *DiPerna964* is substantively identical to the '404 patent.

(21) Appl. No.: **16/262,835**

(22) Filed: **Jan. 30, 2019**

(65) **Prior Publication Data**

US 2019/0268454 A1 Aug. 29, 2019

Related U.S. Application Data

(60) Division of application No. 13/897,353, filed on May 17, 2013, now Pat. No. 10,230,827, which is a
(Continued)

Related U.S. Application Data

continuation of application No. 11/333,809, filed on Jan. 17, 2006, now Pat. No. 8,472,915.

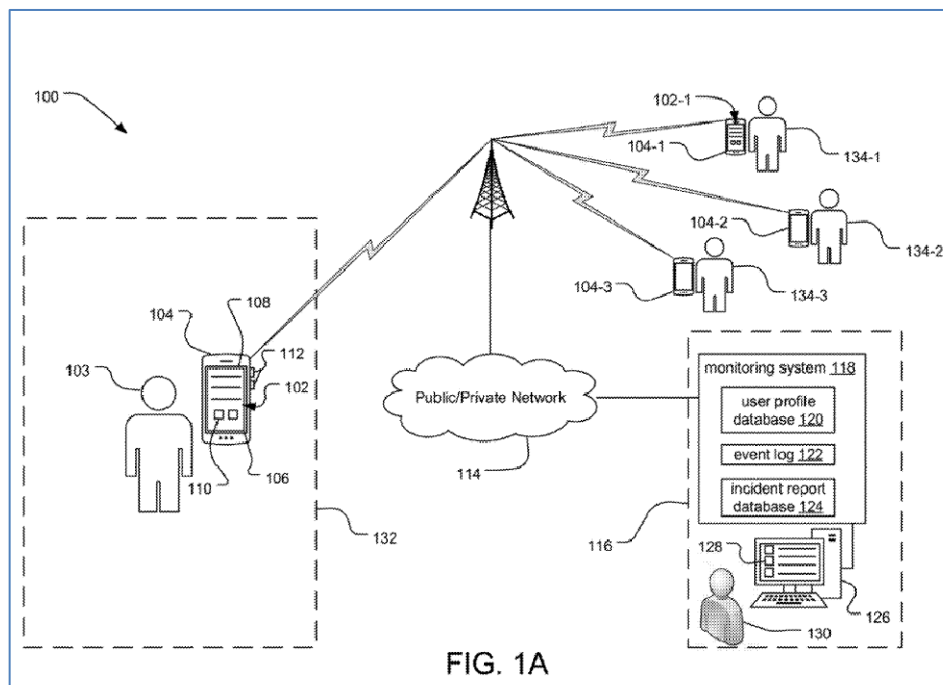
(60) Provisional application No. 60/643,865, filed on Jan. 14, 2005.

EX1001, COVER.

B. *STRACK*

45. *Strack* is titled “Method and System for Mobile Duress Alarm.”

EX1029, Cover. *Strack* discloses a “method for responding to potential security events” and a “mobile duress alarm system.” *Id.*, 4:7-9, 6:24-26. The system includes a mobile application executing on a mobile device and a monitoring center connected via a network. *Id.*, 6:27-30. “The application can detect arming events, record event data, and forward the event data to a monitoring center. It also determines whether the mobile application has been disarmed in response to the arming events. The monitoring center will then execute actions in response to failing to receive an indication that the mobile application was disarmed.” *Id.*, 4:41-47.



EX1029, FIG. 1A.

46. “Arming events are events that will arm the mobile application.”
Id., 8:48-49. The arming event may be pressing a button on the mobile device.
Id., 11:22-28, Claims 1, 2. Examples of how the system works are described with reference to Figures 6 and 7. In sum, the user of the mobile device may arm the device by pressing a button. Once armed, the device begins recording event data such as audio and video, and starts a timer. If the timer expires, then the device transmits a notification and data to the monitoring center.

FIG. 6 is a sequence diagram illustrating the method for the mobile duress alarm system in the event that the mobile application 102 becomes armed and then is disarmed by the user 103. In step 230, the mobile application 102 is armed in response to the detection of an arming event associated with the user 103 in the user profile database 120. In step 232, the mobile application starts a duress timer, and in step 234, the mobile application 102 begins recording audio and video data. In step 236, the user 103 manually selects the option to extend the duress timer, thus providing additional time before the duress timer expires. In step 238, the user 103 selects an option to pause the duress timer, which subsequently stops counting down temporarily. In step 240, the user 103 selects an option to deactivate the duress timer, thus disarming the mobile application 102 and stopping the duress timer in step 242. Finally, in step 244 the mobile application 102, which has not entered an

alarm state, stops recording event data, and the event data is deleted.

In one example, an employee of a company is returning to their car after working late at night. The employee arms the mobile application 102 by pressing a virtual button 110 on the GUI 106 of the mobile application 102. The duress timer is set at five minutes and begins counting down and recording audio and video data. When there is one minute left on the duress timer, the employee extends the duress timer, by pressing another virtual button 110. When the employee gets into their car safely, they press another virtual button 110 to deactivate the duress timer, indicating that no potential security event exists. As a result, the mobile application 102 stops recording audio and video data and deletes the audio and video data already recorded.

In another example, the mobile application 102 automatically detects that the employee is returning to their car using geofencing, and since it is later than a predetermined threshold of time, the mobile application 102 automatically becomes armed and starts the duress timer.

FIG. 7 is a sequence diagram illustrating the method for the mobile duress alarm system in the event that the user arms the mobile application and then allows the armed state of the mobile application to expire. Steps 230 through 234 proceed as previously described. However, in step 246, the duress timer expires without being deactivated, extended or paused by the user 103. As a result, the mobile application 102 enters an alarm

state in step 248, and the monitoring center is notified as previously described in steps 210 through 216.

In this example, the employee returning to their car after working late arms the mobile application 102 as before. However, on their way to their car, the employee becomes incapacitated (for example, after being attacked). As a result, the duress timer expires, and the monitoring center 116 is notified and provided with recorded event data. Local law enforcement is then called and arrives on the scene to intervene.

EX1029, 12:42-13:29.

47. As *Strack* explains in the context of Figure 3, once the timer expires, the mobile application sends an alert to the monitoring center with event data including GPS location data and streaming and/or recorded audio and video data:

In step 210, the mobile application 102 sends an alert to the monitoring center 116 with event data including GPS location data and streaming and/or recorded audio and video data. The mobile application 102 also initiates a telephone call from the mobile computing device 104 to an emergency telephone line of the monitoring center 116. In step 212, the event data is stored in the event log 124 and monitored by a technician 130. In step 214, the monitoring center 116 sends an alert to notify contacts 134 on the user's 103 notification list that a potential security event is occurring or has occurred and to avoid approaching the area, for

example. Finally, in step 216, the monitoring center 116 contacts and forwards real time event data to local law enforcement.

EX1029, 11:34-47.

IX. INTERPRETATION OF THE '404 PATENT CLAIMS

48. I have given all the claim terms their plain and ordinary meaning, as would have been understood by a person having ordinary skill in the art having taken into consideration the language of the claims, the specification, and the prosecution history of record.

X. DETAILED EXPLANATION OF THE GROUND

A. THE CHALLENGED CLAIMS ARE NOT ENTITLED TO A PRIORITY DATE EARLIER THAN JANUARY 30, 2019

49. In my opinion, the “ready itself” limitation in limitation 1[d] lacks written description support in the '353 application (the '404 patent's parent).

50. Limitation 1[d] is:

a panic button, adapted to, when activated, ready itself to perform the following panic button functions: (1) dialing a public or private network for an emergency purpose and (2) activating the transmitting unit,

EX1001, 8:49-52.

51. At best, the '353 application describes an embodiment in which the mobile device includes a “separate ‘safety’ switch which, upon being moved into position, readies the panic button to contact 911 upon being pressed”:

There can also be a separate “safety” switch which, upon being moved into position, readies the panic button to contact 911 upon being pressed.

EX1006 at 23.

52. Otherwise, the '353 application generally describes that when the panic button is activated (e.g., pressed) the various functions or processes are triggered:

In another embodiment, the present invention provides a self-defense device including a self-defense mechanism which is integrated with a mobile phone/device such that *when the self-defense mechanism is activated, a camera built into the mobile phone/device takes an image of the attacker, and the mobile phone/device sends image data and audio data to the authorities along with specific information such as, for example, the name and description of the owner of the self-defense device, location information, a time and date stamp, etc.* In this way, the present invention utilizes a built-in camera to take still or moving images of the attacker and send the image and/or audio data to the authorities along with the specific information. The self-defense mechanism can be a vial containing pepper spray or mace, for example, or simply a separate panic button located on the device which activates the above-mentioned processes. Of course, the present invention is not limited to the examples discussed herein.

Id. at 15-16.

In another embodiment, the present invention provides a self-defense device including a self-defense mechanism which is integrated with a mobile phone/device such that *when the self-defense mechanism is activated, a camera built into the mobile phone/device takes still or moving images of the attacker, and the mobile phone/device sends the image data to the authorities along with specific information such as, for example, the name and description of the owner of the self-defense device, the location information, etc. audio information can be obtained by the camera and sent as well.* In this way, the present invention utilizes a built-in camera to take image(s) of the attacker and send the specific information to the authorities along with the image information and audio information. The self-defense mechanism can be, for example, a vial containing pepper spray or mace, a personal alarm, a stun gun, a stench ointment, or the like. Further, the self-defense mechanism can be a separate panic button located on the device which activates the above-mentioned processes.

Id. at 20.

According to another embodiment, the panic button can be a big (e.g. red) button in the center of the phone (or elsewhere on the phone) that the user holds down for a predetermined time period. This can safeguard against falsely triggering the device. Other safeguards can include a button sequence, the number of times a button is depressed, etc. The user can choose to dial or say 911 and thereby activate the device that way. Or the user can have their own special code word for activation. *The button can send a*

signal to a controller inside the device to activate this process.

The button can start the speech recognition process in one embodiment, to trigger the device.

EX1006 at 25.

53. In my opinion, a person having ordinary skill in the art would not have understood the '353 application to disclose expressly or inherently any feature by which the panic button, when pressed or activated, merely readies itself to perform certain functions (as opposed to, for example, just performing the functions).

54. Accordingly, in my opinion, a person having ordinary skill in the art would not have understood the applicant to have been in possession of the invention claimed in claim 1 as of the priority date of the '353 application.

B. GROUND 1: *DIPERNA964* IN COMBINATION WITH *STRACK* RENDERS OBVIOUS CLAIMS 1-8

1. CLAIM 1

a. *1[pre]: “A mobile device comprising:”*

55. In my opinion, to the extent that the preamble is limiting, *DiPerna964* discloses or suggests “a mobile device.”

56. *DiPerna964* discloses “a mobile device:”

A mobile device includes a camera unit, a location unit, a transmitting unit, a self-defense mechanism, and a panic button. The camera unit [] obtains at least one of image data and audio data, and the location unit obtains location data. The transmitting

unit transmits at least one of the image data, the audio data, the location data, and specific information including owner identification information. The panic button is adapted to activate the camera, the location unit, the transmitting unit, and the self-defense mechanism.

EX1028 at Abstract.

The present invention according to another embodiment provides a *mobile device*, comprising...transmitting unit.

Id. ¶[0023].

The present invention is for use with *all mobile devices including, but not limited to, cellular telephones, beepers, pagers, ipods, and Blackberry-type devices.*

Id. ¶[0050].

“*A mobile device* for transmitting emergency information, comprising:

a camera unit, adapted to obtain at least one of image data and audio data;

a location unit, adapted to obtain location data;

a transmitting unit, adapted to transmit at least one of the image data, the audio data, and the location data to an emergency dispatch center; and

a panic button, adapted to activate the camera unit, the location unit, and the transmitting unit.

Id., Claim 7; *see also* Claims 3, 11, 16, 24, 29.

57. Accordingly, in my opinion, a person having ordinary skill in the art would have understood *DiPerna964* to disclose or suggest “a mobile device.”

b. 1[a]: “a camera unit, adapted to obtain at least one of image data and audio data”;

58. In my opinion *DiPerna964* discloses or suggests “a camera unit, adapted to obtain at least one of image data and audio data.”

59. *DiPerna964* discloses that the mobile device that includes a camera unit, adapted to obtain at least one of image and audio data:

A mobile device includes **a camera unit**, a location unit, a transmitting unit, a self-defense mechanism, and a panic button. ***The camera unit ... obtains at least one of image data and audio data***, and the location unit obtains location data. The transmitting unit transmits at least one of the image data, the audio data, the location data, and specific information including owner identification information. The panic button is adapted to activate the camera, the location unit, the transmitting unit, and the self-defense mechanism.

EX1028, Abstract.

In another embodiment, the present invention provides a self-defense device including a self-defense mechanism which is integrated with a mobile phone/device such that when the self-defense mechanism is activated, ***a camera built into the mobile phone/device takes an image of the attacker, and the mobile phone/device sends image data and audio data to the authorities*** along with specific information such as, for example, the name and

description of the owner of the self-defense device, location information, a time and date stamp, etc. In this way, ***the present invention utilizes a built-in camera to take still or moving images of the attacker and send the image and/or audio data to the authorities*** along with the specific information.

Id. ¶[0017].

The present invention according to another embodiment provides a mobile device, ***comprising a camera unit, adapted to obtain at least one of image data and audio data;*** a location unit, adapted to obtain location data; a transmitting unit, adapted to transmit at least one of the image data, the audio data, and the location data; and a panic button, adapted to activate the camera, the location unit, and the transmitting unit.

Id. ¶[0023].

The present invention in another embodiment provides a mobile device, ***comprising a camera, adapted to obtain at least one of image data and audio data;*** a location unit, adapted to obtain location data; a transmitting unit, adapted to transmit at least one of the image data, the audio data, and the location data; a self-defense mechanism; and a panic button, adapted to activate the camera, the location unit, the transmitting unit, and the self-defense mechanism.

Id. ¶[0025].

The present invention in another embodiment provides a mobile device, ***comprising a camera unit, adapted to obtain at least one of image data and audio data;*** a location unit, adapted to obtain

location data; a transmitting unit, adapted to transmit at least one of the image data, the audio data, the location data, and specific information including owner identification information; a self-defense mechanism; and a panic button, adapted to activate the camera, the location unit, the transmitting unit, and the self-defense mechanism.

Id. ¶[0027].

In another embodiment, the present invention provides a self-defense device including a self-defense mechanism which is integrated with a mobile phone/device such that when the self-defense mechanism is activated, *a camera built into the mobile phone/device takes still or moving images of the attacker*, and the mobile phone/device sends the image data to the authorities along with specific information such as, for example, the name and description of the owner of the self-defense device, the location information, etc. audio information can be obtained by the camera and sent as well. In this way, the present invention utilizes a built-in camera to take image(s) of the attacker and send the specific information to the authorities along with the image information and audio information.

Id. ¶[0035].

A mobile device for transmitting emergency information, comprising:

a camera unit, adapted to obtain at least one of image data and audio data;

a location unit, adapted to obtain location data;

a transmitting unit, adapted to transmit at least one of the image data, the audio data, and the location data to an emergency dispatch center; and

a panic button, adapted to activate the camera unit, the location unit, and the transmitting unit.

Id., Claim 7; *see also* Claims 3, 7, 11, 16, 24, 29.

60. In view of the above, a person having ordinary skill in the art would have understood *DiPerna964* to disclose or suggest “a camera unit, adapted to obtain at least one of image data and audio data.”

c. 1[b] “a location unit, adapted to obtain at least one of image data and audio data;”

61. In my opinion, *DiPerna964* discloses or suggests “a location unit, adapted to obtain at least one of image data and audio data.”

62. *DiPerna964* discloses “a location unit, adapted to obtain location data:”

A mobile device includes a camera unit, *a location unit*, a transmitting unit, a self-defense mechanism, and a panic button. The camera unit [] obtains at least one of image data and audio data, and *the location unit obtains location data*. The transmitting unit transmits at least one of the image data, the audio data, the location data, and specific information including owner identification information. The panic button is adapted to activate the camera, the location unit, the transmitting unit, and the self-defense mechanism.

The present invention according to another embodiment provides a mobile device, comprising a camera unit, adapted to obtain at least one of image data and audio data; ***a location unit, adapted to obtain location data***; a transmitting unit, adapted to transmit at least one of the image data, the audio data, and the location data; and a panic button, adapted to activate the camera, the location unit, and the transmitting unit.

Id. ¶[0023].

In another embodiment, the present invention provides a self-defense device including a self-defense mechanism which is integrated with a mobile phone/device such that when the self-defense mechanism is activated, a camera built into the mobile phone/device takes an image of the attacker, and the mobile phone/device sends image data and audio data to the authorities along with specific information such as, for example, the name and description of the owner of the self-defense device, ***location information***, a time and date stamp, etc. In this way, the present invention utilizes a built-in camera to take still or moving images of the attacker and send the image and/or audio data to the authorities along with the specific information.

Id. ¶[0017].

A voice activation unit may be provided which activates the panic button using a codeword. The panic button may be activated by at least one of: (1) a depressing or series of depressions of the panic

button, (2) a depressing of the panic button for a predetermined time period, (3) a depressing of the panic button together with another button, and (4) a codeword. ***The location unit may obtain the location data through GPS. The location unit may obtain the location data through cell tower-based triangulation.***

Id. ¶[0024].

The present invention in another embodiment provides a mobile device, comprising a camera, adapted to obtain at least one of image data and audio data; ***a location unit, adapted to obtain location data***; a transmitting unit, adapted to transmit at least one of the image data, the audio data, and the location data; a self-defense mechanism; and a panic button, adapted to activate the camera, the location unit, the transmitting unit, and the self-defense mechanism.

Id. ¶[0025].

The present invention in another embodiment provides a mobile device, comprising a camera unit, adapted to obtain at least one of image data and audio data; ***a location unit, adapted to obtain location data***; a transmitting unit, adapted to transmit at least one of the image data, the audio data, the location data, and specific information including owner identification information; a self-defense mechanism; and a panic button, adapted to activate the camera, the location unit, the transmitting unit, and the self-defense mechanism.

Id. ¶[0027].

The location unit may obtain the location data through at least one of GPS and cell tower-based triangulation.

Id. ¶[0026].

In another embodiment, the present invention provides a self-defense device including a self-defense mechanism which is integrated with a mobile phone/device such that when the self-defense mechanism is activated, a camera built into the mobile phone/device takes still or moving images of the attacker, and the mobile phone/device sends the image data to the authorities along with specific information such as, for example, the name and description of the owner of the self-defense device, ***the location information, etc.*** audio information can be obtained by the camera and sent as well. In this way, the present invention utilizes a built-in camera to take image(s) of the attacker and send the specific information to the authorities along with the image information and audio information.

Id. ¶[0035].

A mobile device for transmitting emergency information, comprising:

a camera unit, adapted to obtain at least one of image data and audio data;

a location unit, adapted to obtain location data;

a transmitting unit, adapted to transmit at least one of the image data, the audio data, and the location data to an emergency dispatch center; and

a panic button, adapted to activate the camera unit, the location unit, and the transmitting unit.

Id., Claim 7; see also Claims 3, 7, 11, 16, 24, 29.

63. In my opinion, a person having ordinary skill in the art would have understood that *DiPerna964* discloses or suggests a “location unit, adapted to obtain location data.”

d. 1[c] a transmitting unit adapted to transmit the image data, the audio data, and the location data as emergency information to a specified location, along with the specific information including owner identification information; and

64. In my opinion, *DiPerna964* discloses or suggests “a transmitting unit adapted to transmit the image data, the audio data, and the location data as emergency information to a specified location, along with the specific information including owner identification information.”

65. *DiPerna964* discloses a “transmitting unit” that “transmits at least one of the image data, the audio data, the location data, and specific information including owner identification information”:

A mobile device includes a camera unit, a location unit, a transmitting unit, a self-defense mechanism, and a panic button. The camera unit ... obtains at least one of image data and audio data, and the location unit obtains location data. ***The transmitting unit transmits at least one of the image data, the audio data, the location data, and specific information including owner***

identification information. The panic button is adapted to activate the camera, the location unit, the transmitting unit, and the self-defense mechanism.

EX1028, Abstract.

In another embodiment, the present invention provides a self-defense device including a self-defense mechanism which is integrated with a mobile phone/device such that when the self-defense mechanism is activated, a camera built into the mobile phone/device takes still or moving images of the attacker, and ***the mobile phone/device sends the image data to the authorities along with specific information such as, for example, the name and description of the owner of the self-defense device, the location information, etc. audio information can be obtained by the camera and sent as well.*** In this way, the present invention utilizes a built-in camera to take image(s) of the attacker and ***send the specific information to the authorities along with the image information and audio information.***

Id. ¶[0035].

A mobile device, comprising:
a camera unit, adapted to obtain at least one of image data and audio data;
a location unit, adapted to obtain location data;
a transmitting unit, adapted to transmit at least one of the image data, the audio data, the location data, and specific information including owner identification information to an emergency dispatch center;

a self-defense mechanism; and
a panic actuator, adapted to activate the camera, the location unit,
the transmitting unit, and the self-defense mechanism.

Id., Claim 16.

In another embodiment, the present invention provides a self-defense device including a self-defense mechanism which is integrated with a mobile phone/device such that when the self-defense mechanism is activated, a camera built into the mobile phone/device takes an image of the attacker, ***and the mobile phone/device sends image data and audio data to the authorities along with specific information such as, for example, the name and description of the owner of the self-defense device, location information, a time and date stamp, etc.*** In this way, the present invention utilizes a built-in camera to take still or moving images of the attacker and ***send the image and/or audio data to the authorities along with the specific information.***

Id. ¶[0017].

The present invention according to another embodiment provides a mobile device, comprising a camera unit, adapted to obtain at least one of image data and audio data; a location unit, adapted to obtain location data; ***a transmitting unit, adapted to transmit at least one of the image data, the audio data, and the location data;*** and a panic button, adapted to activate the camera, the location unit, and the transmitting unit.

Id. ¶[0023].

The present invention in another embodiment provides a mobile device, comprising a camera, adapted to obtain at least one of image data and audio data; a location unit, adapted to obtain location data; ***a transmitting unit, adapted to transmit at least one of the image data, the audio data, and the location data***; a self-defense mechanism; and a panic button, adapted to activate the camera, the location unit, the transmitting unit, and the self-defense mechanism.

Id. ¶[0025].

The present invention in another embodiment provides a mobile device, comprising a camera unit, adapted to obtain at least one of image data and audio data; a location unit, adapted to obtain location data; ***a transmitting unit, adapted to transmit at least one of the image data, the audio data, the location data, and specific information including owner identification information***; a self-defense mechanism; and a panic button, adapted to activate the camera, the location unit, the transmitting unit, and the self-defense mechanism.

Id. ¶[0027].

66. *DiPerna964* further discloses that the data is transmitted using MMS:

The present invention in one embodiment communicates the emergency information (image information, location information, owner information, etc.) through a TCP/IP (Transmission Control Protocol/Internet Protocol) connection on the phone or mobile

device, or through another such as WAP (Wireless Application Protocol). TCP/IP is a communications protocol that is used to connect hosts on the internet, and TCP/IP is the de facto standard for transmitting data over networks. *The present invention may also use an MMS (Multimedia Message Service) system, which is a mix between internet protocol and e-mail protocol. More specifically, MMS is a store-and-forward method of transmitting graphics, video clips, sound files, and short text messages over wireless networks using WAP. MMS implementations also support e-mail addressing, so that the device can send e-mails directly to an e-mail address. The presentation of the MMS message is coded into the presentation file so that images, sounds, and text are displayed in a predetermined order as one singular message. The most common use of MMS is for communication between mobile phones/devices. MMS is one method enabling the present invention to obtain video/audio information and send the data to a specified location.* Of course, the present invention is not limited to using protocols such as TCP/IP and MMS.

Id. ¶[0039].

67. Accordingly, in my opinion, *DiPerna964* discloses or suggests “a transmitting unit, adapted to transmit the image data, the audio data, and the location data as emergency information to a specified location, along with specific information including owner identification information.”

- e. ***1[d] a panic button, adapted to, when activated, ready itself to perform the following panic button functions: (1) dialing a public or private network for an emergency purpose and (2) activating the transmitting unit***

68. In my opinion, *DiPerna964* in combination with *Strack* discloses or suggests “a panic button, adapted to, when activated, ready itself to perform the following panic button functions: (1) dialing a public or private network for an emergency purpose and (2) activating the transmitting unit.”

69. *DiPerna964* discloses a mobile phone with an integrated “self-defense mechanism” such as a “panic button”:

In another embodiment, the present invention provides a self-defense device including a self-defense mechanism which is integrated with a mobile phone/device such that when the self-defense mechanism is activated, a camera built into the mobile phone/device takes an image of the attacker, and the mobile phone/device sends image data and audio data to the authorities along with specific information such as, for example, the name and description of the owner of the self-defense device, location information, a time and date stamp, etc. In this way, the present invention utilizes a built-in camera to take still or moving images of the attacker and send the image and/or audio data to the authorities along with the specific information. The self-defense mechanism can be a vial containing pepper spray or mace, for example, or simply a separate panic button located on the device which activates the above-mentioned processes.

EX1028 ¶[0017].

The present invention according to another embodiment provides a mobile device, comprising a camera unit, adapted to obtain at least one of image data and audio data; a location unit, adapted to obtain location data; a transmitting unit, adapted to transmit at least one of the image data, the audio data, and the location data; and ***a panic button, adapted to activate the camera, the location unit, and the transmitting unit.***

Id. ¶[0023].

70. Particularly, *DiPerna964* discloses that, when the panic button is activated, the mobile phone/device sends data and information to the authorities:

In another embodiment, the present invention provides a self-defense device including a self-defense mechanism which is integrated with a mobile phone/device such that when the self-defense mechanism is activated, a camera built into the mobile phone/device takes still or moving images of the attacker, and the mobile phone/device sends the image data to the authorities along with specific information such as, for example, the name and description of the owner of the self-defense device, the location information, etc. audio information can be obtained by the camera and sent as well. In this way, the present invention utilizes a built-in camera to take image(s) of the attacker and send the specific information to the authorities along with the image information and audio information.

Id. ¶[0035]; *see also Id.* ¶[0017].

71. Further, *DiPerna964* also discloses that the panic “can automatically contact 911 upon a press of the button”:

Further, cellular telephones typically comply with e-911, which is emergency 911. Thus, when one dials 911, the dispatch operator can immediately obtain the location. For example, the panic button of the present invention can automatically contact 911 upon a press or series of presses of the button, or upon a codeword. There can also be a separate “safety” switch which, upon being moved into position, readies the panic button to contact 911 upon being pressed. The panic button can be activated upon dialing 911 itself or upon pressing the panic button along with an emergency touchpad “picture.” The present invention can obtain location information in a number of different ways, for example through a tower-based location system. As is well known in the art, cell towers triangulate to figure out where a person is. As another example, the present invention can also obtain location information through a form of GPS (Global Positioning System) on the device (GPS or AGPS, which is assisted GPS). Location information for the present invention can be an x-y coordinate or close to it that the phone obtains and transmits to 911. Altitude information can be included as well.

Id. ¶[0041].

The system can be linked in with an emergency assistance number such as 911 or to a private emergency network specifically set up for these purposes to work with the public authorities in assisting victims. By virtue of the features of the

present invention, authorities will be able to proceed directly to the location of the incident, equipped with specific information such as location information, image and/or audio data of the attack (which can of course aid in identifying the perpetrator), and information as to who owns the mobile phone/device including a description of that person.

Id. ¶[0036].

72. *DiPerna*⁹⁶⁴ also discloses a desire for a device that allows a “victim or ***potential*** victims of violent crime” to flexibly respond to unpredictable emergency situations as they see fit:

Each year many people are assaulted or otherwise find themselves victims or ***potential victims*** of violent crime. Protecting ourselves and our loved ones from these types of crime has always been of paramount importance. Women can be particularly susceptible to crimes of physical assault and violence. According to the U.S. Census Bureau, 231,589,260 people were victims of a crime in 2002. Of these victims, 119,347,330 were women, many of these women having been subjected to awful violent crimes including rape, sexual assault, and robbery, some injured, and some threatened with a weapon. Stalking is another major concern; according to results obtained by a recent National Violence Against Women Survey, women are the primary victims of stalking.

Id. ¶[0005].

The self-defense device can be activated by way of a panic button and/or can be voice activated, for example, upon the shout of a voice command by the victim. Because a situation in which one is confronted by an attacker is inherently unpredictable, *it would be advantageous for potential victims to have the flexibility to proceed as they feel the situation dictates*. Therefore, by virtue of the features of the present invention, the user may keep secret, from the attacker, the fact that the victim has alerted the authorities (e.g. through pressing a silent panic button), or may advertise that fact to the attacker (e.g. through pressing a panic button which is also an alarm). The victim may alert help without saying a word, if the victim deems that the best response to the situation.

Id. ¶[0037].

Of course, the particular threat to women notwithstanding, violent crime is a serious threat to people of both sexes, and of all ages. Many people often find themselves in a potentially dangerous situation in which they are confronted by an attacker. Defending oneself in this situation is of extreme importance.

Id., [0007].

73. In addition to the above, *DiPerna964* recognizes the need to safeguard against falsely triggering the device:

According to another embodiment, the panic button can be a big (e.g. red) button in the center of the phone (or elsewhere on the phone) *that the user holds down for a predetermined time period. This can safeguard against falsely triggering the device. Other safeguards can include a button sequence, the number of times*

a button is depressed, etc. The user can choose to dial or say 911 and thereby activate the device that way. Or the user can have their own special code word for activation. The button can send a signal to a controller inside the device to activate this process. The button can start the speech recognition process in one embodiment, to trigger the device.

Id. ¶[0045].

74. Despite these objectives, a person having ordinary skill in the art would have understood that the mobile device described in *DiPerna964* transmits information and dials 911 upon activation of the panic button. And, as discussed in §X.A, *DiPerna964* does not disclose a technique to allow the panic button to merely ready itself to perform a function when the panic button is pressed or activated. Nevertheless, a POSITA would have been aware of such techniques by January 2019.

75. For example, *Strack* discloses or suggests a system for “responding to potential security events” including a mobile application executing on a mobile device and a monitoring center connected via a network:

In general, according to another aspect, the invention features a method *for responding to potential security events*. The method comprises specifying one or more arming events, expiration actions, and disarming actions. A mobile application executing on a mobile computing device detects the arming events, records event data, forwards the event data to a monitoring center, and

determines whether the mobile application has been disarmed in response to the arming events. Actions are executed in response to failing to detect disarming actions.

EX1029, 4:7-17.

The system 100 includes a mobile and/or embedded application 102 executing on a mobile computing device 104 (e.g. a smart phone, tablet, etc.) and a monitoring center 116 connected via a network 114. The network 114 can be a public network (such as the internet), a private network (such as a corporate network) or a combination public and private network.

Id., 6:27-33.

76. *Strack* discloses that the mobile application may be programmed such that it responds to an “alarm event” such as the user pressing one or more buttons on the device:

Arming events are events that will arm the mobile application 102. When the mobile application 102 is armed, the armed state of the application can be disarmed, extended, or allowed to expire. If the armed state of the mobile application 102 is allowed to expire, an alarm event will be triggered. On the other hand, if the mobile application 102 is disarmed, it is determined that no potential security event exists, and an alarm event is not triggered. Expiration actions are actions taken by the monitoring center 116 when the mobile application 102 is not disarmed and the armed state of the mobile application 102 is allowed to expire. Disarming actions are events taken by the monitoring center 116

when the mobile application is disarmed. The maximum reset count is the maximum number of times that the armed state of the mobile application 102 can be extended before an alarm state is triggered.

Id., 8:48-63.

EMP001's aiming events include "Manual", which indicates that the mobile application 102 will be armed if the user 103 presses a predetermined sequence of virtual buttons 110, physical buttons 112, or wireless alarm buttons 156. The expiration actions for EMP001 include "Text Contacts" and "Call Police", which indicates that when the armed status of the mobile application 102 is allowed to expire (and the mobile application 102 thus enters an alarm state), the monitoring center 116 will send a text message to the contacts 134 in the notification list and will notify local law enforcement. The disarming actions include "Delete A/V, GPS data", which indicates that when the mobile application 102 is disarmed, the audio, video and location information recorded by the mobile application 102 is discarded after a predetermined period of time.

Id., 9:24-38.

1. A method for responding to potential security events comprising:

specifying one or more arming events, expiration actions, and disarming actions for a user;

a mobile application executing on a mobile computing device of the user detecting the specified arming events for the user,

starting recording event data including recording audio and video data by the mobile computing device in response to detecting the specified arming events for the user,
buffering the recorded event data including the audio and video data recorded by the mobile computing device,
executing the specified disarming actions for the user in response to determining that the mobile application was disarmed by the user within a predetermined time period including stopping recording the audio and video data and deleting the recorded audio and video data; and
executing the specified expiration actions for the user in response to determining that the mobile application was not disarmed by the user within the predetermined time period including sending the recorded audio and video data to the monitoring center and streaming recorded audio and video data to the monitoring center.

2. The method according to claim 1, ***wherein the arming events include manual activation by pressing one or more buttons on the mobile computing device.***

Id., claims 1, 2.

77. *Strack* discloses that once armed, the mobile application triggers a “duress timer,” which then begins recording the audio and video data:

In one embodiment, ***a duress timer is used to determine the armed or disarmed status of the mobile application 102.*** In this example, when the mobile application 102 is armed, the duress timer starts at a predetermined amount of time and counts down. When the duress timer reaches zero, the armed state of the mobile

application 102 expires, and the mobile application 102 enters an alarm state.

Id., 8:64-9:3.

In step 230, the mobile application 102 is armed in response to the detection of an arming event associated with the user 103 in the user profile database 120. ***In step 232, the mobile application starts a duress timer, and in step 234, the mobile application 102 begins recording audio and video data.***

Id., 12:45-50.

78. The user may extend the duress timer or deactivate the timer, indicating that no potential security event exists, in which case any recording is stopped and deleted:

In step 236, the user 103 manually selects the option to extend the duress timer, thus providing additional time before the duress timer expires. In step 238, the user 103 selects an option to pause the duress timer, which subsequently stops counting down temporarily. In step 240, the user 103 selects an option to deactivate the duress timer, thus disarming the mobile application 102 and stopping the duress timer in step 242. Finally, in step 244 the mobile application 102, which has not entered an alarm state, stops recording event data, and the event data is deleted.

In one example, an employee of a company is returning to their car after working late at night. The employee arms the mobile

application 102 by pressing a virtual button 110 on the GUI 106 of the mobile application 102. The duress timer is set at five minutes and begins counting down and 65 recording audio and video data. *When there is one minute left on the duress timer, the employee extends the duress timer, by pressing another virtual button 110. When the employee gets into their car safely, they press another virtual button 110 to deactivate the duress timer, indicating that no potential security event exists. As a result, the mobile application 102 stops recording audio and video data and deletes the audio and video data already recorded.*

Id., 12:50-13:5.

79. If the timer is allowed to expire, the mobile application enters an “alarm state”:

In one embodiment, *a duress timer is used to determine the armed or disarmed status of the mobile application 102.* In this example, when the mobile application 102 is armed, the duress timer starts at a predetermined amount of time and counts down. When the duress timer reaches zero, the armed state of the mobile application 102 expires, and the mobile application 102 enters an alarm state.

EX1029, 8:64-9:3.

However, in step 246, the duress timer expires without being deactivated, extended or paused by the user 103. As a result, the mobile application 102 enters an alarm state in step 248, and the monitoring center is notified as previously described in steps 210 through 216.

Id., 13:16-21.

80. In the “alarm state,” the mobile application sends an alert to the monitoring center with event data including GPS data and streaming and/or recorded audio and video data, and the mobile application also initiates a telephone call from the mobile application to the emergency telephone line of the monitoring center:

FIG. 7 is a sequence diagram illustrating the method for the mobile duress alarm system in the event that the user arms the mobile application and then allows the armed state of the mobile application to expire. Steps 230 through 234 proceed as previously described. ***However, in step 246, the duress timer expires without being deactivated, extended or paused by the user 103. As a result, the mobile application 102 enters an alarm state in step 248, and the monitoring center is notified as previously described in steps 210 through 216.***

In this example, the employee returning to their car after working late arms the mobile application 102 as before. However, on their way to their car, the employee becomes incapacitated (for example, after being attacked). As a result, the duress timer expires, and the monitoring center 116 is notified and provided with recorded event data. Local law enforcement is then called and arrives on the scene to intervene.

Id., 13:11-29.

In step 210, *the mobile application 102 sends an alert to the monitoring center 116 with event data including GPS location data and streaming and/or recorded audio and video data.* The mobile application 102 also initiates a telephone call from the mobile computing device 104 to an emergency telephone line of the monitoring center 116. In step 212, the event data is stored in the event log 124 and monitored by a technician 130. In step 214, the monitoring center 116 sends an alert to notify contacts 134 on the user's 103 notification list that a potential security event is occurring or has occurred and to avoid approaching the area, for example. Finally, in step 216, the monitoring center 116 contacts and forwards real time event data to local law enforcement.

Id., 11:34-47.

81. For example, an employee walking to their car late at night can press a button to arm the device and begin recording, and then deactivate the timer if there is no security event:

FIG. 6 is a sequence diagram illustrating the method for the mobile duress alarm system in the event that the mobile application 102 becomes armed and then is disarmed by the user 103. In step 230, the mobile application 102 is armed in response to the detection of an arming event associated with the user 103 in the user profile database 120. In step 232, the mobile application starts a duress timer, and in step 234, the mobile application 102 begins recording audio and video data. In step 236, the user 103 manually selects the option to extend the duress timer, thus providing additional

time before the duress timer expires. In step 238, the user 103 selects an option to pause the duress timer, which subsequently stops counting down temporarily. In step 240, the user 103 selects an option to deactivate the duress timer, thus disarming the mobile application 102 and stopping the duress timer in step 242. Finally, in step 244 the mobile application 102, which has not entered an alarm state, stops recording event data, and the event data is deleted.

In one example, an employee of a company is returning to their car after working late at night. The employee arms the mobile application 102 by pressing a virtual button 110 on the GUI 106 of the mobile application 102. The duress timer is set at five minutes and begins counting down and 65 recording audio and video data. *When there is one minute left on the duress timer, the employee extends the duress timer, by pressing another virtual button 110. When the employee gets into their car safely, they press another virtual button 110 to deactivate the duress timer, indicating that no potential security event exists. As a result, the mobile application 102 stops recording audio and video data and deletes the audio and video data already recorded.*

In another example, the mobile application 102 automatically detects that the employee is returning to their car using geofencing, and since it is later than a predetermined threshold of time, the mobile application 102 automatically becomes armed and starts the duress timer.

FIG. 7 is a sequence diagram illustrating the method for the mobile duress alarm system in the event that the user arms the mobile application and then allows the armed state of the mobile application to expire. Steps 230 through 234 proceed as previously described. However, in step 246, the duress timer expires without being deactivated, extended or paused by the user 103. As a result, the mobile application 102 enters an alarm state in step 248, and the monitoring center is notified as previously described in steps 210 through 216.

In this example, the employee returning to their car after working late arms the mobile application 102 as before. However, on their way to their car, the employee becomes incapacitated (for example, after being attacked). As a result, the duress timer expires, and the monitoring center 116 is notified and provided with recorded event data. Local law enforcement is then called and arrives on the scene to intervene.

Id., 12:42-13:29.

82. If the employee becomes incapacitated (for example, after being attacked), then the duress timer will expire and the mobile application will transmit data and dial an emergency number:

In step 210, the mobile application 102 sends an alert to the monitoring center 116 with event data including GPS location data and streaming and/or recorded audio and video data. The mobile application 102 also initiates a telephone call from the

mobile computing device 104 to an emergency telephone line of the monitoring center 116. In step 212, the event data is stored in the event log 124 and monitored by a technician 130. In step 214, the monitoring center 116 sends an alert to notify contacts 134 on the user's 103 notification list that a potential security event is occurring or has occurred and to avoid approaching the area, for example. Finally, in step 216, the monitoring center 116 contacts and forwards real time event data to local law enforcement.

Id., 11:34-47.

83. A person having ordinary skill in the art would have understood *Strack*'s mobile device and *DiPerna964*'s mobile device were similar. For example, *Strack* and *DiPerna964* describe implementing their disclosures on similar types of mobile devices. *Strack*, 6:29 (describing a "smart phone, tablet, etc."); *DiPerna964* ¶[0050] (describing "cellular telephones" and "Blackberry-type devices"). And both *Strack* and *DiPerna964* disclose that the mobile devices include button(s) that may be used to trigger collection of audio, video, and location data for transmission to a remote location in emergencies.

84. A person having ordinary skill in the art would have understood that *Strack*'s arming and timer technique would have advanced *DiPerna964*'s objectives to (1) provide users with flexible options for responding to unpredictable and potential security threats, and (2) safeguard against false triggering of the system. For example, a person having ordinary skill in the art

would have understood that *Strack*'s technique of arming the device and implementing a timer would allow the user the ability to better assess whether the user was actually in a dangerous situation before triggering a call to 911 and transmission of the recorded information. This would both give the user the flexibility to handle ambiguous potential threats as he/she sees fit and also reduce the likelihood of false triggering because the user would have some additional time to evaluate whether triggering the call/transmission is warranted.

85. A person having ordinary skill in the art would have understood that similar techniques had been used in security systems for some time. For example, the *Faddell* reference, filed in 2014, explains that because home security systems may not be able to distinguish between an intruder and an occupant, security systems implement a "countdown when an intrusion is detected" to "reduce false alarms that are triggered by the occupant." EX1030, 3:55-62:

Security systems use a variety of different sensors to detect intruders for a home or enclosure. However, sensors are unable to discern the difference between an intruder and an occupant. ***To reduce false alarms that are triggered by the occupant, security systems provide a countdown when an intrusion is detected.*** The alarm will be triggered when the countdown reaches zero and the occupant must enter a code into the keypad before that happens to avoid a false alarm. Once the code is entered, the security system

switches to a quiescent state so that the alarm will not be triggered by the occupant while the occupant is home.

EX1030, 3:55-62.²

86. The *Kuz* reference, filed in 2004, similarly describes a vehicle-based emergency call system with a similar delay feature so that “emergency calls triggered by accident or error e.g. due to a failure of sensors may be stopped by an occupant of the vehicle.” EX1031, 2:44-50.³

87. Thus, in my opinion, a person having ordinary skill in the art would have been motivated to incorporate *Strack*’s teachings related to the arming and timer technique into *DiPerna964*. The *DiPerna964-Strack* combination discloses or suggests a mobile device with a panic button that, when activated, arms itself to start recording the image, audio, and location data, and that upon expiration of a timer, triggers the device to dial 911 and transmit the image, audio, and location data to a specified location, along with the specific information.

88. A person having ordinary skill in the art would have understood that the arming and timer technique encompasses readying the panic button to

² To be clear, here, I am relying on *Faddell* as evidence of a person of ordinary skill in the art’s knowledge and the state of the art. *Faddell* is not part of the unpatentability ground.

³ To be clear, here, I am relying on *Kuz* as evidence of a person of ordinary skill in the art’s knowledge and the state of the art. *Kuz* is not part of the unpatentability ground.

perform the functions of dialing 911 and transmitting data because during the timer, the device is getting ready to perform those functions by recording the image, audio, and location data that is transmitted upon expiration of the timer.

89. A person having ordinary skill in the art would have considered the combination to amount to the use of known technique (*Strack*'s arming and timer technique) to improve similar devices (*DiPerna964*'s mobile device) in the same way (to allow a user to start collecting information for sending to an emergency service should it become necessary while giving the user a period of time to disarm the device to reduce false triggering of the system).

90. In my opinion, applying *Strack*'s arming and timer technique to *DiPerna964* would have been well within the skill of an ordinary artisan by January 2019, as evidenced, for example, by the fact that *Strack* already implemented the same functionality in a mobile device similar to *DiPerna964*.

91. Accordingly, in my opinion, a person having ordinary skill in the art would have understood that the *DiPerna964-Strack* combination discloses or suggests a panic button that, when activated ("a panic button, adapted to, when activated") enters an armed state and initiates a duress timer, during which various data is recorded ("ready itself to perform the following panic button functions:") and upon expiration of the timer, contacting 911 and transmits the

recorded data to the authorities (“(1) dialing a public or private network for an emergency purpose and (2) activating the transmitting unit.”)

f. 1[e] wherein the panic button is activated by a depressing of the panic button together with another button at substantially the same initial time such that no panic button function id activated unless both buttons are depressed

92. In my opinion, *DiPerna964* in combination with *Strack* discloses or suggests “wherein the panic button is activated by a depressing of the panic button together with another button at substantially the same initial time such that no panic button function id activated unless both buttons are depressed.”

93. *DiPerna964* discloses that “the panic button may be activated by...a depressing of the panic button together with another button:”

A voice activation unit may be provided which activates the panic button using a codeword. *The panic button may be activated by at least one of:* (1) a depressing or series of depressions of the panic button, (2) a depressing of the panic button for a predetermined time period, (3) *a depressing of the panic button together with another button*, and (4) a codeword. The location unit may obtain the location data through GPS. The location unit may obtain the location data through cell tower-based triangulation.

EX1028 ¶[0024]; *see also* ¶[0041], claim 9.

94. Accordingly, in my opinion, a person having ordinary skill in the art would have understood that the *DiPerna964-Strack* combination discloses or

suggests activating the panic button by a depressing of the panic button together with another button (“panic button is activated by a depressing of the panic button together with another button at substantially the same initial time such that no panic button function is activated unless both buttons are depressed”).

2. CLAIM 2: “A mobile device as set forth in claim 1, wherein the specific information includes a time and date stamp.”

95. In my opinion, *DiPerna964* in combination with *Strack* discloses or suggests “wherein specific information includes a time and date stamp:”

In another embodiment, the present invention provides a self-defense device including a self-defense mechanism which is integrated with a mobile phone/device such that when the self-defense mechanism is activated, a camera built into the mobile phone/device takes an image of the attacker, and the mobile phone/device sends image data and audio data to the authorities *along with specific information such as, for example, the name and description of the owner of the self-defense device, location information, a time and date stamp, etc.* In this way, the present invention utilizes a built-in camera to take still or moving images of the attacker and send the image and/or audio data to the authorities along with the specific information. The self-defense mechanism can be a vial containing pepper spray or mace, for example, or simply a separate panic button located on the device which activates the above-mentioned processes. Of course, the present invention is not limited to the examples discussed herein.

EX1028 ¶[0017].

The specific information may include a time and date stamp. The specific information may include a prerecorded personal warning message. The panic button may be silent. The self-defense mechanism may be at least one of a vial containing pepper spray, a vial containing mace, a vial containing dye, a vial containing a foaming agent, a vial containing a stench ointment, a stun gun, and an audible personal alarm. The panic button may activate an audible warning message.

Id. ¶[0028].

16. A mobile device, comprising:
a camera unit, adapted to obtain at least one of image data and audio data;
a location unit, adapted to obtain location data;
a transmitting unit, adapted to transmit at least one of the image data, the audio data, the location data, and specific information including owner identification information to an emergency dispatch center;
a self-defense mechanism; and
a panic actuator, adapted to activate the camera, the location unit, the transmitting unit, and the self-defense mechanism.

Id., claim 16.

17. A mobile device as set forth in claim 16, *wherein the specific information includes a time and date stamp.*

Id., claim 17.

96. Accordingly, in my opinion, a person having ordinary skill in the art would have understood the *DiPerna964-Strack* combination discloses or suggests “[a] mobile device as set forth in claim 1, wherein the specific information includes a time and date stamp.”

3. CLAIM 3: “A mobile device as set forth in claim 1, wherein the specific information includes a pre-recorded personal warning message if the panic button is activated during a predetermined time period.”

97. In my opinion, *DiPerna964* in combination with *Strack* discloses or suggests “[a] mobile device as set forth in claim 1, wherein the specific information includes a pre-recorded personal warning message if the panic button is activated during a predetermined time period.”

98. *DiPerna964* discloses that the personal warning message may be tailored to play a message with relevant meeting details if the panic button is activated during that meeting. *DiPerna964* further discloses that a person may pre-record a message with day, date, location, and action details that will be transmitted if the user activates the panic button between a certain period of time on that day:

In another embodiment *the present invention allows the user to pre-record a personal warning message which is transmitted to the emergency personnel in the event of an attack during a specific time period.* For example, if one is traveling to a meeting at 2 pm, she could program the device to transmit a specific

warning message if the panic button is activated between the hours of 2 pm-4 pm. For example: “It is now Sunday, January 15th. I will be traveling to Sherbom, MA for a 2 pm meeting with Mr. John Smith who lives on Gray Road.”

EX1028 ¶[0044].

A mobile device as set forth in claim 16, *wherein the specific information includes a pre-recorded personal warning message.*

EX1028, Claim 18.

99. Accordingly, in my opinion, a person having ordinary skill in the art would have understood *DiPerna964-Strack* combination discloses or suggests “[a] mobile device as set forth in claim 1, wherein the specific information includes a pre-recorded personal warning message.”

4. CLAIM 4: “A mobile device as set forth in claim 1, wherein the panic button is silent.”

100. In my opinion, *DiPerna964* in combination with *Strack* discloses or suggests “[a] mobile device as set forth in claim 1, wherein the panic button is silent.”

101. *DiPerna964* discloses that the panic button may be silent to alert authorities while keeping the alert secret from an attacker:

The specific information may include a time and date stamp. The specific information may include a pre-recorded personal warning message. *The panic button may be silent.* The self-defense mechanism may be at least one of a vial containing pepper spray,

a vial containing mace, a vial containing dye, a vial containing a foaming agent, a vial containing a stench ointment, a stun gun, and an audible personal alarm. The panic button may activate an audible warning message.

Id. ¶[0028].

The self-defense device can be activated by way of a panic button and/or can be voice activated, for example, upon the shout of a voice command by the victim. ***Because a situation in which one is confronted by an attacker is inherently unpredictable, it would be advantageous for potential victims to have the flexibility to proceed as they feel the situation dictates. Therefore, by virtue of the features of the present invention, the user may keep secret, from the attacker, the fact that the victim has alerted the authorities (e.g. through pressing a silent panic button), or may advertise that fact to the attacker (e.g. through pressing a panic button which is also an alarm). The victim may alert help without saying a word, if the victim deems that the best response to the situation.***

Id. ¶[0037].

In one example, pushing a “panic button” on the mobile phone/device of the present invention can result in a still image or moving video being taken, as well as an audio recording being obtained. The present invention then wraps the data up and transmits it to an emergency service with the x-y coordinates. This enables the emergency service to have image and/or audio data as well as the relevant location information. Other features are

included as well. For example, a panic button can trigger the image/audio data and location information being obtained. Further, the panic button can also trigger a separate self-defense mechanism such as pepper spray, mace, or a personal alarm. These can be triggered by a panic button or buttons or button sequence. These can also be triggered by, for example, a “code word” that the user shouts. ***Or they can be triggered more silently so that the attacker does not know that his picture has been taken and the image data and location information transmitted.*** Also, the mobile phone/device of the present invention can announce loudly through its speaker a warning messaged to the attacker (e.g “911 has been notified and your picture has been taken!”) or other messages, such as the location information. The user is provided with various options such as the above and is provided with the ability to configure his or her device according to what he or she feels is best.

Id. ¶[0042].

102. Accordingly, in my opinion, a person having ordinary skill in the art would have understood the *DiPerna964-Strack* combination discloses or suggests “[a] mobile device as set forth in claim 1, wherein the panic button is silent.”

5. CLAIM 5: “A mobile device as set forth in claim 1, wherein the panic button activates an audible warning message, wherein the audible warning message includes words.”

103. In my opinion, *DiPerna964* in combination with *Strack* discloses or suggests “[a] mobile device as set forth in claim 1, wherein the panic button activates an audible warning message, wherein the audible warning message includes words.”

104. *DiPerna964* discloses the panic button “activat[ing] an audible warning message.”:

The specific information may include a time and date stamp. The specific information may include a pre-recorded personal warning message. The panic button may be silent. The self-defense mechanism may be at least one of a vial containing pepper spray, a vial containing mace, a vial containing dye, a vial containing a foaming agent, a vial containing a stench ointment, a stun gun, and an audible personal alarm. ***The panic button may activate an audible warning message.***

Id. ¶[0028].

105. *DiPerna964* discloses the mobile phone/device broadcasts a warning message via its speaker to announce “911 has been notified and you picture has been taken!”:

In one example, pushing a “panic button” on the mobile phone/device of the present invention can result in a still image or moving video being taken, as well as an audio recording being

obtained. The present invention then wraps the data up and transmits it to an emergency service with the x-y coordinates. This enables the emergency service to have image and/or audio data as well as the relevant location information. Other features are included as well. For example, a panic button can trigger the image/audio data and location information being obtained. Further, the panic button can also trigger a separate self-defense mechanism such as pepper spray, mace, or a personal alarm. These can be triggered by a panic button or buttons or button sequence. These can also be triggered by, for example, a “code word” that the user shouts. Or they can be triggered more silently so that the attacker does not know that his picture has been taken and the image data and location information transmitted. ***Also, the mobile phone/device of the present invention can announce loudly through its speaker a warning messaged to the attacker (e.g “911 has been notified and your picture has been taken!”) or other messages, such as the location information.*** The user is provided with various options such as the above and is provided with the ability to configure his or her device according to what he or she feels is best.

Id. ¶[0042].

106. Accordingly, in my opinion, a person having ordinary skill in the art would have understood that the *DiPerna964-Strack* combination discloses or suggests “wherein the panic button activates an audible warning message, wherein the audible warning message includes words.”

6. CLAIM 6: “The mobile device as set forth in claim 1, wherein the panic button activates an audible alarm.”

107. In my opinion, *DiPerna964* in combination with *Strack* discloses or suggests “[t]he mobile device as set forth in claim 1, wherein the panic button activates an audible alarm.”

108. *DiPerna964* discloses that a victim can alert the authorities and “may advertise that fact to the attacker (e.g. through pressing a panic button which is also an alarm)”:

The self-defense device can be activated by way of a panic button and/or can be voice activated, for example, upon the shout of a voice command by the victim. Because a situation in which one is confronted by an attacker is inherently unpredictable, it would be advantageous for potential victims to have the flexibility to proceed as they feel the situation dictates. ***Therefore, by virtue of the features of the present invention, the user may*** keep secret, from the attacker, the fact that the victim has alerted the authorities (e.g. through pressing a silent panic button), or may ***advertise that fact to the attacker (e.g. through pressing a panic button which is also an alarm)***. The victim may alert help without saying a word, if the victim deems that the best response to the situation.

Id. ¶[0037].

109. In addition to the above, *DiPerna964* further discloses that “one or more features of the present invention (e.g. picture/audio and location information transmitted, mace activated, warning sounds)” may “occur at once”:

In another embodiment the present invention contains a panic button and a separate button or nozzle to activate pepper spray or the like, and *these two buttons are tied together so that one or more features of the present invention (e.g. picture/audio and location information transmitted, mace activated, warning sounds) occur at once.*

Id. ¶[0043].

110. Accordingly, in my opinion, a person of ordinary skill in the art would have understood that the *DiPerna964-Strack* combination discloses or suggests “[t]he mobile device as set forth in claim 1, wherein the panic button activates an audible alarm.”

7. CLAIM 7: “The mobile device as set forth in claim 1, further comprising a safety switch that, upon being moved into position, readies the panic button to contact the public or private network for emergency purposes when the panic button is activated.”

111. In my opinion, *DiPerna964* in combination with *Strack* discloses or suggests “[t]he mobile device as set forth in claim 1, further comprising a safety switch that, upon being moved into position, readies the panic button to contact the public or private network for emergency purposes when the panic button is activated.”

112. *DiPerna964* discloses the mobile phone/device contains a safety switch that “upon being moved into position, readies the panic button to contact 911 upon being pressed”:

Further, cellular telephones typically comply with e-911, which is emergency 911. Thus, when one dials 911, the dispatch operator can immediately obtain the location. For example, the panic button of the present invention can automatically contact 911 upon a press or series of presses of the button, or upon a codeword. ***There can also be a separate “safety” switch which, upon being moved into position, readies the panic button to contact 911 upon being pressed.*** The panic button can be activated upon dialing 911 itself or upon pressing the panic button along with an emergency touchpad “picture.” The present invention can obtain location information in a number of different ways, for example through a tower-based location system. As is well known in the art, cell towers triangulate to figure out where a person is. As another example, the present invention can also obtain location information through a form of GPS (Global Positioning System) on the device (GPS or AGPS, which is assisted GPS). Location information for the present invention can be an x-y coordinate or close to it that the phone obtains and transmits to 911. Altitude information can be included as well.

Id. ¶[0041].

113. *DiPerna964* further discloses the mobile phone/device is linked to 911 as an “emergency assistance number” to “work with the public authorities in assisting victims”:

The present invention integrates with mobile phones/devices to send image data of the attack, which could be either still image

data or moving video, along with location information, and/or audio information, so that help can be dispatched right away. ***The system can be linked in with an emergency assistance number such as 911 or to a private emergency network specifically set up for these purposes to work with the public authorities in assisting victims.*** By virtue of the features of the present invention, authorities will be able to proceed directly to the location of the incident, equipped with specific information such as location information, image and/or audio data of the attack (which can of course aid in identifying the perpetrator), and information as to who owns the mobile phone/device including a description of that person. Audio data (either a pre-recorded help message or audio of the attack itself) can also be sent to the authorities.

Id. ¶[0036].

114. Accordingly, in my opinion, a person of ordinary skill in the art would have understood the *DiPerna964-Strack* combination discloses or suggests “[t]he mobile device as set forth in claim 1, further comprising a safety switch that, upon being moved into position, readies the panic button to contact the public or private network for emergency purposes when the panic button is activated.”

8. CLAIM 8: “A mobile device as set forth in claim 1, wherein the owner identification information includes a name and a description of the owner of the mobile device.”

115. In my opinion, *DiPerna964* in combination with *Strack* discloses or suggests “[a] mobile device as set forth in claim 1, wherein the owner identification information includes a name and a description of the owner of the mobile device.”

116. As discussed in §X.B.1.d, *DiPerna964* discloses transmitting specific information including owner identification information.

117. *DiPerna964* discloses that specific information includes “the name and description of the owner of the self-defense device”:

In another embodiment, the present invention provides a self-defense device including a self-defense mechanism which is integrated with a mobile phone/device such that when the self-defense mechanism is activated, a camera built into the mobile phone/device takes an image of the attacker, and the mobile phone/device sends image data and audio data to the authorities along with specific information such as, for example, the name and description of the owner of the self-defense device, location information, a time and date stamp, etc. In this way, the present invention utilizes a built-in camera to take still or moving images of the attacker and send the image and/or audio data to the authorities along with the specific information. The self-defense mechanism can be a vial containing pepper spray or mace, for

example, or simply a separate panic button located on the device which activates the above-mentioned processes. Of course, the present invention is not limited to the examples discussed herein.

Id. ¶[0017].

In another embodiment, the present invention provides a self-defense device including a self-defense mechanism which is integrated with a mobile phone/device such that when the self-defense mechanism is activated, a camera built into the mobile phone/device takes still or moving images of the attacker, and the mobile phone/device sends the image data to the authorities along with specific information such as, for example, the name and description of the owner of the self-defense device, the location information, etc. audio information can be obtained by the camera and sent as well. In this way, the present invention utilizes a built-in camera to take image(s) of the attacker and send the specific information to the authorities along with the image information and audio information. The self-defense mechanism can be, for example, a vial containing pepper spray or mace, a personal alarm, a stun gun, a stench ointment, or the like. Further, the self-defense mechanism can be a separate panic button located on the device which activates the above-mentioned processes.

Id. ¶[0035].

118. A person having ordinary skill in the art would have understood that the name and description of the owner of the self-defense device is the same as that of the mobile device because *DiPerna*⁹⁶⁴ discloses that “the present

invention provides a self-defense device which is integrated with a mobile phone/device.”

The present invention provides a self-defense device which is integrated with a mobile phone/device. In one embodiment, the present invention provides a self-defense mechanism that is attached to a mobile phone/device. The self-defense mechanism can be removably and easily attached to the mobile phone/device. This can be done by way of a clip, or by way of a protective case which holds the mobile device and which has a pocket for a self-defense mechanism such as pepper spray, the pocket in one embodiment holding the vial of pepper spray in position such that it is ready to be used with only minimal steps such as the removal of a protective cap or cover. The self-defense mechanism can also be permanently secured to a mobile phone/device. If the self-defense mechanism is attached to the mobile phone/device, a person who is carrying his or her mobile phone/device would also be carrying the self-defense mechanism. As used in this application, the term “self-defense mechanism” is included but not limited to pepper spray or mace, a dye for identifying an attacker, a foaming agent, a stun gun, a stench, a personal alarm, and a panic button.

Id. ¶[0016].

119. Accordingly, in my opinion, a person having ordinary skill in the art would have understood the *DiPerna964-Strack* combination discloses or suggests “[a] mobile device as set forth in claim 1, wherein the owner

identification information includes a name and a description of the owner of the mobile device.”

XI. CONCLUSION

120. The findings and opinions set forth in this declaration are based on my work and examinations to date.

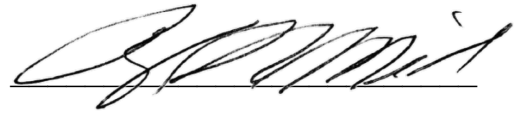
121. I may continue my examinations. I may also receive additional documentation and other factual evidence over the course of this IPR that will allow me to supplement and/or refine my opinions. I reserve the right to add to, alter, or delete my opinions and my declaration upon discovery of any additional information. I reserve the right to make such changes as may be deemed necessary.

122. In signing this declaration, I recognize that the declaration will be filed as evidence in an IPR before the PTAB. I also recognize that I may be subject to cross-examination in the case and that cross-examination will take place within the United States. If cross-examination is required of me, I will appear for cross-examination within the United States during the time allotted for cross-examination.

123. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the

knowledge that willful false statements and the like are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code.

Date: 1 November 2023

A handwritten signature in black ink, appearing to read 'W. R. Michalson', written over a horizontal line.

William R. Michalson, Ph.D.