

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEW JERSEY

CAMBRIDGE MOBILE TELEMATICS, INC.,

Plaintiff,

v.

SFARA, INC.

Defendant.

Civil Action No.: 3:23-cv-01368

**PLAINTIFF AND COUNTER-DEFENDANT CAMBRIDGE
MOBILE TELEMATICS INC.'S INVALIDITY CONTENTIONS**

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I. INTRODUCTION

Plaintiff and Counter-Defendant Cambridge Mobile Telematics, Inc. (“CMT” or “Plaintiff”) hereby submits these Invalidity Contentions and accompanying identification of documents. Defendant and Counter-Plaintiff Sfara, Inc. (“Sfara” or “Defendant”) alleged in its Disclosure of Asserted Claims and Infringement Contentions, dated August 21, 2023, (“Sfara’s Infringement Contentions”) that CMT infringes claims 1–18 of U.S. Patent No. 8,989,952 (“the ’952 patent”) and claims 1–6, 8–13, and 15–20 of U.S. Patent No. 9,333,946 (“the ’946 patent”). The ’952 patent and the ’946 patent collectively are “the Sfara Asserted Patents.” The claims of the Sfara Asserted Patents that Sfara alleges CMT infringes collectively are “the Sfara Asserted Claims.” These Invalidity Contentions address each of the Sfara Asserted Claims. CMT may modify, amend, and/or supplement its Invalidity Contentions should Sfara attempt to modify its Asserted Claims or otherwise modify its Infringement Contentions.

These Invalidity Contentions are made without the benefit of a claim construction ruling, and without Sfara having disclosed its contentions on the meaning of the terms recited in the Asserted Claims. CMT in no way accepts Sfara’s apparent reading of the claims in its Infringement Contentions as reflecting the proper scope of the claims. For example, although CMT charted certain features described in prior art systems and documents for certain claim limitations, CMT’s charting is based on its understanding of Sfara’s interpretation of those claim limitations as reflected, for example, in Sfara’s Infringement Contentions. CMT does not waive its right to argue that the charted features of the prior art, to the extent present in the accused products, do not infringe the corresponding claim limitations. Additionally, nothing in these Invalidity Contentions is an admission that any accused product meets any limitation of the Asserted Claims. These contentions are not intended to reflect CMT’s claim construction positions, which have not yet been disclosed pursuant to the case schedule. CMT may modify its

contentions should any of the claim limitations be construed, whether previously construed or not, by the Court.

Discovery in this action is ongoing. These contentions are based on CMT's current knowledge and understanding of the prior art. For example, CMT has not deposed the individual identified as the inventor of the Sfara Asserted Patents. CMT may modify or supplement its invalidity contentions, whether in response to any amendment by Sfara of its Infringement Contentions, or otherwise becoming aware of additional prior art or further material information.

Much of the art identified in the attached exhibits reflects common knowledge and the state of the art before the respective filing dates of the Asserted Patents. In many instances where a particular contention calls for combining references, any one of a number of references can be combined. The inclusion of certain exemplary combinations of prior art references does not exclude other combinations based upon the claim charts attached hereto.

The identified prior art references and solutions inherently disclose certain features of the Asserted Claims, including as apparently construed by Sfara in its Infringement Contentions. To the extent that inherency is not explicitly stated as a basis for invalidity in the attached charts, CMT may rely on inherency to demonstrate the invalidity of the Asserted Claims. CMT may rely on cited or uncited portions of the prior art, other documents, and expert testimony to establish the inherency of those features.

Pursuant to L. Pat. R. 3.4(b), CMT is producing, or has produced the prior art cited below to Sfara. *See, e.g.*, CMT-SFARA-0001441 – CMT-SFARA-0003318 and CMT-SFARA-0003421 – CMT-SFARA-0003497.

Each Asserted Claim is anticipated by and/or obvious in view of one or more of the items of prior art identified here alone or in combination with other prior art references. Pursuant to L.

Pat. R. 3.3(c), Exhibits A-01 through A-19 and B-01 through B-29 (“CMT’s claim charts”) accompanying this document provide explanations detailing how additional prior art references and/or commercial prior art devices anticipate and/or render obvious the Asserted Claims. Those Exhibits are incorporated here by reference. CMT’s claim charts may disclose multiple theories of invalidity in a single chart. In some cases, CMT has listed both anticipation and obviousness theories and may pursue either or both theory, depending upon the claim construction and the ultimate question of what a particular reference teaches. Each claim chart directed to an anticipatory product or system may also describe that the product or system alone, in light of the knowledge and skill in the art, or in light of one or more other prior art references, renders each Asserted Claim obvious. A combination of prior art references that renders a dependent claim obvious also renders obvious any claim from which that claim depends. A claim that is obvious over a single prior art reference is also obvious over that reference in combination with another reference or references and/or in light or in combination with the knowledge of a POSA.

While CMT has endeavored to identify the most relevant portions of the prior art references in the accompanying Exhibits, the cited references may contain other or additional support for particular claim limitations. CMT may rely upon these portions that have not been specifically identified, any documents or statements identified in the cited references, any documents that claim priority to the cited references, any foreign counterparts to the cited references, their file histories (as applicable), or fact and expert testimony/documents not yet in evidence to provide context in understanding the references. Similarly, where there are multiple references relating to a single prior art product or system, CMT may cite only to a single reference for a particular limitation, even though other references may also contain similar teachings. Thus, CMT may rely on uncited

references relating to a particular prior art document or system for additional support for a particular element.

Additionally, CMT believes that certain non-parties and current or former employees thereof may possess relevant information or documents constituting prior art to the Asserted Patents, including prior art products and systems. CMT may supplement these Invalidity Contentions to identify additional references, combinations, motivations to modify, or explanations for particular references based on any information or documents provided by the former employees or successors-in-interests of companies or individuals who may possess relevant information or documents constituting prior art to the Sfara Asserted Patents, including information and documents about prior art systems. The concepts disclosed and claimed in each of the Sfara Asserted Patents are not new, and had been disclosed, used, offered for sale, sold, and practiced by others prior to the claimed priority date of the patents. The prior art identified herein and in the Exhibits, individually or in combination, invalidates the asserted claims under 35 U.S.C. §§ 102 (a), (b), (e), and/or (g) and/or § 103. Because discovery has not yet closed, CMT expects to gather additional information about the identified prior art, and other prior art, through third party discovery or other discovery, and will thus amend and supplement these Invalidity Contentions once they obtain that discovery and have meaningful and reasonable time to analyze it.

CMT's investigation for prior art and third-party discovery is not yet complete. CMT may present additional items of prior art under 35 U.S.C. §§ 102(a), (b), (e), and/or (g), and/or § 103 located during the course of discovery and/or further investigation. In addition, CMT reserves the right to assert invalidity under 35 U.S.C. §§ 102(c), (d), or (f) to the extent that discovery or further investigation yield information forming the basis for such invalidity.

CMT reserves the right to revise its ultimate contentions concerning the invalidity of the Sfara Asserted Claims, which may change depending upon any findings as to the priority date of those claims, and/or positions that Sfara or expert witness(es) may take concerning infringement and/or invalidity issues.

If Sfara challenges any aspect of these Invalidity Contentions, including whether a particular reference constitutes prior art or whether a combination of prior art references identified by CMT is properly combinable, CMT may supplement these Invalidity Contentions to address any such challenge.

II. THE ASSERTED PATENTS

The Asserted Patents belong to the same patent family. The '952 patent is a continuation-in-part of the '946 patent. The face of the Asserted Patents identify Sascha Simon as the inventor.

A. The '952 Patent

The '952 patent, titled "System And Method For Detecting Vehicle Crash" issued on March 24, 2015 from U.S. Patent Application No. 14/105,744, which was filed on December 13, 2013, and is a continuation-in-part of U.S. Patent Application No. 14/072,231, filed on November 5, 2013, and a continuation-in-part of U.S. Patent Application No. 14/095,156, filed on December 3, 2013, and claims priority to the following provisional applications:

- Provisional Application No. 61/740,814, filed on Dec. 21, 2012 (the "'814 provisional application");
- Provisional Application No. 61/740,831, filed on Dec. 21, 2012 (the "'831 provisional application");
- Provisional Application No. 61/740,851, filed on Dec. 21, 2012 (the "'851 provisional application"); and

- Provisional Application No. 61/745,677, filed on Dec. 24, 2012 (the “’677 provisional application”).

1. Asserted Claims

Sfara has asserted claims 1–18 of the ’952 patent against CMT. The claims read as follows:

1. A device for use with a vehicle, said device comprising:

a mode-determining component operable to detect whether the device is in the vehicle and to generate an in-vehicle signal;

a first detecting component operable detect a first parameter and to generate a first detector signal based on the first detected parameter; and

a second detecting component operable detect a second parameter and to generate a second detector signal based on the second detected parameter;

wherein said mode-determining component is further operable to generate a crash mode signal based on the in-vehicle signal, the first detector signal and the second detector signal.
2. The device of claim 1, wherein said first detecting component is operable to detect, as the first parameter, one of the group consisting of magnetic fields in any of three dimensions, electric fields in any of three dimensions, electro-magnetic fields in any of three dimensions, velocity in any of three dimensions, acceleration in any of three dimensions, angular velocity in any of three dimensions, angular acceleration in any of three dimensions, geodetic position, sound, temperature, vibrations in any of three dimensions, pressure in any of three dimensions, biometrics, contents of surrounding atmosphere, a change in electric fields in any of three dimensions, a change in magnetic fields in any of three dimensions, a change in electro-magnetic fields in any of three dimensions, a change in velocity in any of three dimensions, a change in acceleration in any of three dimensions, a change in angular velocity in any of three dimensions, a change in angular acceleration in any of three dimensions, a change in geodetic position in any of three dimensions, a change in sound, a change in temperature, a change in vibrations in any of three dimensions, a change in pressure in any of three dimensions, a change in biometrics, a change in contents of surrounding atmosphere and combinations thereof.
3. The device of claim 2, wherein said first detecting component is operable to detect, as the first parameter, a parameter associated with deployment of an airbag within the vehicle.
4. The device of claim 2,

wherein said first detecting component is operable to detect, as the first parameter, acceleration along a single axis, and

wherein said first detecting component is operable to generate the first detector signal when the detected acceleration along the single axis is equal to or greater than a predetermined value.

5. The device of claim 1, further comprising a communication component operable to wirelessly communicate with a network.

6. The device of claim 1, further comprising:

an operating component operable to operate in a first mode and a second mode,

wherein said operating component is operable to switch from operating in the first mode to operating in the second mode based on the crash mode signal.

7. A method for use with a vehicle, said method comprising:

detecting, via a mode-determining component, whether the mode-determining component is in the vehicle;

generating, via the mode-determining component, an in-vehicle signal;

detecting, via a first detecting component, a first parameter;

generating, via the first detecting component, a first detector signal based on the first detected parameter;

detecting, via a second detecting component, a second parameter;

generating, via the second detecting component, a second detector signal based on the second detected parameter; and

generating, via the mode-determining component, a crash mode signal based on the in-vehicle signal, the first detector signal and the second detector signal.

8. The method of claim 7, wherein said detecting a first parameter comprises detecting one of the group consisting of magnetic fields in any of three dimensions, electric fields in any of three dimensions, electro-magnetic fields in any of three dimensions, velocity in any of three dimensions, acceleration in any of three dimensions, angular velocity in any of three dimensions, angular acceleration in any of three dimensions, geodetic position, sound, temperature, vibrations in any of three dimensions, pressure in any of three dimensions, biometrics, contents of surrounding atmosphere, a change in electric fields in any of three dimensions, a change in magnetic fields in any of three dimensions, a change in electro-magnetic fields in any of three dimensions, a change in velocity in any of three dimensions, a change in acceleration in any of three dimensions, a change in angular velocity in any of three dimensions, a change in angular acceleration in any

of three dimensions, a change in geodetic position in any of three dimensions, a change in sound, a change in temperature, a change in vibrations in any of three dimensions, a change in pressure in any of three dimensions, a change in biometrics, a change in contents of surrounding atmosphere and combinations thereof.

9. The method of claim 8, wherein said detecting a first parameter comprises detecting a parameter associated with deployment of an airbag within the vehicle.
10. The method of claim 8,

wherein said detecting a first parameter comprises detecting acceleration along a single axis, and

wherein said generating a first detector signal comprises generating the first detector signal when the detected acceleration along the single axis is equal to or greater than a predetermined value.
11. The method of claim 7, further comprising wirelessly communicating, via a communication component, with a network.
12. The method of claim 7, further comprising:

operating an operating component in a first mode; and

switching operation of the operating component from the first mode to a second mode based on the crash mode signal.
13. A non-transitory, computer-readable media having computer-readable instructions stored thereon, for use with a vehicle, the computer-readable instructions being capable of being read by a computer and being capable of instructing the computer to perform the method comprising:

detecting, via a mode-determining component, whether the mode-determining component is in the vehicle;

generating, via the mode-determining component, an in-vehicle signal;

detecting, via a first detecting component, a first parameter;

generating, via the first detecting component, a first detector signal based on the first detected parameter;

detecting, via a second detecting component, a second parameter;

generating, via the second detecting component, a second detector signal based on the second detected parameter;

operating an operating component in a first mode;

generating, via the mode-determining component, a crash mode signal based on the in-vehicle signal, the first detector signal and the second detector signal; and

switching operation of the operating component from the first mode to a second mode based on the crash mode signal.

14. The non-transitory, computer-readable media of claim 13, wherein the computer-readable instructions are capable of instructing the computer to perform the method such that said detecting a first parameter comprises detecting one of the group consisting of magnetic fields in any of three dimensions, electric fields in any of three dimensions, electro-magnetic fields in any of three dimensions, velocity in any of three dimensions, acceleration in any of three dimensions, angular velocity in any of three dimensions, angular acceleration in any of three dimensions, geodetic position, sound, temperature, vibrations in any of three dimensions, pressure in any of three dimensions, biometrics, contents of surrounding atmosphere, a change in electric fields in any of three dimensions, a change in magnetic fields in any of three dimensions, a change in electro-magnetic fields in any of three dimensions, a change in velocity in any of three dimensions, a change in acceleration in any of three dimensions, a change in angular velocity in any of three dimensions, a change in angular acceleration in any of three dimensions, a change in geodetic position in any of three dimensions, a change in sound, a change in temperature, a change in vibrations in any of three dimensions, a change in pressure in any of three dimensions, a change in biometrics, a change in contents of surrounding atmosphere and combinations thereof.
15. The non-transitory, computer-readable media of claim 14, the computer-readable instructions being capable of being read by a computer and being capable of instructing the computer to perform the method such that said detecting a first parameter comprises detecting a parameter associated with deployment of an airbag within the vehicle.
16. The non-transitory, computer-readable media of claim 14, wherein the computer-readable instructions are capable of instructing the computer to perform the method such that

said detecting a first parameter comprises detecting acceleration along a single axis, and

said generating a first detector signal comprises generating the first detector signal when the detected acceleration along the single axis is equal to or greater than a predetermined value.
17. The non-transitory, computer-readable media of claim 13, the computer-readable instructions being capable of being read by a computer and being capable of instructing the computer to perform the method further comprising wirelessly communicating, via a communication component, with a network.
18. The non-transitory, computer-readable media of claim 13, the computer-readable instructions being capable of being read by a computer and being capable of instructing the computer to perform the method further comprising:

operating an operating component in a first mode; and

switching operation of the operating component from the first mode to a second mode based on the crash mode signal.

2. Priority Date

Sfara thus far has not identified an earlier alleged priority date for the '952 patent than the December 21, 2012 priority date associated with the filing of the '814, '831, and '851 provisional applications. It likewise has failed to identify any purported evidence that could support an earlier date of conception and reduction to practice of the claims of the '952 patent other than the filings of the '814, '831, and '851 provisional applications and the filing of the non-provisional application that issued as the '952 patent. CMT may present additional items of prior art or further support for current prior art under pre-AIA and AIA 35 U.S.C. § 102 and/or § 103 should discovery or further investigation show that any Sfara Asserted Claim is not entitled to the December 21, 2012 priority date associated with the filing of the '814, '831, and '851 provisional applications or the December 14, 2012 priority date associated with the filing of the '677 provisional application.¹ For example, the asserted claims of the '952 patent are not entitled to the priority dates of the provisional applications because the provisional applications do not disclose at least the following:

Patent	Term	Claim(s)
'952 patent	"in-vehicle signal"	1, 7, 13
	"first detector signal"	1, 4, 7, 10, 13, 16
	"second detector signal"	1, 7, 13
	"crash mode signal"	1, 6-7, 12-13, 18

¹ CMT's invalidity contentions contained herein reference the pre-Leahy-Smith America Invents Act statute. As discovery and further investigation develop to establish that the Sfara Asserted Patents are not entitled to an December 21, 2012 priority date, CMT may amend its contentions to include reference to the Leahy-Smith America Invents Act.

Patent	Term	Claim(s)
	“detect, as the first parameter, a parameter associated with deployment of an airbag within the vehicle”	3, 9, 15
	“wherein said first detecting component is operable to detect, as the first parameter, . . . electric fields in any of three dimensions . . . temperature, vibrations in any of three dimensions, pressure in any of three dimensions, biometrics, contents of surrounding atmosphere, a change in electric fields in any of three dimensions . . . a change in temperature, a change in vibrations in any of three dimensions, a change in pressure in any of three dimensions, a change in biometrics, a change in contents of surrounding atmosphere and combinations thereof	2, 8, 14
	“to detect, as the first parameter, a parameter associated with deployment of an airbag within the vehicle”	3, 9, 15
	“an operating component operable to operate in a first mode and a second mode”	6
	“wherein said operating component is operable to switch from operating in the first mode to operating in the second mode based on the crash mode signal”	6
	“switching operation of the operating component from the first mode to a second mode based on the crash mode signal”	12, 18

During the prosecution of Patent Application No 14/095,156 (the “’156 application”), which the ’952 patent claims priority to as a continuation-in-part, the Examiner stated that “the provisional applications do not teach the limitations of claim 1, claims are not entitled to [sic] earlier filing date of the provisional application.” Advisory Action Before the Filing of an Appeal Brief, dated Oct. 18, 2018. The Examiner also stated that claim 1 could not claim priority to the provisional applications in their Final Office Action, dated March 18, 2018 (“the provisional applications do not teach the limitations of the claim 1, [sic] claims are not entitled to earlier filing

date of the provisional application”). The ’156 application claimed priority to the ’814 provisional application, the ’831 provisional application, the ’851 provisional application, and the ’677 provisional application. *See Applicant’s Response To Final Office Action*, dated April 2, 2018.

At the time of these rejections, claim 1 of the ’156 application had similar limitations to the claims of the ’952 patent and read as follows:

1. (Previously Presented) A device, for use with a database having a detected parameter signature stored therein, the detected parameter signature being based on a first parameter and a second parameter, said device comprising:

an accessing component operable to access the detected parameter signature from the database;

a parameter-detecting component operable to detect a third parameter, to detect a fourth parameter and to generate a second detected parameter signature based on the third detected parameter and the fourth detected parameter;

a comparing component operable to generate a comparison signal based on the detected parameter signature and the second detected parameter signature; and

a probability-assessing component operable to determine whether the device is in a vehicle mode of operation based on a comparison of the comparison signal and a predetermined probability threshold, said predetermined probability threshold being established to reduce the probability of a false positive identification of the device being in a vehicle mode of operation,

wherein said parameter-detecting component is further operable to detect at least one additional parameter only when said probability-assessing component determines that the device is not in a vehicle mode of operation.

B. The ’946 Patent

The ’946 patent, titled “System and Method For Identifying Vehicle By Utilizing Detected Magnetic Field” issued on May 10, 2016 from U.S. Patent Application No. 14/072,231, which was filed on November 5, 2013, and claims priority to the following provisional applications:

- the ’814 provisional application;
- the ’831 provisional application;

- the '851 provisional application; and
- the '677 provisional application.

1. Asserted Claims

Sfara has asserted claims 1–6, 8–13, and 15–20 of the '946 patent against CMT. The claims read as follows:

1. A device, for use with a database, said device comprising:

a field-detecting component operable to detect at least one of an electric field, a magnetic field and an electro-magnetic field and to generate a detected field signature based on the detected one of an electric field, a magnetic field and an electro-magnetic field;

an input component operable to input the detected field signature into the database;

an accessing component operable to access the detected field signature from the database;

a comparing component operable to generate a comparison signal; and

an identifying component operable to identify one of an item and a location based on the comparison signal,

wherein said field-detecting component is further operable to detect a second one of an electric field, a magnetic field and an electro-magnetic field and to generate a second detected field signature based on the detected second one of an electric field, a magnetic field and an electro-magnetic field, and

wherein said comparing component is operable to generate the comparison signal based on a comparison of the detected field signature and the second detected field signature.
2. The device of claim 1, wherein said field-detecting component is operable to detect the at least one of an electric field, a magnetic field and an electro-magnetic field as a function over a period of time.
3. The device of claim 1, further comprising:

a parameter-detecting component operable to detect a parameter and to generate a parameter signal based on the detected parameter,

wherein said identifying component is operable to identify the one of an item and a location based additionally on the parameter signal.

4. The device of claim 3, wherein said parameter-detecting component is operable to detect, as the parameter, one of the group consisting of a velocity, acceleration, angular velocity, angular acceleration, geodetic position, sound, temperature, vibrations, pressure, biometrics, contents of surrounding atmosphere and combinations thereof.
5. The device of claim 1, further comprising a communication component operable to wirelessly communicate with a network.
6. The device of claim 1,

wherein said field-detecting component is operable to detect a magnetic field,

wherein said input component is further operable to input an association between a vehicle and the detected magnetic field,

wherein said field-detecting component is further operable to detect a second magnetic field and to generate a second detected field signature based on the detected second magnetic field, and

wherein said identifying component is further operable, based on the association, to identify the vehicle as the item.
8. A method, for use with a database, said method comprising:

detecting, via a field-detecting component, at least one of an electric field, a magnetic field and an electro-magnetic field;

generating, via the field-detecting component, a detected field signature based on the detected one of an electric field, a magnetic field and an electro-magnetic field;

inputting, via an input component, the detected field signature into the database;

accessing, via an accessing component, the detected field signature from the database;

generating, via a comparing component, a comparison signal;

identifying, via an identifying component, one of an item and a location based on the comparison signal;

detecting, via the field-detecting component, a second one of an electric field, a magnetic field and an electro-magnetic field; and

generating, via the field-detecting component, a second detected field signature based on the detected second one of an electric field, a magnetic field and an electro-magnetic field,

wherein said generating a comparison signal comprises generating the comparison signal based on a comparison of the detected field signature and the second detected field signature.

9. The method of claim 8, wherein said detecting comprises detecting the at least one of an electric field, a magnetic field and an electro-magnetic field as a function over a period of time.

10. The method of claim 8, further comprising:

detecting, via a parameter-detecting component, a parameter; and

generating, via the parameter-detecting component, a parameter signal based on the detected parameter,

wherein said identifying comprises identifying the one of an item and a location based additionally on the parameter signal.

11. The method of claim 10, wherein said detecting a parameter comprises detecting, as the parameter, one of the group consisting of a velocity, acceleration, angular velocity, angular acceleration, geodetic position, sound, temperature, vibrations, pressure, biometrics, contents of surrounding atmosphere and combinations thereof.

12. The method of claim 8, further comprising wirelessly communicating, via a communication component, with a network.

13. The method of claim 8, further comprising:

inputting, via the input component is further operable to input an association; and

identifying, via the identifying component, a vehicle,

wherein said detecting, via a field-detecting component, at least one of an electric field, a magnetic field and an electro-magnetic field comprises detecting detect a magnetic field,

wherein said inputting an association comprises inputting an association between a vehicle and the detected magnetic field,

wherein said detecting a second one of an electric field, a magnetic field and an electro-magnetic field comprises detecting a second magnetic field,

wherein said generating a second detected field signature comprises generating a second detected field signature based on the detected second magnetic field, and

wherein said identifying a vehicle comprises identifying, based on the association, the vehicle as the item.

15. A non-transitory, tangible, computer-readable media having computer-readable instructions stored thereon, for use with a database, the computer-readable instructions being capable of being read by a computer and being capable of instructing the computer to perform the method comprising:

detecting, via a field-detecting component, at least one of an electric field, a magnetic field and an electro-magnetic field;

generating, via the field-detecting component, a detected field signature based on the detected one of an electric field, a magnetic field and an electro-magnetic field;

inputting, via an input component, the detected field signature into the database;

accessing, via an accessing component, the detected field signature from the database;

generating, via a comparing component, a comparison signal;

identifying, via an identifying component, one of an item and a location based on the comparison signal;

detecting, via the field-detecting component, a second one of an electric field, a magnetic field and an electro-magnetic field; and

generating, via the field-detecting component, a second detected field signature based on the detected second one of an electric field, a magnetic field and an electro-magnetic field,

wherein said generating a comparison signal comprises generating the comparison signal based on a comparison of the detected field signature and the second detected field signature.

16. The non-transitory, tangible, computer-readable media of claim 15, wherein the computer-readable instructions are capable of instructing the computer to perform the method such that said detecting comprises detecting the at least one of an electric field, a magnetic field and an electro-magnetic field as a function over a period of time.

17. The non-transitory, tangible, computer-readable media of claim 15, the computer-readable instructions being capable of being read by a computer and being capable of instructing the computer to perform the method further comprising:

detecting, via a parameter-detecting component, a parameter; and

generating, via the parameter-detecting component, a parameter signal based on the detected parameter,

wherein said identifying comprises identifying the one of an item and a location based additionally on the parameter signal.

18. The non-transitory, tangible, computer-readable media of claim 17, wherein the computer-readable instructions are capable of instructing the computer to perform the method such that said detecting a parameter comprises detecting, as the parameter, one of the group consisting of a velocity, acceleration, angular velocity, angular acceleration, geodetic position, sound, temperature, vibrations, pressure, biometrics, contents of surrounding atmosphere and combinations thereof.
19. The non-transitory, tangible, computer-readable media of claim 15, the computer-readable instructions being capable of being read by a computer and being capable of instructing the computer to perform the method further comprising wirelessly communicating, via a communication component, with a network.
20. The non-transitory, tangible, computer-readable media of claim 15, the computer-readable instructions being capable of instructing the computer to perform the method further comprising:

inputting, via the input component is further operable to input an association; and

identifying, via the identifying component, a vehicle,

wherein said detecting, via a field-detecting component, at least one of an electric field, a magnetic field and an electro-magnetic field comprises detecting detect a magnetic field,

wherein said inputting an association comprises inputting an association between a vehicle and the detected magnetic field,

wherein said detecting a second one of an electric field, a magnetic field and an electro-magnetic field comprises detecting a second magnetic field,

wherein said generating a second detected field signature comprises generating a second detected field signature based on the detected second magnetic field, and

wherein said identifying a vehicle comprises identifying, based on the association, the vehicle as the item.

2. Priority Date

Sfara thus far has not identified an earlier alleged priority date for the '946 patent than the December 21, 2012 priority date associated with the filing of the '814, '831, and '851 provisional applications. It likewise has failed to identify any purported evidence that could support an earlier date of conception and reduction to practice of the claims of the '946 patent other than the filings of the '814, '831, and '851 provisional applications and the filing of the non-provisional

application that issued as the '952 patent. CMT may present additional items of prior art or further support for current prior art under pre-AIA and AIA 35 U.S.C. § 102 and/or § 103 should discovery or further investigation show that any Sfara Asserted Claim is not entitled to the December 21, 2012 priority date associated with the filing of the '814, '831, and '851 provisional applications or the December 14, 2012 priority date associated with the filing of the '677 provisional application. For example, the asserted claims of the '946 patent are not entitled to the priority dates of the provisional applications because the provisional applications do not disclose at least the following:

Patent	Term	Claim(s)
'946 patent	"a field-detecting component operable to detect at least one of an electric field" / "operable to detect the at least one of an electric field . . . as a function over a period of time"	1-2, 9, 16
	"detecting, via a field-detecting component, at least one of an electric field"	8, 15
	"comparison signal"	1, 8, 15
	"said field-detecting component is further operable to detect a second one of an electric field, a magnetic field and an electro-magnetic field and to generate a second detected field signature based on the detected second one of an electric field, a magnetic field and an electro-magnetic field"	1
	"detecting, via the field-detecting component, a second one of an electric field, a magnetic field and an electro-magnetic field"	8, 15
	"generating, via the field-detecting component, a second detected field signature based on the detected second one of an electric field, a magnetic field and an electro-magnetic field"	8, 15
	"parameter signal"	3, 10, 17

Patent	Term	Claim(s)
	“said identifying comprises identifying the one of an item and a location based additionally on the parameter signal	3, 10, 17
	“said parameter-detecting component is operable to detect, as the parameter, one of the group consisting of . . . temperature, vibrations, pressure, biometrics, contents of surrounding atmosphere and combinations thereof	4, 11, 18
	“said input component is further operable to input an association between a vehicle and the detected magnetic field”	6
	“said field-detecting component is further operable to detect a second magnetic field and to generate a second detected field signature based on the detected second magnetic field	6
	“said identifying component is further operable, based on the association, to identify the vehicle as the item”	6
	“inputting, via the input component is further operable to input an association”	13, 20
	“said inputting an association comprises inputting an association between a vehicle and the detected magnetic field”	13, 20
	“said detecting a second one of an electric field, a magnetic field and an electro-magnetic field comprises detecting a second magnetic field”	13, 20
	“said generating a second detected field signature comprises generating a second detected field signature based on the detected second magnetic field”	13, 20
	“said identifying a vehicle comprises identifying, based on the association, the vehicle as the item”	13, 20

As discussed in Section II.A.2, above, an Examiner stated that claim 1 of the '156 application, which is in the same family as the '946 patent, was not supported by the '814 provisional application, the '831 provisional application, the '851 provisional application, or the '677 provisional application. Claim 1 of the '156 application had similar limitations to the claims of the '946 patent.

III. SFARA'S INFRINGEMENT CONTENTIONS

Sfara's Infringement Contentions are deficient in numerous respects. Because those deficiencies may lead to additional invalidity grounds, CMT may modify, amend, or supplement its invalidity contentions if Sfara modifies, amends, or supplements its infringement contentions, or produces documents or testimony in discovery. If any of these Invalidity Contentions, including the charts attached hereto, seem to rely on a claim construction that appears to underlie Sfara's infringement contentions in this case, CMT does not concede that Sfara's apparent construction is proper, and may contest any such constructions.

IV. PERSON HAVING ORDINARY SKILL IN THE ART

The disclosures and teachings of a prior art reference should be understood from the perspective of a person of ordinary skill in the art ("POSITA") in the relevant time period, whose understanding of the prior art reference necessarily involves other information available in the prior art, including the background information, education, and the level of skill (including the ability to conduct testing and carry out studies) such a person would have. The prior art discussed herein necessarily is in view of, and inclusive of, the knowledge of a person of ordinary skill in

the art, including without limitation, the knowledge of the state of the art and references that may provide evidence as to the state of the art.

V. IDENTIFICATION OF PRIOR ART

CMT relies on at least the following prior art references in support of its invalidity contentions related to the Sfara Asserted Patents based on anticipation under § 102 and/or obviousness under § 103. Unless otherwise stated, it should be presumed that CMT intends to rely upon each reference in its entirety to the extent relevant and/or appropriate, including references cited in and/or referenced within the references identified below.

A. Identification of Prior Art Patents and Patent Applications

CMT hereby discloses the following prior art on which it may rely to contend that the Sfara Asserted Claims are invalid as anticipated and/or obvious under 35 U.S.C. §§ 102, 103.

Patent/ Publication No.	Country	Inventor(s)	Date of Issue or Publication Date	Abbreviation
provisional US61875100	US	Dan Abramson	N/A	Abramson '100
8,290,480	US	Dan Abramson, et al.	October 16, 2012	Abramson '480
8,750,853	US	Dan Abramson	June 10, 2014	Abramson '853
provisional 2013US- 61882383	US	Joe Adelman	N/A	Adelman '383
5,785,347	US	Eudora F. Adolph, et al.	July 28, 1998	Adolph
6,073,004	US	Shridharan Balachandran	June 6, 2000	Balachandran ²
6,865,518	US	Jean Bertrand et al.	March 8, 2005	Bertrand
2012/0092019	US	Dieter Wolfgang Blum	April 19, 2012	Blum
2013/0267194	US	David S. Breed	October 10, 2013	Breed '194
2003/0209893	US	David S. Breed, et al.	November 13, 2003	Breed '893

² Balachandran issued on June 6, 2000. Therefore, it constitutes prior art to the '952 patent and the '946 patent under at least pre-AIA 35 U.S.C. §§ 102(a), (b) and (e) and/or AIA § 102(a).

Patent/ Publication No.	Country	Inventor(s)	Date of Issue or Publication Date	Abbreviation
8,082,014	US	Mark Edward Causey, et al.	December 20, 2011	Causey
8,862,486	US	Brad Cordova, et al.	October 14, 2014	Cordova
2012/0143495	US	Ramanamurthy Dantu	June 7, 2012	Dantu
8,352,639	US	Jeffrey Alton Hugh Dods et al.	January 8, 2013	Dods
2009/0037056	US	Yannick Erb	February 5, 2009	Erb
2013/0069802	US	Amir Foghel et al.	March 21, 2013	Foghel
8,509,812	US	Gary Fong et al.	August 13, 2013	Fong
9,390,625	US	William Blease Green et al.	July 12, 2016	Green
2263533	EP	Hamed Ketabdar	December 22, 2010	Ketabdar
10-2011-0025027	KR	Jong Tae Lee	March 9, 2011	Lee
4,837,489	US	John E. McFee	June 6, 1989	McFee
2498793	GB	Steven J McKay et al.	July 31, 2013	McKay
2014/0274020	US	Alan Miller	September 18, 2014	Miller
2005/0037730	US	Albert Montague	February 17, 2005	Montague
2006/0085153	US	Christopher L. Oesterling, et al.	April 20, 2006	Oesterling '153
2013/0130639	US	Christopher L. Oesterling, et al.	May 23, 2013	Oesterling '639
6828920	US	Donald K. Owen et al.	December 7, 2004	Owen
2012/0169327	US	Adam Louis Parco et al.	July 5, 2012	Parco
8,290,434	US	Patrick S. Piemonte et al.	October 16, 2012	Piemonte
2011/0279263	US	Ryan Scott Rodkey et al.	November 17, 2011	Rodkey
1995/028693	WO	Gordon F. Rouse et al.	October 26, 1995	Rouse
2009/024581	WO	Ulrich Stahlin	February 25, 2009	Stahlin
2010/004340	WO	Alex Tame	January 14, 2010	Tame
9,037,407	US	James Thompson	May 19, 2015	Thompson '407

Patent/ Publication No.	Country	Inventor(s)	Date of Issue or Publication Date	Abbreviation
2003/0029345	US	Timothy C. Tiernan, et al.	February 13, 20023	Tiernan
9,301,116	US	Rex Franklin Tomer	March 29, 2016	Tomer
2010/0317371	US	William J. Westerinen, et al.	December 16, 2010	Westerinen
9,311,271	US	Andrew William Wright	April 12, 2016	Wright
2012/0158249	US	Yangsheng Xu, et al.	June 21, 2012	Xu
2013/0226369	US	Rudy Yorio, et al.	August 29, 2013	Yorio

B. Identification of Prior Art Publications

CMT hereby discloses the following prior art publications on which it may rely to contend that the Sfara Asserted Claims are invalid as anticipated and/or obvious under 35 U.S.C. §§ 102, 103.

Title	Date Published	Author (Publisher)	Abbreviation
<i>Vehicle Detection and Compass Applications Using AMR Magnetic Sensors</i>	1999	Michael J. Caruso, et al.	Caruso 1999
<i>Active Magnetic Field Based Sensing System for Improved Detection and Discrimination of Side Impact Crashes</i>	June 9, 2005	Len Cech, et al. (National Highway Traffic Safety Administration)	Cech 2005
<i>A Treatise on Crash Sensing for Automotive Air Bag Systems</i>	June 2002	Ching-Yao Chan (IEEE)	Chan 2002
<i>CarTel: A Distributed Mobile Sensor Computing System</i>	November 3, 2006	Brett Hull et al. (Association for Computing Machinery)	Hull 2006
<i>WreckWatch: Automatic Traffic Accident Detection and Notification with Smartphones</i>	March 22, 2011	Jules White, et a;. (Springer Science+Business Media)	White 2011
<i>Mobile Phone Based Drunk Driving Detection</i>	June 7, 2010	Jiangpeng Dai, et al. (IEEE)	Dai 2010

Title	Date Published	Author (Publisher)	Abbreviation
<i>Vehicle Classification with Low Computation Magnetic Sensor</i>	January 6, 2009	Saowaluck Kaewkamnerd, et al. (IEEE)	Kaewkamnerd 2008
<i>Vehicle Classification Based on Magnetic Sensor Signal</i>	July 19, 2010	Saowaluck Kaewkamnerd, et al. (IEEE)	Kaewkamnerd 2010
<i>Using Smartphones to Detect Car Accidents and Provide Situational Awareness to Emergency Responders</i>	June 2010	Chris Thompson, et al. (LNICST)	Thompson 2010
<i>No Need to War-Drive: Unsupervised Indoor Localization</i>	June 25, 2012	He Wang, et al. (MobiSys)	Wang 2012
<i>A Preliminary Study of Sensing Appliance Usage for Human Activity Recognition Using Mobile Magnetometer</i>	September 5, 2012	Mi Zhang, et al. (UbiComp)	Zhang 2012

C. Identification of Commercial Prior Art

CMT hereby discloses the following commercial prior art on which it may rely to contend that the Sfara Asserted Claims are invalid as anticipated and/or obvious under 35 U.S.C. §§ 102, 103:

- CarTel including, but not limited to, products such as shown in CMT-SFARA-0002398 – CMT-SFARA-0002410, in public use, on sale, or otherwise available to the public as by at least 2006.
- WreckWatch including, but not limited to, products such as shown in CMT-SFARA-0002704 – CMT-SFARA-0002717 and CMT-SFARA-0002851 – CMT-SFARA-0002869, in public use, on sale, or otherwise available to the public as by at least 2010.

D. Identification of § 102(g) Prior Art

In view of Sfara's infringement contentions, CMT hereby discloses that the Sfara Asserted Claims are anticipated and/or rendered obvious by CarTel, which constitutes § 102(g)(2) prior art.

The creators of CarTel, including the authors of *CarTel: A Distributed Mobile Sensor Computing System*, publicly disclosed details regarding CarTel by at least November 2006. The creators of CarTel did not abandon, suppress, or conceal their invention. In fact, for over a year before November 2006, “CarTel [had] been deployed on six cars, running on a small scale in several metropolitan areas in the US.” Hull 2006 at 12 (CMT-SFARA-0002409). CMT’s investigation into the development of the CarTel project is still ongoing. Accordingly, CMT may supplement and/or amend these contentions as additional information is discovered.

E. The Intrinsic Record

CMT may also rely upon prior art cited in the prosecution histories of the Sfara Asserted Patents as invalidating references or to show the state of the art. CMT intends to rely on the patent applicant’s admissions about the scope of the prior art relevant to the Sfara Asserted Patents found in, inter alia: the Sfara Asserted Patents’ prosecution histories, any deposition testimony of the named inventor, the papers filed, and any evidence (including pre-complaint correspondence authored by the named inventor or his agents) submitted by Sfara in connection with this litigation, and the admitted prior art found in the specification of the Sfara Asserted Patents.

F. Rebuttal Evidence

Prior art not included in these Invalidity Contentions, whether known or not known to CMT, may become relevant. In particular, CMT is currently unaware of the extent, if any, to which Sfara will contend that limitations of the Sfara Asserted Claims are not disclosed in the prior art identified herein. If that occurs, CMT may identify other references that would render obvious the allegedly missing limitation(s) of the disclosed device or method.

G. Contextual Evidence

CMT’s claim charts cite to particular teachings and disclosures of the prior art as applied to features of the Sfara Asserted Claims. However, persons of ordinary skill in the art generally

may view an item of prior art in the context of his or her experience and training, other publications, literature, products, and understanding. Thus, the cited portions are only examples, and CMT may rely on uncited portions of the prior art references and on other publications and expert testimony as aids in understanding and interpreting the cited portions, as providing context thereto, and as additional evidence that the prior art discloses a claim limitation or the claimed subject matter as a whole. CMT further may rely on uncited portions of the prior art references, other publications, and testimony, including expert testimony, to establish bases for combinations of certain cited references that render the Sfara Asserted Claims obvious. The references discussed in the claim charts may disclose the elements of the Sfara Asserted Claims explicitly and/or inherently, and/or they may be relied upon to show the state of the art in the relevant time frame. The disclosures concerning obviousness are provided in the alternative to anticipation contentions and are not to be construed to suggest that any reference included in the combinations is not by itself anticipatory.

VI. IDENTIFICATION OF BASIS FOR INVALIDITY UNDER 35 U.S.C. §§ 102, 103

The following prior art references, either alone or in combination with the knowledge of one skilled in the art, and/or in combination with other prior art references, render one or more asserted claims of the Sfara Asserted Patents invalid as anticipated or obvious. The inclusion of certain exemplary combinations herein does not exclude other combinations based upon the prior art references identified herein. CMT contends that all claims that are anticipated by a particular reference are also rendered obvious by that same reference alone, or in combination with the other references discussed below. The prior art references set forth in the incorporated Exhibits A-01 through A-19 and B-01 through B-29, attached hereto, clearly demonstrate that each of the limitations of the Sfara Asserted Claims was known in the art. A person of ordinary skill would have been motivated to combine these known elements to arrive at the Sfara Asserted Claims at least for the reasons set forth herein. In particular, each prior art reference may be combined with (1) information

known to persons skilled in the art at the time of the alleged invention, (2) any of the other anticipatory prior art references, and/or (3) any of the additional prior art identified herein and in the charts attached hereto. In addition, CMT incorporates by reference each and every prior art reference of record in the prosecution of the Sfara Asserted Patents, including the statements made therein by the applicant, as well as the prior art discussed in the specification.

In view of the Supreme Court’s *KSR International Co. v. Teleflex Inc.*, 550 U.S. 398, 127 S.Ct. 1727, 1739 (2007) (“KSR”) decision, the USPTO issued a set of Examination Guidelines. See Examination Guidelines for Determining Obviousness Under 35 U.S.C. § 103 in view of the Supreme Court Decision in *KSR International Co. v. Teleflex Inc.*, 72 Fed. Reg. 57, 526 (Oct. 10, 2007). Those rationales include:

- Combining prior art elements according to known methods to yield predictable results;
- Simple substitution of one known element for another to obtain predictable results;
- Use of a known technique to improve similar devices (methods, or products) in the same way;
- Applying a known technique to a known device (method, or product) ready for improvement to yield predictable results;
- “Obvious to try” – choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success;
- Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations would have been predictable to one of ordinary skill in the art;
- Some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention.

Id. at 529. These rationales are consistent with the Supreme Court’s emphasis in *KSR* that “the results of ordinary innovation” from the perspective of a person of ordinary skill are not patentable, and further that “[a] person of ordinary skill is also a person of ordinary creativity, not an

automaton.” *KSR*, 550 U.S. at 421. CMT contends that one or more of these rationales apply in considering the obviousness of the Sfara Asserted Claims.

As the Supreme Court emphasized in *KSR*, issued patent claims may be determined to be invalid as obvious even without a teaching, suggestion, or motivation to combine particular references. *Id.* at 419 (“The obviousness analysis cannot be confined by a formalistic conception of the words teaching, suggestion, and motivation, or by overemphasis on the importance of published articles and the explicit content of issued patents.”). Nevertheless, a person of skill in the art would have been motivated to combine each of the identified references with the others identified with respect to the Sfara Asserted Claims. CMT contends that one of ordinary skill in the art, at the time the alleged inventions of the Sfara Asserted Patents were made, would have been motivated to combine the references disclosed herein in such a way to reach the alleged inventions. The teaching, suggestion, or motivation to combine these references, although not required, is found, explicitly or implicitly, in one or more of at least the following: the knowledge or common sense of one of ordinary skill in the art; the prior art references themselves and/or the prior art as a whole, including interrelated teachings of multiple prior art references; the common fields of technology of the references; the subject matter acknowledged as prior art in Sfara Asserted Patents; the nature of the problem to be solved and the existence of similar improvements in similar applications; design incentives and other market forces, including the advantages of creating a superior and more desirable product and the effects of demands known to the design community or present in the marketplace; the ability to implement the alleged invention as a predictable variation of the prior art; improvements in similar devices; any needs or problems known in the fields addressed by the Sfara Asserted Patents; the teachings in the references directed to solving the problems that the Sfara Asserted Patents allegedly directed to solving; and the number of identified, predictable solutions to the problems addressed by these patents. In addition, the simultaneous (and/or prior) inventions

described above (and elsewhere in these contentions) are evidence that motivation to combine the concepts described in the various prior art references did, in fact, exist, and they were, in fact, combined.

These references identify and address many of the same technical issues and suggest similar solutions to those issues. Accordingly, the teachings of the individual prior art references and alleged inventions, combined with the industry knowledge of a person of ordinary skill in the art at the time of the alleged invention of the Sfara Asserted Patents, would render obvious the Sfara Asserted Claims for at least the reasons described herein and in the incorporated exhibits. A person of ordinary skill at the time of the alleged inventions had reason to combine or modify one or more of the listed references in light of the knowledge of a person of ordinary skill in the art at the time of the alleged invention and information in the prior art cited herein. Thus, these references would logically have been combined pursuant to 35 U.S.C. § 103, and there was abundant motivation to combine such references at the time of the purported inventions of the Sfara Asserted Patents.

A. The '952 Patent

For at least the reasons explained in Exhibits A-01 through A-19, the asserted claims of the '952 patent are invalid as anticipated and/or obvious over at least the following references alone or in combination:

- Wright
- Green
- Montague
- Miller
- Foghel
- White 2011
- Chan 2002
- Breed '194
- CarTel (Hull 2006)
- Caruso 1999
- Cech 2005
- Ketabdar
- Oesterling '639

- Rodkey
- Stahlin
- Tame
- Tomer
- Yorio
- Adolph
- Causey

B. Obviousness Combinations for the '952 Patent

Pursuant to L. Pat. R. 3.3(b), CMT identifies the following combinations of prior art references that disclose each limitation of each of the Asserted Claims of the '952 patent:

- Any one of Wright, Green, Montague, Miller, Foghel, White 2011, or Chan 2002, alone.
- Any one of Wright, Green, Montague, Miller, Foghel, White 2011, or Chan 2002, in conjunction with the knowledge of one of ordinary skill in the art.
- Any one of Wright, Green, Montague, Miller, Foghel, White 2011, or Chan 2002, in combination with:

Wright, Green, Montague, Miller, Foghel, White 2011, Chan 2002, Breed '194, CarTel (Hull 2006), Caruso 1999, Cech 2005, Ketabdar, Oesterling '639, Rodkey, Stahlin, Tame, Tomer, Yorio, Adolph, or Causey.

In the claim charts attached as Exhibits A-01 through A-19, CMT identifies examples of each prior art reference's disclosures for the limitations of the Asserted Claims of the '952 patent. For at least the reasons described in these contentions, it would have been obvious to one of ordinary skill in the art to combine any of a number of prior art references, including any combination of those identified below, along with the knowledge of one of ordinary skill in the art to meet the limitations of the Asserted Claims of the '952 patent. Moreover, CMT has not yet completed its search or discovery concerning additional prior art. Thus, CMT's inclusion of exemplary combinations does not preclude it from identifying other invalidating combinations as

appropriate, and CMT reserves the right to identify additional specific combinations as well as to detail and explain such combinations.

To the extent not anticipated, the Asserted Claims of the '952 patent represent no more than the result of ordinary variations of the prior art. CMT further believes that no showing of a specific motivation to combine prior art is required to combine the references disclosed above and in the attached charts, as each combination of art would have no unexpected results, and at most would simply represent a known alternative to one of skill in the art. *See KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398, 415–16 (2007) (rejecting the Federal Circuit's "rigid" application of the teaching, suggestion, or motivation to combine test, instead espousing an "expansive and flexible" approach). Indeed, the Supreme Court held that a person of ordinary skill in the art is "a person of ordinary creativity, not an automaton" and "in many cases a person of ordinary skill in the art will be able to fit the teachings of multiple patents together like pieces of a puzzle." *Id.* at 420–21. Nevertheless, in addition to the information contained elsewhere in these contentions, CMT identifies motivation and reason to combine the cited art.

One or more combinations of the prior art references identified above would have been obvious because these references would have been combined using: known methods to yield predictable results; known techniques in the same way; a simple substitution of one known, equivalent element for another to obtain predictable results; and/or a teaching, suggestion, or motivation in the prior art generally. In addition, it would have been obvious to try combining the prior art references identified above because there were only a finite number of predictable solutions and/or because known work in one field of endeavor prompted variations based on predictable design incentives and/or market forces either in the same field or a different one. Further, the combinations of the prior art references identified above would have been obvious

because the combinations represent known potential options with a reasonable expectation of success.

Additional evidence that there would have been a motivation to combine the prior art references identified above includes the interrelated teachings of multiple prior art references; common authorship; the effects of demands known to the design community or present in the marketplace; the existence of a known problem for which there was an obvious solution encompassed by the Asserted Claims of the '952 patent; the existence of a known need or problem in the field of the endeavor at the time of the alleged invention(s); and the background knowledge that would have been possessed by a person having ordinary skill in the art.

Thus, the motivation to combine the teachings of the prior art references disclosed herein is found in the references themselves and also in: (1) the nature of the problem being solved; (2) the express, implied and inherent teachings of the prior art; (3) the knowledge of persons of ordinary skill in the art; (4) the predictable results obtained in combining the different elements of the prior art; (5) the predictable results obtained in simple substitution of one known element for another; (6) the use of a known technique to improve similar devices, methods, or products in the same way; (7) the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; (8) the finite number of identified predictable solutions that had a reasonable expectation of success; and (9) known work in various technological fields that could be applied to the same or different technological fields based on design incentives or other market forces.

Additionally, it would be obvious to one of skill in the art to consult and/or combine any of the prior art listed above because all of these references relate to the same area of technology (vehicle telematics, including, in particular using portable devices, such as a smartphone, to collect

sensor data and monitor or determine driver behavior) and/or are from analogous art. The Asserted Claims of the '952 patent only unite old elements, well known in the field, with no change in their respective function. Given the interrelated teachings of the prior art, the effects of demands known to the design community or present in the marketplace, and the background knowledge possessed by a person having ordinary skill in the art, it would have been obvious for one of ordinary skill in the art to combine these familiar elements, disclosed and/or embodied in the prior art listed above to practice the Asserted Claims of the '952 patent.

All of the references listed above and in Exhibits A-01 through A-19 are directed to using portable devices, such as a smartphone, or other devices to collect sensor data and monitor or determine driver behavior. The underlying technology and principles disclosed in the references are similar, and various components of the different references are compatible with, or can be easily integrated into, the systems described in the other references. Indeed, the components claimed in the Asserted Claims of the '952 patent and their respective functionalities were all known well before the priority date of the '952 patent. For example, a person of ordinary skill in the art would have known of multiple devices, including smartphones, that are able to collect sensor data from multiple sensors, including data relating to magnetic fields, acceleration, velocity, etc., to determine if an event, such as a vehicle crash, had occurred.

The prior art could have been combined according to methods known to those of ordinary skill within the field of vehicle telematics to yield predictable results. The substitution of one element in a device used to collect and analyze sensor data could have been predictably achieved by one of ordinary skill at the time of the alleged invention. One of ordinary skill in the art would have been aware of and familiar with these various applications, including the various sensor data collection and analysis methodologies and techniques, and would have been able to select

appropriate attributes of one for inclusion in another. Those of ordinary skill in the art could have employed known techniques to improve similar prior art devices in the same way as claimed in the asserted patents.

In addition, the prior art also provided sets of finite, identified, predictable solutions for known problems that would have been obvious to those of ordinary skill to try with a reasonable expectation of success. For example, work with respect to one particular device (e.g., a smartphone) to collect sensor data and monitor driver behavior would have prompted variations for use in either the same type of device or a different device based on design incentives or other market forces. Various expanded applications for monitoring drivers and vehicle telematics were being explored and implemented in the art at the time of the alleged invention. In addition, the prior art provided multiple teachings, suggestions, and motivations that would have led one of ordinary skill to modify or to combine prior art teachings to arrive at systems and methods purportedly covered by the Asserted Claims, as can be found in the references themselves.

Accordingly, in light of the disclosure of the prior references, among other bases, one of ordinary skill in the art would have been motivated to combine any number of the references listed above, as all of those references relate to analogous art and use common technology in various applications relating to collecting sensor data to monitor or determine driver behavior.

Any reference or combination of references that anticipates or makes obvious an asserted independent claim also makes obvious any asserted claim dependent on that independent claim, as the element of each dependent Asserted Claim of the '952 patent was known by a person of ordinary skill at the time of the alleged invention, and it would have been obvious to combine those known elements with the independent claims at least as a matter of common sense and routine innovation. Accordingly, CMT contends that each Asserted Claim would have been

obvious not only by the combinations described in these contentions, but also by any combination of references that renders obvious an Asserted Claim.

In addition to the specific examples of motivation provided above, CMT reserves the right to rely on the disclosures of the references listed above, in the claim charts attached as Exhibits A-01 through A-19, and §§ V.A–V.C, *supra*, for additional motivations to combine. The above-identified examples of combinations are given merely to illustrate various motivations to combine and are not intended to provide an exhaustive list of every possible combination to which the motivation may apply. CMT reserves the right to contend that the above-described motivations to combine apply to other combinations at the appropriate time, i.e., in expert reports regarding invalidity.

C. The '946 Patent

For at least the reasons explained in Exhibits B-01 through B-29, the asserted claims of the '946 patent are invalid as anticipated or obvious over at least the following references alone or in combination:

- Abramson '480
- Abramson '853
- Dods
- Fong
- McFee
- McKay
- Parco
- Abramson '100
- Bertrand
- Blum
- CarTel (Hull 2006)
- Caruso 1999
- Cech 2005
- Cordova
- Dai 2010
- Dantu
- Kaewkamnerd 2008

- Kaewkamnerd 2010
- Lee
- Owen
- Piemonte
- Rouse
- Thompson 2010
- Thompson '407
- Wang 2012
- Westerinen
- White 2011
- Zhang 2012
- Breed '893
- Erb
- Oesterling '153
- Tiernan
- Xu

D. Obviousness Combinations for the '946 Patent

Pursuant to L. Pat. R. 3.3(b), CMT identifies the following combinations of prior art references that disclose each limitation of each of the Asserted Claims of the '946 patent:

- Any one of Abramson '480, Abramson '853, Dods, Fong, McFee, McKay, or Parco, alone.
- Any one of Abramson '480, Abramson '853, Dods, Fong, McFee, McKay, or Parco, in conjunction with the knowledge of one of ordinary skill in the art.
- Any one of Abramson '480, Abramson '853, Dods, Fong, McFee, McKay, or Parco, in combination with:

Abramson '480, Abramson '853, Dods, Fong, McFee, McKay, Parco, Abramson '100, Bertrand, Blum, CarTel (Hull 2006), Caruso 1999, Cech 2005, Cordova, Dai 2010, Dantu, Kaewkamnerd 2008, Kaewkamnerd 2010, Lee, Owen, Piemonte, Rouse, Thompson 2010, Thompson '407, Wang 2012, Westerinen, White 2011, Zhang 2012, Breed '893, Erb, Oesterling '153, Tiernan, or Xu.

In the claim charts attached as Exhibits B-01 through B-29, CMT identifies examples of each prior art reference's disclosures for the limitations of the Asserted Claims of the '946 patent. For at least the reasons described in these contentions, it would have been obvious to one of ordinary skill in the art to combine any of a number of prior art references, including any

combination of those identified below, along with the knowledge of one of ordinary skill in the art to meet the limitations of the Asserted Claims of the '946 patent. Moreover, CMT has not yet completed its search or discovery concerning additional prior art. Thus, CMT's inclusion of exemplary combinations does not preclude it from identifying other invalidating combinations as appropriate, and CMT reserves the right to identify additional specific combinations as well as to detail and explain such combinations.

To the extent not anticipated, the Asserted Claims of the '946 patent represent no more than the result of ordinary variations of the prior art. CMT further believes that no showing of a specific motivation to combine prior art is required to combine the references disclosed above and in the attached charts, as each combination of art would have no unexpected results, and at most would simply represent a known alternative to one of skill in the art. *See KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398, 415–16 (2007) (rejecting the Federal Circuit's "rigid" application of the teaching, suggestion, or motivation to combine test, instead espousing an "expansive and flexible" approach). Indeed, the Supreme Court held that a person of ordinary skill in the art is "a person of ordinary creativity, not an automaton" and "in many cases a person of ordinary skill in the art will be able to fit the teachings of multiple patents together like pieces of a puzzle." *Id.* at 420–21. Nevertheless, in addition to the information contained elsewhere in these contentions, CMT identifies motivation and reason to combine the cited art.

One or more combinations of the prior art references identified above would have been obvious because these references would have been combined using: known methods to yield predictable results; known techniques in the same way; a simple substitution of one known, equivalent element for another to obtain predictable results; and/or a teaching, suggestion, or motivation in the prior art generally. In addition, it would have been obvious to try combining the

prior art references identified above because there were only a finite number of predictable solutions and/or because known work in one field of endeavor prompted variations based on predictable design incentives and/or market forces either in the same field or a different one. Further, the combinations of the prior art references identified above would have been obvious because the combinations represent known potential options with a reasonable expectation of success.

Additional evidence that there would have been a motivation to combine the prior art references identified above includes the interrelated teachings of multiple prior art references; common authorship; the effects of demands known to the design community or present in the marketplace; the existence of a known problem for which there was an obvious solution encompassed by the Asserted Claims of the '946 patent; the existence of a known need or problem in the field of the endeavor at the time of the alleged invention(s); and the background knowledge that would have been possessed by a person having ordinary skill in the art.

Thus, the motivation to combine the teachings of the prior art references disclosed herein is found in the references themselves and also in: (1) the nature of the problem being solved; (2) the express, implied and inherent teachings of the prior art; (3) the knowledge of persons of ordinary skill in the art; (4) the predictable results obtained in combining the different elements of the prior art; (5) the predictable results obtained in simple substitution of one known element for another; (6) the use of a known technique to improve similar devices, methods, or products in the same way; (7) the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; (8) the finite number of identified predictable solutions that had a reasonable expectation of success; and (9) known work in various technological fields

that could be applied to the same or different technological fields based on design incentives or other market forces.

Additionally, it would be obvious to one of skill in the art to consult and/or combine any of the prior art listed above because all of these references relate to the same area of technology (vehicle telematics, including, in particular using portable devices, such as a smartphone, to collect sensor data and monitor or determine driver behavior) and/or are from analogous art. The Asserted Claims of the '946 patent only unite old elements, well known in the field, with no change in their respective function. Given the interrelated teachings of the prior art, the effects of demands known to the design community or present in the marketplace, and the background knowledge possessed by a person having ordinary skill in the art, it would have been obvious for one of ordinary skill in the art to combine these familiar elements, disclosed and/or embodied in the prior art listed above to practice the Asserted Claims of the '946 patent.

All of the references listed above and in Exhibits B-01 through B-29 are directed to using portable devices, such as a smartphone, to collect sensor data and monitor or determine driver behavior. The underlying technology and principles disclosed in the references are similar, and various components of the different references are compatible with, or can be easily integrated into, the systems described in the other references. Indeed, the components claimed in the Asserted Claims of the '946 patent and their respective functionalities were all known well before the priority date of the '946 patent. For example, a person of ordinary skill in the art would have known of multiple devices, including smartphones, that are able to collect sensor data relating to one of an electric field, a magnetic field and an electromagnetic field. Further, inputting and accessing data from a database was known, as was comparing data retrieved from a database.

The prior art could have been combined according to methods known to those of ordinary skill within the field of vehicle telematics to yield predictable results. The substitution of one element in a device used to collect and analyze sensor data could have been predictably achieved by one of ordinary skill at the time of the alleged invention. One of ordinary skill in the art would have been aware of and familiar with these various applications, including the various sensor data collection and analysis methodologies and techniques, and would have been able to select appropriate attributes of one for inclusion in another. Those of ordinary skill in the art could have employed known techniques to improve similar prior art devices in the same way as claimed in the asserted patents.

In addition, the prior art also provided sets of finite, identified, predictable solutions for known problems that would have been obvious to those of ordinary skill to try with a reasonable expectation of success. For example, work with respect to one particular device (e.g., a smartphone) to collect sensor data and monitor driver behavior would have prompted variations for use in either the same type of device or a different device based on design incentives or other market forces. Various expanded applications for monitoring drivers and vehicle telematics were being explored and implemented in the art at the time of the alleged invention. In addition, the prior art provided multiple teachings, suggestions, and motivations that would have led one of ordinary skill to modify or to combine prior art teachings to arrive at systems and methods purportedly covered by the Asserted Claims, as can be found in the references themselves.

Accordingly, in light of the disclosure of the prior references, among other bases, one of ordinary skill in the art would have been motivated to combine any number of the references listed above, as all of those references relate to analogous art and use common technology in various applications relating to collecting sensor data to monitor or determine driver behavior.

Any reference or combination of references that anticipates or makes obvious an asserted independent claim also makes obvious any asserted claim dependent on that independent claim, as the element of each dependent Asserted Claim of the '946 patent was known by a person of ordinary skill at the time of the alleged invention, and it would have been obvious to combine those known elements with the independent claims at least as a matter of common sense and routine innovation. Accordingly, CMT contends that each Asserted Claim would have been obvious not only by the combinations described in these contentions, but also by any combination of references that renders obvious an Asserted Claim.

In addition to the specific examples of motivation provided above, CMT reserves the right to rely on the disclosures of the references listed above, in the claim charts attached as Exhibits B-01 through B-29, and §§ V.A–V.C, *supra*, for additional motivations to combine. The above-identified examples of combinations are given merely to illustrate various motivations to combine and are not intended to provide an exhaustive list of every possible combination to which the motivation may apply. CMT reserves the right to contend that the above-described motivations to combine apply to other combinations at the appropriate time, i.e., in expert reports regarding invalidity.

VII. THE SFARA ASSERTED CLAIMS ARE INVALID UNDER 35 U.S.C. § 101

Section 101 provides that “[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.” 35 U.S.C. § 101. Because (1) the claims of the Sfara Asserted Patents are directed to an abstract idea and (2) the elements of the claims—both individually and as ordered combinations—fail to transform the nature of the claims into a patent-eligible application of the abstract idea, the Sfara Asserted Claims

are invalid for failing to claim patent-eligible subject matter. *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 573 U.S. 208 (2014); *Vroom Inc. v. Sidekick Tech., LLC*, 609 F. Supp. 3d 307, 315 (D.N.J. 2022). The Court may decide patent eligibility based on representative claims where “all the claims are substantially similar and linked to the same abstract idea.” *Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat. Ass’n*, 776 F.3d 1343, 1348 (Fed. Cir. 2014) (internal quotations and citation omitted); *Vroom*, 609 F. Supp. 3d at 312; *Beteiro, LLC v. BetMGM, LLC*, 626 F. Supp. 3d 789, 796 (D.N.J. 2022).

A. The Asserted Claims Of The '952 Patent Are Invalid Under § 101

Each of the Sfara Asserted Claims of the '952 patent are invalid as directed to ineligible subject matter under Section 101. At *Alice* step one, the Sfara Asserted Claims claim no more than the abstract idea of collecting, analyzing, and presenting the results of data to determine if a crash has occurred. *See, e.g., Elec. Power Group, LLC v. Alstom S.A.*, 830 F.3d 1350, 1351 (Fed. Cir. 2016) (claims directed to “collection, analysis, and display of available information” are abstract); *Digitech Image Techs., LLC v. Elecs. For Imaging, Inc.*, 758 F.3d 1344, 1351 (Fed. Cir. 2014) (“Without additional limitations, a process that employs mathematical algorithms to manipulate existing information to generate additional information is not patent eligible.”); *Content Extraction*, 776 F.3d at 1347 (holding that claims directed to “data collection, recognition, and storage” are abstract). The remaining dependent claims are substantially similar to independent claims 1, 7, and 13 and are directed to the same abstract idea.

At *Alice* step two, the claims, “individually and as an ordered combination” do not recite an “inventive concept” beyond the abstract idea itself. *Alice*, 573 U.S. at 217–18 (internal quotation marks omitted). Instead, the claims recite nothing more than the use of conventional computer and network equipment in their conventional manner to carry out that abstract idea.

The *Electric Power* court noted that “a large portion of the lengthy claims is devoted to enumerating types of information and information sources available within the power-grid environment.” 830 F.3d at 1355. That was a strong signal of patent ineligibility because “merely selecting information, by content or source, for collection, analysis, and display does nothing significant to differentiate a process from ordinary mental processes, whose implicit exclusion from § 101 undergirds the information-based category of abstract ideas.” *Id.* Viewed in that light, “[t]he claims . . . [did] not even require a new source or type of information, or new techniques for analyzing it” and, accordingly, did “not require an arguably inventive set of components or methods, such as measurement devices or techniques, that would generate new data.” *Id.* (internal citations omitted). Similarly, here the claims, including the dependent claims, simply “enumerat[e] types of information and information sources” that could be collected, analyzed, and presented to determine if a crash has occurred.

B. The Asserted Claims Of The '946 Patent Are Invalid Under § 101

Each of the Sfara Asserted Claims of the '946 patent are invalid as directed to ineligible subject matter under Section 101. At *Alice* step one, the Sfara Asserted Claims claim no more than the abstract idea of collecting, analyzing, and presenting the results of data to determine if an object was detected. *See, e.g., Elec. Power Group, LLC v. Alstom S.A.*, 830 F.3d 1350, 1351 (Fed. Cir. 2016) (claims directed to “collection, analysis, and display of available information” are abstract); *Digitech Image Techs., LLC v. Elecs. For Imaging, Inc.*, 758 F.3d 1344, 1351 (Fed. Cir. 2014) (“Without additional limitations, a process that employs mathematical algorithms to manipulate existing information to generate additional information is not patent eligible.”); *Content Extraction*, 776 F.3d at 1347 (holding that claims directed to “data collection, recognition, and storage” are abstract). The remaining dependent claims are substantially similar to independent claims 1, 8, and 15 and are directed to the same abstract idea.

At *Alice* step two, the claims, “individually and as an ordered combination” do not recite an “inventive concept” beyond the abstract idea itself. *Alice*, 573 U.S. at 217–18 (internal quotation marks omitted). Instead, the claims recite nothing more than the use of conventional computer and network equipment in their conventional manner to carry out that abstract idea.

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VIII. THE SFARA ASSERTED CLAIMS ARE INVALID UNDER 35 U.S.C. § 112³

A. Lack of Enablement

Pursuant to 35 U.S.C. § 112(a), “[t]he specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is

³ Because Sfara contends that the Asserted Claims are entitled to a priority date after September 16, 2012, CMT applies AIA 35 U.S.C. § 112 here. However, to the extent that any other form of the patent statute (e.g., pre-AIA) regarding invalidity for indefiniteness, non-enablement, or lack of written description applies, CMT’s contentions and analyses are equally applicable.

most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor or joint inventor of carrying out the invention.” The purpose of the enablement requirement is to “require the patentee to describe his invention so that others may construct and use it after the expiration of the patent.” *Ariad Pharms., Inc. v. Eli Lilly and Co.*, 598 F.3d 1336, 1346 (Fed. Cir. 2010). Enablement requires that “the specification of a patent . . . teach those skilled in the art how to make and use the full scope of the claimed invention without undue experimentation.” *Trustees of Bos. Univ. v. Everlight Elecs. Co.*, 896 F.3d 1357, 1362 (Fed. Cir. 2018) (internal quotations omitted); *Magsil Corp. v. Hitachi Global Storage Tech., Inc.*, 687 F.3d 1377, 1380 (Fed. Cir. 2012); *Wyeth v. Abbot Lab’ys*, C.A. No. 08-230, 2012 WL 175023 at *5 (D.N.J. Jan. 19, 2012); *Acorda Therapeutics Inc. v. Apotex Inc.*, C.A. No. 07-4937, 2011 WL 4074116 at *22 (D.N.J. Sept. 6, 2011). “A court may consider several factors in determining whether undue experimentation is required to practice a claimed invention, including: (1) the quantity of experimentation necessary; (2) the amount of direction or guidance disclosed in the patent; (3) the presence or absence of working examples in the patent; (4) the nature of the invention; (5) the state of the prior art; (6) the relative skill of those in the art; (6) the predictability of the art; and (7) the breadth of the claims.” *Acorda Therapeutics*, 2011 WL 4074116 at *21 (citing *In re Wands*, 858 F.2d 731, 737 (Fed.Cir.1988)). The “scope of the claims must be less than or equal to the scope of the enablement to ensure that the public knowledge is enriched by the patent specification to a degree at least commensurate with the scope of the claims.” *MagSil*, 687 F.3d at 1381.

1. The Asserted Claims of the ’952 Patent Lack Enablement

The asserted claims of the ’952 patent are invalid under 35 U.S.C. § 112(a) because the specification fails to provide an enabling disclosure of at least the following limitations, either alone or in combination with the other limitations set forth in the claims:

Patent	Term	Claim(s)
'952 Patent	"in-vehicle signal"	1, 7, 13
	"first detector signal"	1, 4, 7, 10, 13, 16
	"second detector signal"	1, 7, 13
	"crash mode signal"	1, 6-7, 12-13, 18
	"first mode"	6, 12-13, 18
	"second mode"	6, 12-13, 18
	"first parameter"	1-4, 7-10, 13-16
	"contents of surrounding atmosphere" / "one of the group consisting of magnetic fields in any of three dimensions, electric fields in any of three dimensions, electro-magnetic fields in any of three dimensions, velocity in any of three dimensions, acceleration in any of three dimensions, angular velocity in any of three dimensions, angular acceleration in any of three dimensions, geodetic position, sound, temperature, vibrations in any of three dimensions, pressure in any of three dimensions, biometrics, contents of surrounding atmosphere, a change in electric fields in any of three dimensions, a change in magnetic fields in any of three dimensions, a change in electro-magnetic fields in any of three dimensions, a change in velocity in any of three dimensions, a change in acceleration in any of three dimensions, a change in angular velocity in any of three dimensions, a change in angular acceleration in any of three dimensions, a change in geodetic position in any of three dimensions, a change in sound, a change in	2, 8, 14

Patent	Term	Claim(s)
	temperature, a change in vibrations in any of three dimensions, a change in pressure in any of three dimensions, a change in biometrics, a change in contents of surrounding atmosphere and combinations thereof” (“Limitations of Claims 2, 8, 14”)	

a) “in-vehicle signal”

Independent claims 1, 7, and 13 of the ’952 patent recite “a mode-determining component operable to detect whether the device is in the vehicle and to generate an in-vehicle signal,” “generating, via the mode-determining component, an in-vehicle signal,” “wherein said mode-determining component is further operable to generate a crash mode signal based on the in-vehicle signal, the first detector signal and the second detector signal,” and “generating, via the mode-determining component, a crash mode signal based on the in-vehicle signal, the first detector signal and the second detector signal.” These limitations lack enablement because the ’952 patent fails to teach a person of ordinary skill in the art how to implement these limitations without undue experimentation.

The patent does not disclose characteristics of the signal or how such “in-vehicle signal” is created. The ’952 patent discloses: “Comparing component may compare signals based on the detected parameters with a previously stored signature corresponding to a vehicle in database 204. Identifying component 220 may generate an in-vehicle signal indicating that device is in a vehicle based on the comparison by comparing component 218.” ’952 patent at 8:1-7. The ’952 patent also discloses that “[e]ach of the detecting components of parameter-detecting component 222 is able to generate a respective detected signal based on the detected parameter” and “[e]ach of these detected signals may be provided to controlling component 410 via a respective communication line.” *Id.* at 10:17-21. The ’952 patent discloses that “further processes include averaging, adding,

subtracting, and transforming any of the individual detected signals and combinations thereof.” *Id.* at 12:52-55. The ’952 patent also discloses that “identifying component 220 acts as a mode-determining component and has generated an in-vehicle signal indicating that device 202 is in a vehicle.” *Id.* at 14:40-42. The ’952 patent contemplates comparing signals, but does not disclose the form of the signals or how to compare the same.

The specification of the ’952 patent states, “In an example embodiment, device 202 determines whether it is in a vehicle and as described in copending U.S. application Ser. No. 14/095,156 filed Dec. 3, 2013.” *Id.* at 7:63-65. The ’156 application also fails to disclose characteristics of the signal or how such “in-vehicle signal” is created. The ’156 application does not disclose the form of an “in-vehicle signal.”

Thus, the ’952 patent fails to provide sufficient information to inform a person of ordinary skilled in the art how to make or use the invention without undue experimentation.

b) “first detector signal”

Claims 1, 4, 7, 10, 13, and 16 of the ’952 patent recite “a first detecting component operable detect a first parameter and to generate a first detector signal based on the first detected parameter,” “wherein said mode-determining component is further operable to generate a crash mode signal based on the in-vehicle signal, the first detector signal and the second detector signal,” “generating, via the first detecting component, a first detector signal based on the first detected parameter,” “generating, via the mode-determining component, a crash mode signal based on the in-vehicle signal, the first detector signal and the second detector signal,” “said first detecting component is operable to generate the first detector signal when the detected acceleration along the single axis is equal to or greater than a predetermined value,” and “wherein said generating a first detector signal comprises generating the first detector signal when the detected acceleration along the single axis is equal to or greater than a predetermined value.” These limitations lack enablement because

the '952 patent fails to teach a person of ordinary skill in the art how to implement these limitations without undue experimentation. The patent does not disclose characteristics of the “first detector signal.” The '952 patent discloses: “Further field-detecting component 212 has generated a detector signal based on a first detected parameter, in this example, a detected magnetic field associated with the deployment of an airbag.” '952 patent at 14:42-46. The '952 patent also discloses “[f]ield-detecting component 212 is additionally able to generate a field signal based on the detected field.” *Id.* at 6:30-31. The '952 patent also discloses that “[e]ach of the detecting components of parameter-detecting component 222 is able to generate a respective detected signal based on the detected parameter” and “[e]ach of these detected signals may be provided to controlling component 410 via a respective communication line.” *Id.* at 10:17-21. The '952 patent contemplates comparing signals, but does not disclose the form of the signals or how to compare the same. Thus, the patent fails to provide sufficient information to inform a person of ordinary skill in the art how to make or use the invention without undue experimentation.

c) “second detector signal”

Independent claims 1, 7, and 13 of the '952 patent recite “a second detecting component operable detect a second parameter and to generate a second detector signal based on the second detected parameter,” “wherein said mode-determining component is further operable to generate a crash mode signal based on the in-vehicle signal, the first detector signal and the second detector signal,” “generating, via the second detecting component, a second detector signal based on the second detected parameter,” and “generating, via the mode-determining component, a crash mode signal based on the in-vehicle signal, the first detector signal and the second detector signal.” These limitations lack enablement because the '952 patent fails to teach a person of ordinary skill in the art how to implement these limitations without undue experimentation. The patent does not disclose characteristics of a “second detector signal.” The '952 patent discloses: “Additionally,

parameter-detecting component 222 has generated a detector signal based on a second detected parameter, in this example, a detected deceleration.” ’952 patent at 14:46-48. The ’952 patent also discloses “[f]ield-detecting component 212 is additionally able to generate a field signal based on the detected field.” *Id.* at 6:30-31. The ’952 patent also discloses that “[e]ach of the detecting components of parameter-detecting component 222 is able to generate a respective detected signal based on the detected parameter” and “[e]ach of these detected signals may be provided to controlling component 410 via a respective communication line.” *Id.* at 10:17-21. The ’952 patent contemplates comparing signals, but does not disclose the form of the signals or how to compare the same. Thus, the patent fails to provide sufficient information to inform a person of ordinary skilled in the art how to make or use the invention without undue experimentation.

d) “crash mode signal”

Claims 1, 6-7, 12-13, and 18 of the ’952 patent recite “wherein said mode-determining component is further operable to generate a crash mode signal based on the in-vehicle signal, the first detector signal and the second detector signal,” “generating, via the mode-determining component, a crash mode signal based on the in-vehicle signal, the first detector signal and the second detector signal,” “switching operation of the operating component from the first mode to a second mode based on the crash mode signal,” “wherein said operating component is operable to switch from operating in the first mode to operating in the second mode based on the crash mode signal,” and “switching operation of the operating component from the first mode to a second mode based on the crash mode signal.” These limitations lack enablement because the ’952 patent fails to teach a person of ordinary skill in the art how to implement these limitations without undue experimentation. The patent does not disclose characteristics of the “crash mode signal.” The ’952 patent discloses: “In such a case, identifying component 220 provides a crash mode signal to controlling component 228, via communication line 238, indicating device 202 should operate in

a crash mode.” ’952 patent at 14:34-36. The ’952 patent further discloses that “identifying component 220 generates the crash mode signal based on the in-vehicle signal, the signal based on the first parameter and the signal based on the second parameter.” *Id.* at 14:48-51. The ’952 patent contemplates comparing signals, but does not disclose the form of the signals or how to compare the same. Furthermore, the “crash mode signal” is “based on the in-vehicle signal, the signal based on the first parameter and the signal based on the second parameter,” which also lack enablement. Thus, the patent fails to provide sufficient information to inform a person of ordinary skill in the art how to make or use the invention without undue experimentation.

e) “first mode” and “second mode”

Claims 6, 12-13, and 18 of the ’952 patent recite “an operating component operable to operate in a first mode and a second mode,” “wherein said operating component is operable to switch from operating in the first mode to operating in the second mode based on the crash mode signal,” “operating an operating component in a first mode,” “switching operation of the operating component from the first mode to a second mode based on the crash mode signal,” “operating an operating component in a first mode,” and “switching operation of the operating component from the first mode to a second mode based on the crash mode signal.” These limitations lack enablement because the ’952 patent fails to teach a person of ordinary skill in the art how to implement these limitations without undue experimentation. The ’952 patent discloses that “[t]he mode of operation of the communication device may be set to vehicle mode, by any known method.” ’952 patent at 6:54-55. The ’952 patent further discloses that “a communication device may be able to detect the crash of vehicle 102 based on being in the vehicle mode and based on detecting two parameters, in this example vibrations and a magnetic field associated with deployment of airbag 110.” *Id.* at 5:1-5. The ’952 patent discloses that “if it is determined that the generated crash probability is greater than or equal to the predetermined probability threshold

(Y at S312), then the device is operated in a crash mode (S314).” ’952 patent at 14:25-28. The ’952 patent also discloses that “identifying component 220 provides a crash mode signal to controlling component 228, via communication line 238, indicating device 202 should operate in a crash mode. Further, for purposes of discussion, let the crash mode be such a mode wherein predetermined functions of device 202 may be activated, such as automatically contacting emergency services.” *Id.* at 14:34-39. The ’952 patent further discloses that “identifying component 220 acts as a mode-determining component and has generated an in-vehicle signal indicating that device 202 is in a vehicle.” *Id.* at 14:40-42. The ’952 patent discloses: “Returning to FIG. 3, if an additional parameter is not to be detected (N at S316), then the device is not operated in the crash mode (S322). If the crash probability CP is ultimately lower than the predetermined probability threshold T , then it is determined that the vehicle has not crashed. As such, device 202 would not be operating in the crash mode.” *Id.* at 16:4-9. The ’952 patent further discloses as follows:

Returning to FIG. 3, if it is determined that the current operating mode has been switched to the crash mode (Y at S324), then the device is operated in a crash mode (S314).

Alternatively, if it is determined that the mode has not been switched (N at S324), then it is determined whether the device has been turned off (S326). For example, returning to FIG. 2, 25 there may be situations where a user turns off device 202 or device 202 runs out of power. If it is determined that the device has not been turned off (N at S326), the process repeats and it is determined whether the device is in a vehicle (S304). Alternatively, if it is determined that the device has been turned off (Y at S326), the method 300 stops (S328).

Id. at 16:19-30. The patent only refers to “modes” as a “crash mode.” However, the limitations listed above disclose two separate modes—a “first mode” and a “second mode.” The ’952 patent does not describe a “first mode” and a “second mode” sufficient for a POSITA to make or use the invention without undue experimentation.

f) Limitations of Claims 2, 8, 14 and “first parameter”

Claims 2, 8, and 14 recite “said first detecting component is operable to detect, as the first parameter, one of the group consisting of magnetic fields in any of three dimensions, electric fields in any of three dimensions, electro-magnetic fields in any of three dimensions, velocity in any of three dimensions, acceleration in any of three dimensions, angular velocity in any of three dimensions, angular acceleration in any of three dimensions, geodetic position, sound, temperature, vibrations in any of three dimensions, pressure in any of three dimensions, biometrics, contents of surrounding atmosphere, a change in electric fields in any of three dimensions, a change in magnetic fields in any of three dimensions, a change in electro-magnetic fields in any of three dimensions, a change in velocity in any of three dimensions, a change in acceleration in any of three dimensions, a change in angular velocity in any of three dimensions, a change in angular acceleration in any of three dimensions, a change in geodetic position in any of three dimensions, a change in sound, a change in temperature, a change in vibrations in any of three dimensions, a change in pressure in any of three dimensions, a change in biometrics, a change in contents of surrounding atmosphere and combinations thereof” and “said detecting a first parameter comprises detecting one of the group consisting of magnetic fields in any of three dimensions, electric fields in any of three dimensions, electro-magnetic fields in any of three dimensions, velocity in any of three dimensions, acceleration in any of three dimensions, angular velocity in any of three dimensions, angular acceleration in any of three dimensions, geodetic position, sound, temperature, vibrations in any of three dimensions, pressure in any of three dimensions, biometrics, contents of surrounding atmosphere, a change in electric fields in any of three dimensions, a change in magnetic fields in any of three dimensions, a change in electro-magnetic fields in any of three dimensions, a change in velocity in any of three dimensions, a change in acceleration in any of three dimensions, a change in angular velocity in any of three

dimensions, a change in angular acceleration in any of three dimensions, a change in geodetic position in any of three dimensions, a change in sound, a change in temperature, a change in vibrations in any of three dimensions, a change in pressure in any of three dimensions, a change in biometrics, a change in contents of surrounding atmosphere and combinations thereof.” The ’952 patent does not disclose how to collect each of these parameters, including what instruments should be used in conjunction with the disclosed “device 202” and overall systems, devices, and methods disclosed in the specification. The ’952 patent simply discloses that these are “known parameters” (’952 patent at 7:36-62) and “known detectable parameter (*id.* at 8:18-40). For example, the limitations include “a change in contents of surrounding atmosphere” as a “first parameter” but the specification does not disclose what instrument should be used to detect the same. The ’952 patent specification discloses that the “device” could be a “smartphone” that can “detect at least two parameters associated with a vehicle crash.” *Id.* at 4:27-42. Yet, the specification is silent as to what mechanism in a smartphone, or any other device, would be able to detect “a change in contents of surrounding atmosphere.” Moreover, these limitations require detecting a “first parameter” that is “*one of the group*” of twenty eight (28) different measurements “and combinations thereof.” The limitations state that the “first parameter” be “one of the group,” yet then discloses that it can be “combinations thereof.” The specification does not disclose what combinations could be combined for a “first parameter.” A POSITA would not be able to determine what combinations of twenty eight different measurements to use without undue experimentation. Thus, the patent fails to provide sufficient information to inform a person of ordinary skilled in the art how to make or use the invention without undue experimentation.

2. The Asserted Claims of the '946 Patent Lack Enablement

The asserted claims of the '946 patent are invalid under 35 U.S.C. § 112(a) because the specification fails to provide an enabling disclosure of at least the following limitations, either alone or in combination with the other limitations set forth in the claims:

Patent	Term	Claim(s)
'946 Patent	“detect[ing] [] at least one of an electric field, a magnetic field and an electro-magnetic field”	1-2, 8-9, 15-16
	“said field-detecting component is further operable to detect a second one of an electric field, a magnetic field and an electro-magnetic field” / “detecting, via the field-detecting component, a second one of an electric field, a magnetic field and an electro-magnetic field”	1, 8, 15
	“comparison signal”	1, 8, 15
	“generat[ing] [] a parameter signal based on the detected parameter”	3, 10, 17
	“said parameter-detecting component is operable to detect, as the parameter, one of the group consisting of a velocity, acceleration, angular velocity, angular acceleration, geodetic position, sound, temperature, vibrations, pressure, biometrics, contents of surrounding atmosphere and combinations thereof” / “said detecting a parameter comprises detecting, as the parameter, one of the group consisting of a velocity, acceleration, angular velocity, angular acceleration, geodetic position, sound, temperature, vibrations, pressure, biometrics, contents of surrounding atmosphere and combinations thereof” (“Limitations of Claims 4, 11, 18”)	4, 11, 18

a) “detect[ing] [] at least one of an electric field, a magnetic field and an electro-magnetic field”

Claims 1-2, 8-9, and 15-16 of the '946 patent recite “a field-detecting component operable to detect at least one of an electric field, a magnetic field and an electro-magnetic field,” “said field-detecting component is operable to detect the at least one of an electric field, a magnetic field and an electro-magnetic field as a function over a period of time,” “detecting, via a field-detecting component, at least one of an electric field, a magnetic field and an electro-magnetic field,” and “said detecting comprises detecting the at least one of an electric field, a magnetic field and an electro-magnetic field as a function over a period of time.” These limitations lack enablement because the '946 patent fails to teach a person of ordinary skill in the art how to implement these limitations without undue experimentation. The '946 patent discloses that “[f]ield-detecting component 412 may be any known device or system that is operable to detect a field, non-limiting examples of which include an electric field, a magnetic field, and electro-magnetic field and combinations thereof.” '946 patent at 6:15-19. The '946 patent uses the detection of the magnetic field generally throughout the specification. *See, e.g., id.* at 7:55-8:13, 9:16-33, 10:45-51. The '946 patent states that “a smartphone is used to measure a magnetic field associated with a vehicle” or “to measure a magnetic field associated with a house” (*id.* at 4:6-12) without describing how a smartphone would do so. The '946 patent discloses that “a smartphone may utilize its magnetometer function to periodically measure the electromagnetic levels sensed at the smartphone’s current location” and “map the periodic electromagnetic levels sensed by the smartphone with the vehicular electromagnetic signatures stored in library.” *Id.* at 17:25-31. The '946 patent does not adequately describe to a POSITA how the invention detects “an electric field, a magnetic field and an electro-magnetic field.” Thus, the '946 patent fails to provide sufficient information to inform a person of ordinary skilled in the art how to make or use the invention without undue experimentation.

b) “said field-detecting component is further operable to detect a second one of an electric field, a magnetic field and an electro-magnetic field” / “detecting, via the field-detecting component, a second one of an electric field, a magnetic field and an electro-magnetic field”

Independent claims 1, 8, and 15 of the '946 patent recite “said field-detecting component is further operable to detect a second one of an electric field, a magnetic field” and “detecting, via the field-detecting component, a second one of an electric field, a magnetic field and an electro-magnetic field.” These limitations lack enablement because the '946 patent fails to teach a person of ordinary skill in the art how to implement these limitations without undue experimentation. The '946 patent discloses that “[f]ield-detecting component 412 may be any known device or system that is operable to detect a field, non-limiting examples of which include an electric field, a magnetic field, and electro-magnetic field and combinations thereof.” '946 patent at 6:15-19. The '946 patent uses the detection of the magnetic field generally throughout the specification. *See, e.g., id.* at 7:55-8:13, 9:16-33, 10:45-51. The '946 patent states that “a smartphone is used to measure a magnetic field associated with a vehicle” or “to measure a magnetic field associated with a house” (*id.* at 4:6-12) without describing how a smartphone would do so. The '946 patent discloses that “a smartphone may utilize its magnetometer function to periodically measure the electromagnetic levels sensed at the smartphone’s current location” and “map the periodic electromagnetic levels sensed by the smartphone with the vehicular electromagnetic signatures stored in library.” *Id.* at 17:25-31. The '946 patent does not adequately describe to a POSITA how the invention detects “an electric field, a magnetic field and an electro-magnetic field.” Thus, the '946 patent fails to provide sufficient information to inform a person of ordinary skill in the art how to make or use the invention without undue experimentation.

c) “comparison signal”

Independent claims 1, 8, and 15 of the '946 patent recite “a comparing component operable to generate a comparison signal,” “an identifying component operable to identify one of an item and a location based on the comparison signal,” “said comparing component is operable to generate the comparison signal based on a comparison of the detected field signature and the second detected field signature,” “generating, via a comparing component, a comparison signal,” “identifying, via an identifying component, one of an item and a location based on the comparison signal,” and “said generating a comparison signal comprises generating the comparison signal based on a comparison of the detected field signature and the second detected field signature.” The '946 patent does not provide a definition of “comparison signal” in the specification. The '946 patent discloses that “[f]ield-detecting component 412 is additionally arranged to detect field 406, to communicate with input component 414 via a communication line 446, to communicate with comparing component 418 via a communication line 448 and to communicate with parameter-detecting component 422 via a communication line 445.” '946 patent at 6:10-15. The '946 patent also generally discloses that “[c]omparing component 418 may be any known device or system that is operable to compare two inputs.” *Id.* at 6:50-52. This general description of the “comparing component” is insufficient to enable a POSITA to make or use the claimed invention. Moreover, the '946 patent specification does not distinguish the form of the “comparison signal” from the “parameter signal,” which also lacks enablement, as discussed below. Thus, the '946 patent fails to provide sufficient information to inform a person of ordinary skilled in the art how to make or use the invention without undue experimentation.

d) “generat[ing] [] a parameter signal based on the detected parameter”

Claims 3, 10, and 17 of the '946 patent recite “a parameter-detecting component operable to detect a parameter and to generate a parameter signal based on the detected parameter” and

“generating, via the parameter-detecting component, a parameter signal based on the detected parameter.” These limitations lack enablement because the ’946 patent fails to teach a person of ordinary skill in the art how to implement these limitations without undue experimentation. The patent does not disclose characteristics of the signal or how such “parameter signal” is created. The ’946 patent discloses that “field-detecting component 412 is detecting magnetic fields as field vectors as functions over a period of time” and “[t]he detected signals illustrated in FIGS. 6-8 are easily distinguishable from one another.” ’946 patent at 10:45-49. The ’946 patent also discloses the following: “In the examples discussed above with respect to FIGS. 9-11, just as with the examples discussed above with respect to FIGS. 6-8, the detected magnetic signals are easily distinguishable from one another.” *Id.* at 14:30-33. The ’946 patent also discloses that “[t]he detected acceleration signals illustrated in FIGS. 9-11 are easily distinguishable from one another.” *Id.* at 14:44-46. The ’946 patent fails to disclose how a POSITA would use the invention to generate a “parameter signal.” To be sure, if Sfara attempts to argue that the signals are anything other than what are shown in Figures 6-8 and 9-11, the limitations would not be enabled. Thus, the ’946 patent fails to provide sufficient information to inform a person of ordinary skill in the art how to make or use the invention without undue experimentation.

e) Limitations of Claims 4, 11, 18

Claims 4, 11, and 18 of the ’946 patent recite “said parameter-detecting component is operable to detect, as the parameter, one of the group consisting of a velocity, acceleration, angular velocity, angular acceleration, geodetic position, sound, temperature, vibrations, pressure, biometrics, contents of surrounding atmosphere and combinations thereof” and “said detecting a parameter comprises detecting, as the parameter, one of the group consisting of a velocity, acceleration, angular velocity, angular acceleration, geodetic position, sound, temperature, vibrations, pressure, biometrics, contents of surrounding atmosphere and combinations thereof.”

These limitations lack enablement because the '946 patent fails to teach a person of ordinary skill in the art how to implement these limitations without undue experimentation. The '946 patent does not disclose how to collect each of these parameters, including what instruments should be used in conjunction with the overall systems, devices, and methods disclosed in the specification. The '946 patent simply discloses that “[p]arameter-detecting component 422 may be any known device or system that is operable to detect a parameter, non-limiting examples of which include velocity, acceleration, angular velocity, angular acceleration, geodetic position, sound, temperature, vibrations, pressure, biometrics, contents of surrounding atmosphere and combinations thereof” ('946 patent at 6:55-61), parroting the same list of parameters disclosed in the claims. For example, the limitations include “a change in contents of surrounding atmosphere” as a “first parameter” but the specification does not disclose what instrument should be used to detect the same. For example, the specification is silent as to what mechanism in “parameter-detecting component 422” would be able to detect “a change in contents of surrounding atmosphere.” Moreover, these limitations require detecting a “parameter” that is “*one of the group*” of ten (10) different measurements “and combinations thereof.” The limitations state that the “parameter” be “one of the group,” yet then discloses that it can be “combinations thereof.” The specification does not disclose what combinations could be combined for a “parameter.” A POSITA would not be able to determine what combinations of ten different measurements to use without undue experimentation. Thus, the patent fails to provide sufficient information to inform a person of ordinary skill in the art how to make or use the invention without undue experimentation.

B. Lack of Written Description

The Sfara Asserted Claims are also invalid for failure to meet the written description requirement of 35 U.S.C. § 112(a). To satisfy the written description requirement, the

specification must reasonably convey to those skilled in the art that the inventor had possession of the claimed subject matter. *Ariad Pharm., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc); *Wyeth v. Abbot Lab's*, C.A. No. 08-230, 2012 WL 175023 at *4 (D.N.J. Jan. 19, 2012). To demonstrate possession, the inventor must provide enough description in the specification to demonstrate that he actually invented what has been claimed—a “mere wish or plan for obtaining the claimed invention” is not enough. *Centocor Ortho Biotech, Inc. v. Abbott Labs.*, 636 F.3d 1341, 1348 (Fed. Cir. 2011); *Sanofi-Aventis U.S. LLC v. Mylan GmbH*, C.A. No. 17-9105, 2020 WL 1151191 (D.N.J. Mar. 9, 2020). The written description requirement serves as a check on the inventor laying claims to inventions it did not actually possess by claiming its inventive subject matter too broadly. *See Chiron Corp. v. Genentech, Inc.*, 363 F.3d 1247, 1255 (Fed. Cir. 2004). Where a specification discloses a broad range of values and a value within that range is claimed, the disclosure must allow one skilled in the art to “immediately discern the limitation at issue in the claims.” *Purdue Pharma L.P. v. Faulding Inc.*, 230 F.3d 1320, 1323 (Fed. Cir. 2000). Moreover, a disclosed range that minimally overlaps with the claimed range does not provide written description support for the claimed range. *General Hospital Corp. v. Sienna Biopharma, Inc.*, 888 F.3d 1368, 1372–73 (Fed. Cir. 2018); *see also Eiselstein v. Frank*, 52 F.3d 1035, 1040 (Fed. Cir. 1995).

Additionally, “[f]unctionally defined genus claims can be inherently vulnerable to invalidity challenge for lack of written description support, especially in technology fields that are highly unpredictable, where it is difficult to establish a correlation between structure and function for the whole genus or to predict what would be covered by the functionally claimed genus.” *AbbVie Deutschland GmbH & Co., KG v. Janssen Biotech, Inc.*, 759 F.3d 1285, 1301 (Fed. Cir. 2014). To claim a broad, functionally defined genus, “a patentee must disclose ‘a representative

number of species falling within the scope of the genus or structural features common to the members of the genus so that one of skill in the art can ‘visualize or recognize’ the members of the genus.” *Amgen Inc. v. Sanofi*, 872 F.3d 1367, 1373 (Fed. Cir. 2017) (quoting *Ariad Pharm., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc)); *Wyeth*, 2012 WL 175023 at *15.

1. The Asserted Claims of the ’952 Patent Lack Written Description

The asserted claims of the ’952 patent are invalid under 35 U.S.C. § 112 because the specification fails to reasonably convey to those skilled in the art that the inventor had possession of the claimed subject matter for at least the following limitations, either alone or in combination with the other limitations set forth in the claims:

Patent	Term	Claim(s)
'952 Patent	“in-vehicle signal”	1, 7, 13
	“first detector signal”	1, 4, 7, 10, 13, 16
	“second detector signal”	1, 7, 13
	“crash mode signal”	1, 6-7, 12-13, 18
	“first mode”	6, 12-13, 18
	“second mode”	6, 12-13, 18
	“first parameter”	1-4, 7-10, 13-16

Patent	Term	Claim(s)
	“contents of surrounding atmosphere” / “one of the group consisting of magnetic fields in any of three dimensions, electric fields in any of three dimensions, electro-magnetic fields in any of three dimensions, velocity in any of three dimensions, acceleration in any of three dimensions, angular velocity in any of three dimensions, angular acceleration in any of three dimensions, geodetic position, sound, temperature, vibrations in any of three dimensions, pressure in any of three dimensions, biometrics, contents of surrounding atmosphere, a change in electric fields in any of three dimensions, a change in magnetic fields in any of three dimensions, a change in electro-magnetic fields in any of three dimensions, a change in velocity in any of three dimensions, a change in acceleration in any of three dimensions, a change in angular velocity in any of three dimensions, a change in angular acceleration in any of three dimensions, a change in geodetic position in any of three dimensions, a change in sound, a change in temperature, a change in vibrations in any of three dimensions, a change in pressure in any of three dimensions, a change in biometrics, a change in contents of surrounding atmosphere and combinations thereof” (“Limitations of Claims 2, 8, 14”)	2, 8, 14

a) “in-vehicle signal”

Independent claims 1, 7, and 13 of the ’952 patent recite “a mode-determining component operable to detect whether the device is in the vehicle and to generate an in-vehicle signal,” “generating, via the mode-determining component, an in-vehicle signal,” “wherein said mode-determining component is further operable to generate a crash mode signal based on the in-vehicle signal, the first detector signal and the second detector signal,” and “generating, via the mode-determining component, a crash mode signal based on the in-vehicle signal, the first detector signal and the second detector signal.” These limitations lack written. The patent does not disclose characteristics of the signal or how such “in-vehicle signal” is created. The ’952 patent discloses:

“Comparing component may compare signals based on the detected parameters with a previously stored signature corresponding to a vehicle in database 204. Identifying component 220 may generate an in-vehicle signal indicating that device is in a vehicle based on the comparison by comparing component 218.” ’952 patent at 8:1-7. The ’952 patent also discloses that “[e]ach of the detecting components of parameter-detecting component 222 is able to generate a respective detected signal based on the detected parameter” and “[e]ach of these detected signals may be provided to controlling component 410 via a respective communication line.” *Id.* at 10:17-21. The ’952 patent discloses that “further processes include averaging, adding, subtracting, and transforming any of the individual detected signals and combinations thereof.” *Id.* at 12:52-55. The ’952 patent also discloses that “identifying component 220 acts as a mode-determining component and has generated an in-vehicle signal indicating that device 202 is in a vehicle.” *Id.* at 14:40-42. The ’952 patent contemplates comparing signals, but does not disclose the form of the signals or how to compare the same.

The specification of the ’952 patent states, “In an example embodiment, device 202 determines whether it is in a vehicle and as described in copending U.S. application Ser. No. 14/095,156 filed Dec. 3, 2013.” *Id.* at 7:63-65. The ’156 application also fails to disclose characteristics of the signal or how such “in-vehicle signal” is created. The ’156 application does not disclose the form of an “in-vehicle signal.”

Therefore, the patent specification fails to describe the claimed invention in sufficient detail that one skilled in the art could reasonably conclude that the inventor had possession of the disclosed limitations.

b) “first detector signal”

Claims 1, 4, 7, 10, 13, and 16 of the ’952 patent recite “a first detecting component operable detect a first parameter and to generate a first detector signal based on the first detected parameter,”

“wherein said mode-determining component is further operable to generate a crash mode signal based on the in-vehicle signal, the first detector signal and the second detector signal,” “generating, via the first detecting component, a first detector signal based on the first detected parameter,” “generating, via the mode-determining component, a crash mode signal based on the in-vehicle signal, the first detector signal and the second detector signal,” “said first detecting component is operable to generate the first detector signal when the detected acceleration along the single axis is equal to or greater than a predetermined value,” and “wherein said generating a first detector signal comprises generating the first detector signal when the detected acceleration along the single axis is equal to or greater than a predetermined value.” These limitations lack written description. The patent does not disclose characteristics of the first detector signal. The ’952 patent discloses: “Further field-detecting component 212 has generated a detector signal based on a first detected parameter, in this example, a detected magnetic field associated with the deployment of an airbag.” ’952 patent at 14:42-46. The ’952 patent also discloses “[f]ield-detecting component 212 is additionally able to generate a field signal based on the detected field.” *Id.* at 6:30-31. The ’952 patent also discloses that “[e]ach of the detecting components of parameter-detecting component 222 is able to generate a respective detected signal based on the detected parameter” and “[e]ach of these detected signals may be provided to controlling component 410 via a respective communication line.” *Id.* at 10:17-21. The ’952 patent contemplates comparing signals, but does not disclose the form of the signals or how to compare the same. Therefore, the patent specification fails to describe the claimed invention in sufficient detail that one skilled in the art could reasonably conclude that the inventor had possession of the disclosed limitations.

c) “second detector signal”

Independent claims 1, 7, and 13 of the ’952 patent recite “a second detecting component operable detect a second parameter and to generate a second detector signal based on the second

detected parameter,” “wherein said mode-determining component is further operable to generate a crash mode signal based on the in-vehicle signal, the first detector signal and the second detector signal,” “generating, via the second detecting component, a second detector signal based on the second detected parameter,” and “generating, via the mode-determining component, a crash mode signal based on the in-vehicle signal, the first detector signal and the second detector signal.” These limitations lack written description. The patent does not disclose characteristics of a second detector signal. The ’952 patent discloses: “Additionally, parameter-detecting component 222 has generated a detector signal based on a second detected parameter, in this example, a detected deceleration.” ’952 patent at 14:46-48. The ’952 patent also discloses “[f]ield-detecting component 212 is additionally able to generate a field signal based on the detected field.” *Id.* at 6:30-31. The ’952 patent also discloses that “[e]ach of the detecting components of parameter-detecting component 222 is able to generate a respective detected signal based on the detected parameter” and “[e]ach of these detected signals may be provided to controlling component 410 via a respective communication line.” *Id.* at 10:17-21. The ’952 patent contemplates comparing signals, but does not disclose the form of the signals or how to compare the same. Therefore, the patent specification fails to describe the claimed invention in sufficient detail that one skilled in the art could reasonably conclude that the inventor had possession of the disclosed limitations.

d) “crash mode signal”

Claims 1, 6-7, 12-13, and 18 of the ’952 patent recite “wherein said mode-determining component is further operable to generate a crash mode signal based on the in-vehicle signal, the first detector signal and the second detector signal,” “generating, via the mode-determining component, a crash mode signal based on the in-vehicle signal, the first detector signal and the second detector signal,” “switching operation of the operating component from the first mode to a second mode based on the crash mode signal,” “wherein said operating component is operable to

switch from operating in the first mode to operating in the second mode based on the crash mode signal,” and “switching operation of the operating component from the first mode to a second mode based on the crash mode signal.” These limitations lack written description. The patent does not disclose characteristics of the crash mode signal. The ’952 patent discloses: “In such a case, identifying component 220 provides a crash mode signal to controlling component 228, via communication line 238, indicating device 202 should operate in a crash mode.” ’952 patent at 14:34-36. The ’952 patent further discloses that “identifying component 220 generates the crash mode signal based on the in-vehicle signal, the signal based on the first parameter and the signal based on the second parameter.” *Id.* at 14:48-51. The ’952 patent contemplates comparing signals, but does not disclose the form of the signals or how to compare the same. Furthermore, the “crash mode signal” is “based on the in-vehicle signal, the signal based on the first parameter and the signal based on the second parameter,” which also lack written description. Therefore, the patent specification fails to describe the claimed invention in sufficient detail that one skilled in the art could reasonably conclude that the inventor had possession of the disclosed limitations.

e) “first mode” and “second mode”

Claims 6, 12-13, and 18 of the ’952 patent recite “an operating component operable to operate in a first mode and a second mode,” “wherein said operating component is operable to switch from operating in the first mode to operating in the second mode based on the crash mode signal,” “operating an operating component in a first mode,” “switching operation of the operating component from the first mode to a second mode based on the crash mode signal,” “operating an operating component in a first mode,” and “switching operation of the operating component from the first mode to a second mode based on the crash mode signal.” These limitations lack written description. The ’952 patent discloses that “[t]he mode of operation of the communication device may be set to vehicle mode, by any known method.” ’952 patent at 6:54-55. The ’952 patent

further discloses that “a communication device may be able to detect the crash of vehicle 102 based on being in the vehicle mode and based on detecting two parameters, in this example vibrations and a magnetic field associated with deployment of airbag 110.” *Id.* at 5:1-5. The ’952 patent discloses that “if it is determined that the generated crash probability is greater than or equal to the predetermined probability threshold (Y at S312), then the device is operated in a crash mode (S314).” ’952 patent at 14:25-28. The ’952 patent also discloses that “identifying component 220 provides a crash mode signal to controlling component 228, via communication line 238, indicating device 202 should operate in a crash mode. Further, for purposes of discussion, let the crash mode be such a mode wherein predetermined functions of device 202 may be activated, such as automatically contacting emergency services.” *Id.* at 14:34-39. The ’952 patent further discloses that “identifying component 220 acts as a mode-determining component and has generated an in-vehicle signal indicating that device 202 is in a vehicle.” *Id.* at 14:40-42. The ’952 patent discloses: “Returning to FIG. 3, if an additional parameter is not to be detected (N at S316), then the device is not operated in the crash mode (S322). If the crash probability CP is ultimately lower than the predetermined probability threshold T , then it is determined that the vehicle has not crashed. As such, device 202 would not be operating in the crash mode.” *Id.* at 16:4-9. The ’952 patent further discloses as follows:

Returning to FIG. 3, if it is determined that the current operating mode has been switched to the crash mode (Y at S324), then the device is operated in a crash mode (S314).

Alternatively, if it is determined that the mode has not been switched (N at S324), then it is determined whether the device has been turned off (S326). For example, returning to FIG. 2, 25 there may be situations where a user turns off device 202 or device 202 runs out of power. If it is determined that the device has not been turned off (N at S326), the process repeats and it is determined whether the device is in a vehicle (S304). Alternatively, if it is determined that the device has been turned off (Y at S326), the method 300 stops (S328).

Id. at 16:19-30. The patent only refers to “modes” as a “crash mode.” However, the limitations listed above disclose two separate modes—a “first mode” and a “second mode.” The ’952 patent does not describe a “first mode” and a “second mode” sufficient for one skilled in the art to reasonably conclude that the inventor had possession of the disclosed limitations.

f) Limitations of Claims 2, 8, 14 and “first parameter”

Claims 2, 8, and 14 recite “said first detecting component is operable to detect, as the first parameter, one of the group consisting of magnetic fields in any of three dimensions, electric fields in any of three dimensions, electro-magnetic fields in any of three dimensions, velocity in any of three dimensions, acceleration in any of three dimensions, angular velocity in any of three dimensions, angular acceleration in any of three dimensions, geodetic position, sound, temperature, vibrations in any of three dimensions, pressure in any of three dimensions, biometrics, contents of surrounding atmosphere, a change in electric fields in any of three dimensions, a change in magnetic fields in any of three dimensions, a change in electro-magnetic fields in any of three dimensions, a change in velocity in any of three dimensions, a change in acceleration in any of three dimensions, a change in angular velocity in any of three dimensions, a change in angular acceleration in any of three dimensions, a change in geodetic position in any of three dimensions, a change in sound, a change in temperature, a change in vibrations in any of three dimensions, a change in pressure in any of three dimensions, a change in biometrics, a change in contents of surrounding atmosphere and combinations thereof” and “said detecting a first parameter comprises detecting one of the group consisting of magnetic fields in any of three dimensions, electric fields in any of three dimensions, electro-magnetic fields in any of three dimensions, velocity in any of three dimensions, acceleration in any of three dimensions, angular velocity in any of three dimensions, angular acceleration in any of three dimensions, geodetic position, sound, temperature, vibrations in any of three dimensions, pressure in any of three

dimensions, biometrics, contents of surrounding atmosphere, a change in electric fields in any of three dimensions, a change in magnetic fields in any of three dimensions, a change in electromagnetic fields in any of three dimensions, a change in velocity in any of three dimensions, a change in acceleration in any of three dimensions, a change in angular velocity in any of three dimensions, a change in angular acceleration in any of three dimensions, a change in geodetic position in any of three dimensions, a change in sound, a change in temperature, a change in vibrations in any of three dimensions, a change in pressure in any of three dimensions, a change in biometrics, a change in contents of surrounding atmosphere and combinations thereof.” The ’952 patent does not disclose how to collect each of these parameters, including what instruments should be used in conjunction with the disclosed “device 202” and overall systems, devices, and methods disclosed in the specification. The ’952 patent simply discloses that these are “known parameters” (’952 patent at 7:36-62) and “known detectable parameter (*id.* at 8:18-40). For example, limitation includes “a change in contents of surrounding atmosphere” as a “first parameter” but does not disclose what instrument should be used to detect the same. The ’952 patent specification discloses that the “device” could be a “smartphone” that can “detect at least two parameters associated with a vehicle crash.” *Id.* at 4:27-42. Yet, the specification is silent as to what mechanism in a smartphone, or any other device, would be able to detect “a change in contents of surrounding atmosphere.” Moreover, these limitations require detecting a “first parameter” that is “*one of the group*” of twenty eight (28) different measurements “and combinations thereof.” The limitations state that the “first parameter” be “one of the group,” yet then say that it can be “combinations thereof.” The specification does not disclose what combinations could be combined for a “first parameter.” A POSITA would not be able to determine what combinations of twenty eight different measurements to use based on the written

description. Therefore, the patent specification fails to describe the claimed invention in sufficient detail that one skilled in the art could reasonably conclude that the inventor had possession of the disclosed limitations.

2. The Asserted Claims of the '946 Patent Lack Written Description

The asserted claims of the '946 patent are invalid under 35 U.S.C. § 112 because the specification fails to reasonably convey to those skilled in the art that the inventor had possession of the claimed subject matter for at least the following limitations, either alone or in combination with the other limitations set forth in the claims:

Patent	Term	Claim(s)
'946 Patent	“detect[ing] [] at least one of an electric field, a magnetic field and an electro-magnetic field”	1-2, 8-9, 15-16
	“said field-detecting component is further operable to detect a second one of an electric field, a magnetic field and an electro-magnetic field” / “detecting, via the field-detecting component, a second one of an electric field, a magnetic field and an electro-magnetic field”	1, 8, 15
	“comparison signal”	1, 8, 15
	“generat[ing] [] a parameter signal based on the detected parameter”	3, 10, 17
	“said parameter-detecting component is operable to detect, as the parameter, one of the group consisting of a velocity, acceleration, angular velocity, angular acceleration, geodetic position, sound, temperature, vibrations, pressure, biometrics, contents of surrounding atmosphere and combinations thereof” / “said detecting a parameter comprises detecting, as the parameter, one of the group consisting of a velocity, acceleration, angular velocity, angular acceleration, geodetic position, sound, temperature, vibrations, pressure, biometrics,	4, 11, 18

Patent	Term	Claim(s)
	contents of surrounding atmosphere and combinations thereof” (“Limitations of Claims 4, 11, 18”)	

a) “detect[ing] [] at least one of an electric field, a magnetic field and an electro-magnetic field”

Claims 1-2, 8-9, and 15-16 of the ’946 patent recite “a field-detecting component operable to detect at least one of an electric field, a magnetic field and an electro-magnetic field,” “said field-detecting component is operable to detect the at least one of an electric field, a magnetic field and an electro-magnetic field as a function over a period of time,” “detecting, via a field-detecting component, at least one of an electric field, a magnetic field and an electro-magnetic field,” and “said detecting comprises detecting the at least one of an electric field, a magnetic field and an electro-magnetic field as a function over a period of time.” These limitations lack written description. The ’946 patent discloses that “[f]ield-detecting component 412 may be any known device or system that is operable to detect a field, non-limiting examples of which include an electric field, a magnetic field, and electro-magnetic field and combinations thereof.” ’946 patent at 6:15-19. The ’946 patent uses the detection of the magnetic field generally throughout the specification. *See, e.g., id.* at 7:55-8:13, 9:16-33, 10:45-51. The ’946 patent states that “a smartphone is used to measure a magnetic field associated with a vehicle” or “to measure a magnetic field associated with a house” (*id.* at 4:6-12) without describing how a smartphone would do so. The ’946 patent discloses that “a smartphone may utilize its magnetometer function to periodically measure the electromagnetic levels sensed at the smartphone’s current location” and “map the periodic electromagnetic levels sensed by the smartphone with the vehicular electromagnetic signatures stored in library.” *Id.* at 17:25-31. The ’946 patent does not adequately describe to a POSITA how the invention detects “an electric field, a magnetic field and an electro-

magnetic field.” Therefore, the patent specification fails to describe the claimed invention in sufficient detail that one skilled in the art could reasonably conclude that the inventor had possession of the disclosed limitations.

b) “said field-detecting component is further operable to detect a second one of an electric field, a magnetic field and an electro-magnetic field” / “detecting, via the field-detecting component, a second one of an electric field, a magnetic field and an electro-magnetic field”

Independent claims 1, 8, and 15 of the '946 patent recite “said field-detecting component is further operable to detect a second one of an electric field, a magnetic field” and “detecting, via the field-detecting component, a second one of an electric field, a magnetic field and an electro-magnetic field.” These limitations lack written description. The '946 patent discloses that “[f]ield-detecting component 412 may be any known device or system that is operable to detect a field, non-limiting examples of which include an electric field, a magnetic field, and electro-magnetic field and combinations thereof.” '946 patent at 6:15-19. The '946 patent uses the detection of the magnetic field generally throughout the specification. *See, e.g., id.* at 7:55-8:13, 9:16-33, 10:45-51. The '946 patent states that “a smartphone is used to measure a magnetic field associated with a vehicle” or “to measure a magnetic field associated with a house” (*id.* at 4:6-12) without describing how a smartphone would do so. The '946 patent discloses that “a smartphone may utilize its magnetometer function to periodically measure the electromagnetic levels sensed at the smartphone’s current location” and “map the periodic electromagnetic levels sensed by the smartphone with the vehicular electromagnetic signatures stored in library.” *Id.* at 17:25-31. The '946 patent does not adequately describe to a POSITA how the invention detects “an electric field, a magnetic field and an electro-magnetic field.” Therefore, the patent specification fails to describe the claimed invention in sufficient detail that one skilled in the art could reasonably conclude that the inventor had possession of the disclosed limitations.

c) “comparison signal”

Independent claims 1, 8, and 15 of the '946 patent recite “a comparing component operable to generate a comparison signal,” “an identifying component operable to identify one of an item and a location based on the comparison signal,” “said comparing component is operable to generate the comparison signal based on a comparison of the detected field signature and the second detected field signature,” “generating, via a comparing component, a comparison signal,” “identifying, via an identifying component, one of an item and a location based on the comparison signal,” and “said generating a comparison signal comprises generating the comparison signal based on a comparison of the detected field signature and the second detected field signature.” The '946 patent does not provide a definition of “comparison signal” in the specification. The '946 patent discloses that “[f]ield-detecting component 412 is additionally arranged to detect field 406, to communicate with input component 414 via a communication line 446, to communicate with comparing component 418 via a communication line 448 and to communicate with parameter-detecting component 422 via a communication line 445.” '946 patent at 6:10-15. The '946 patent also generally discloses that “[c]omparing component 418 may be any known device or system that is operable to compare two inputs.” *Id.* at 6:50-52. This general description of the “comparing component” is insufficient to enable a POSITA to make or use the claimed invention. Moreover, the '946 patent specification does not distinguish the form of the “comparison signal” from the “parameter signal,” which also lacks written description, as discussed below. Therefore, the patent specification fails to describe the claimed invention in sufficient detail that one skilled in the art could reasonably conclude that the inventor had possession of the disclosed limitations.

d) “generat[ing] [] a parameter signal based on the detected parameter”

Claims 3, 10, and 17 of the '946 patent recite “a parameter-detecting component operable to detect a parameter and to generate a parameter signal based on the detected parameter” and “generating, via the parameter-detecting component, a parameter signal based on the detected parameter.” These limitations lack written description. The patent does not disclose characteristics of the signal or how such “parameter signal” is created. The '946 patent discloses that “field-detecting component 412 is detecting magnetic fields as field vectors as functions over a period of time” and “[t]he detected signals illustrated in FIGS. 6-8 are easily distinguishable from one another.” '946 patent at 10:45-49. The '946 patent also discloses the following: “In the examples discussed above with respect to FIGS. 9-11, just as with the examples discussed above with respect to FIGS. 6-8, the detected magnetic signals are easily distinguishable from one another.” *Id.* at 14:30-33. The '946 patent also discloses that “[t]he detected acceleration signals illustrated in FIGS. 9-11 are easily distinguishable from one another.” *Id.* at 14:44-46. The '946 patent fails to disclose how a POSITA would use the invention to generate a “parameter signal.” To be sure, if Sfara attempts to argue that the signals are anything other than what are shown in Figures 6-8 and 9-11, the limitations would not be enabled. Therefore, the patent specification fails to describe the claimed invention in sufficient detail that one skilled in the art could reasonably conclude that the inventor had possession of the disclosed limitations.

e) Limitations of Claims 4, 11, 18

Claims 4, 11, and 18 of the '946 patent recite “said parameter-detecting component is operable to detect, as the parameter, one of the group consisting of a velocity, acceleration, angular velocity, angular acceleration, geodetic position, sound, temperature, vibrations, pressure, biometrics, contents of surrounding atmosphere and combinations thereof” and “said detecting a parameter comprises detecting, as the parameter, one of the group consisting of a velocity, acceleration, angular velocity, angular acceleration, geodetic position, sound, temperature,

vibrations, pressure, biometrics, contents of surrounding atmosphere and combinations thereof.” These limitations lack written description. The ’946 patent does not disclose how to collect each of these parameters, including what instruments should be used in conjunction with the overall systems, devices, and methods disclosed in the specification. The ’946 patent simply discloses that “[p]arameter-detecting component 422 may be any known device or system that is operable to detect a parameter, non-limiting examples of which include velocity, acceleration, angular velocity, angular acceleration, geodetic position, sound, temperature, vibrations, pressure, biometrics, contents of surrounding atmosphere and combinations thereof” (’946 patent at 6:55-61), parroting the same list of parameters disclosed in the claims. For example, the limitations include “a change in contents of surrounding atmosphere” as a “first parameter” but the specification does not disclose what instrument should be used to detect the same. For example, the specification is silent as to what mechanism in “parameter-detecting component 422” would be able to detect “a change in contents of surrounding atmosphere.” Moreover, these limitations require detecting a “parameter” that is “*one of the group*” of ten (10) different measurements “and combinations thereof.” The limitations state that the “parameter” be “one of the group,” yet then discloses that it can be “combinations thereof.” The specification does not disclose what combinations could be combined for a “parameter.” A POSITA would not be able to determine what combinations of ten different measurements to use based on the written description. Therefore, the patent specification fails to describe the claimed invention in sufficient detail that one skilled in the art could reasonably conclude that the inventor had possession of the disclosed limitations.

C. Indefiniteness

Pursuant to 35 U.S.C. § 112(b), “[t]he specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or joint

inventor regards as the invention.” “The specification must conclude with a claim particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention or discovery” and “must set forth the precise invention for which a patent is solicited, in such manner as to distinguish it from other inventions and from what is old.” 37 C.F.R. §§ 1.71(b), 1.75(a). “The language of the claims must make it clear what subject matter they encompass.” *PPG Industries, Inc. v. Guardian Industries Corp.*, 75 F.3d 1558, 1562 (Fed. Cir. 1996). The test for determining if a claim is sufficiently definite focuses on whether one of ordinary skill in the art would understand the boundaries of the claim. *See S3 Inc. v. NVIDIA Corp.*, 259 F.3d 1364, 1367 (Fed. Cir. 2001). “[A] patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention.” *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 901 (2014).

The Sfara Asserted Claims fail to satisfy the definiteness requirement of 35 U.S.C. § 112(b). This is because at least one of each of the following terms appears in each claim and each of these terms, viewed in light of the surrounding claim language, specification, and prosecution history, fails to inform those skilled in the art about the scope of the invention with reasonable certainty as required under *Nautilus*, 572 U.S. at 910–11.

1. The Asserted Claims of the ’952 Patent Are Indefinite

The asserted claims of the ’952 patent are invalid under 35 U.S.C. § 112(b) because each of the terms below, viewed in light of the surrounding claim language, specification, and prosecution history, fails to inform those skilled in the art about the scope of the invention with reasonable certainty:

Patent	Term	Claim(s)
'952 Patent	“parameter associated with deployment of an airbag”	3, 9, 15
	“detect/detecting a first parameter” / “detecting . . . a first parameter” / “detect, as the first parameter”	1-4, 7-10, 13-16
	“detect a second parameter” / “detecting . . . a second parameter”	1, 7, 13

a) “parameter associated with deployment of an airbag

Claims 3, 9, and 15 of the '952 patent recite “said first detecting component is operable to detect, as the first parameter, a parameter associated with deployment of an airbag within the vehicle” and “said detecting a first parameter comprises detecting a parameter associated with deployment of an airbag within the vehicle.” The specification does not define or describe “parameter associated with deployment of an airbag.” Therefore, when read in light of the specification and the prosecution history, the claims’ use of the term “parameter associated with deployment of an airbag” fails to inform a person skill in the art about the scope of invention with reasonable certainty.

b) “detect/detecting a first parameter” / “detecting . . . a first parameter” / “detect, as the first parameter”

Claims 1-4, 7-10, and 13-16 of the '952 patent recite “detect a first parameter,” “detecting a first parameter,” “detecting . . . a first parameter,” and “detect, as the first parameter.” The '952 patent does not disclose how to detect “a first parameter,” including what instruments should be used in conjunction with the disclosed “device 202” and overall systems, devices, and methods disclosed in the specification. The '952 patent simply discloses that these are “known parameters” ('952 patent at 7:36-62) and “known detectable parameter (*id.* at 8:18-40). Moreover, these

limitations require detecting a “first parameter” that is “*one of the group*” of twenty eight (28) different measurements “and combinations thereof.” *Id.* at claims 2, 8, 14. The limitations state that the “first parameter” be “one of the group,” yet then discloses that it can be “combinations thereof.” The specification does not disclose what combinations could be combined for a “first parameter.” Therefore, when read in light of the specification and the prosecution history, the claims’ use of these terms fails to inform a person skill in the art about the scope of invention with reasonable certainty.

2. The Asserted Claims of the ’946 Patent Are Indefinite

The asserted claims of the ’946 patent are invalid under 35 U.S.C. § 112(b) because each of the terms below, viewed in light of the surrounding claim language, specification, and prosecution history, fails to inform those skilled in the art about the scope of the invention with reasonable certainty:

Patent	Term	Claim(s)
’946 Patent	“based on a comparison of the detected field signature and the second detected field signature”	1, 8, 15

a) “based on a comparison of the detected field signature and the second detected field signature”

Claims 1, 8, and 15 of the ’946 patent recite “based on a comparison of the detected field signature and the second detected field signature.”

The ’946 patent does not describe how a “comparison of the detected field signature and the second detected field signature.” The ’946 patent discloses that “[f]ield-detecting component 412 is additionally arranged to detect field 406, to communicate with input component 414 via a communication line 446, to communicate with comparing component 418 via a communication

line 448 and to communicate with parameter-detecting component 422 via a communication line 445.” ’946 patent at 6:10-15. The ’946 patent also generally discloses that “[c]omparing component 418 may be any known device or system that is operable to compare two inputs.” *Id.* at 6:50-52. Thus, when read in light of the specification and the prosecution history, the claims’ use of these terms fails to inform a person skill in the art about the scope of invention with reasonable certainty.

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CERTIFICATE OF SERVICE

I, Lana S. Shiferman, hereby certify that on October 26, 2023, a copy of this document was served on the following via the manner indicated below:

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