

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

AMAZON.COM, INC., AMAZON.COM SERVICES LLC,
Petitioner,

v.

NOKIA TECHNOLOGIES OY,
Patent Owner.

Case IPR2024-00798
Patent 9,473,602

**DECLARATION OF FRANCO LODATO
IN SUPPORT OF PATENT OWNER'S PRELIMINARY RESPONSE**

TABLE OF CONTENTS

I.	INTRODUCTION	1
II.	QUALIFICATIONS	1
A.	Materials Considered.....	8
III.	PERSON OF ORDINARY SKILL IN THE ART (POSITA)	9
IV.	LEGAL STANDARD FOR PATENTABILITY	11
A.	Claim Interpretation	11
B.	Prior Art.....	12
C.	Anticipation	13
D.	Obviousness.....	13
V.	OVERVIEW OF THE '602 PATENT	18
VI.	PROSECUTION HISTORY OF THE '602 PATENT.....	22
VII.	PRIORITY DATE	27
VIII.	CLAIM CONSTRUCTION	27
IX.	THE '602 PATENT IS ENTITLED TO A PRIORITY DATE OF AT LEAST MARCH 29, 2006.	28
A.	The '602 Patent provides support for “a one piece housing forming enclosed exterior lateral sides and a rear side,” “a cut out in the rear side of said housing,” and “a camera located in said housing and extending to said cut out at said rear side.”	29

B.	The '602 Patent provides support for “an engine section comprising a printed circuit board, a transceiver, a processor, and a memory.”	46
C.	The '602 Patent provides support for “a user input section.”	47
D.	The '602 Patent provides support for “a user input section located above the engine section and a battery, wherein the user section is located adjacent the battery and the engine section.”	48
E.	The '602 Patent provides support for “wherein the battery and engine section are housed in the housing and the user input is located in an opening between said exterior lateral sides of said one piece housing of the portable electronic device.”	49
X.	PETITIONER’S GROUNDS FAIL AT LEAST BECAUSE THE REFERENCES ARE NOT PRIOR ART TO THE '602 PATENT.....	53
A.	Grounds 1 and 2 fail at least because McClure-997 and McClure-998 are not prior art.	53
B.	Ground 3 fails at least because McClure-997 and McClure-998 are not prior art.	54
XI.	CONCLUSION.....	56

I, Franco Lodato, declare as follows:

I. INTRODUCTION

1. I have been retained by Patent Owner Nokia Technologies Oy (“Patent Owner”) to provide expert opinions in connection with this *inter partes* review.

2. I am being paid at my standard consulting rate of \$650 per hour for my work in this matter. Additionally, I will be reimbursed for all expenses incurred. My compensation is not dependent on the outcome of this action, and I have no other interests in this matter or with any of the parties involved.

3. My opinions are also based on my education, training, research, experience, knowledge, personal and professional experience, and my investigation and study of relevant materials.

II. QUALIFICATIONS

4. My qualifications for forming the opinions set forth in this report are listed in this section and provided in my *curriculum vitae* (“CV”), attached hereto as Exhibit 2002. *See* Ex. 2002. My CV also includes a list of my publications.

5. I am an accomplished and globally recognized designer with experience in corporate, startup, and design consulting agencies across multiple industries, including mobile technologies.

6. I have extensive experience in full concept-to-market product design in multiple areas, including high-tech consumer goods. I was recognized as a “Master Innovator” at Motorola- Google in 2004 and 2013 and hold 75 U.S. and International patents. For example, my innovations include the complete Motorola iDEN / Nextel product line from 2001 to 2006. I am a recipient of the prestigious Red Dot Award 2020 for Product Design and am a professional member of the U.S. National Academy of Inventors. I was also the subject of Jens Bernsen’s book, *Bionics in Action: The Design Work of Franco Lodato*, Motorola (2004).

7. Based on my work experience, described in my *curriculum vitae* and in more detail below, I am knowledgeable about wireless electronic device design and development, including the devices analyzed in this report and disclosed in the ’602 Patent.

8. I received a Bachelor of Science in Industrial Design from the Institute of Technology AJS (1984) in Caracas, Venezuela, followed by a Master of Science in Industrial Design from the Istituto Europeo di Design in Milan, Italy (1989). I also received an MIT Sloan Executive Business Certificate (2002), a Lean Six Sigma from Villanova University (2012), an honorary Ph.D. from Universidad Nueva Esparta (2016), and a Sustainability Professional Certificate from MIT (2023).

9. I have held the following academic positions: Associate Professor at the University of Montreal School of Design, Designer in Residence at the University of South Florida, Visiting Lecturer at the MIT Media Laboratory, Research Associate at the Institute of Human and Machine Cognition, and Vice President of the Industrial Designers Society of America (IDSA), Florida Chapter.

10. I have been a named inventor on over 70 patents for innovative products in various fields, including consumer electronics, healthcare, personal grooming, luxury lifestyle, infant products, and wearables. My expertise in biomimicry and sustainability strategy applied to consumer products has earned me global recognition as a subject matter expert. As a trusted advisor, I provide consulting services to Fortune 500 companies, non-profits, and academia and serve as a strategy and growth consultant for C-suite executives.

11. I served as the Chief Designer of Integrated Digital Enhanced Network (iDEN) Technology for Motorola, Inc. in Cambridge, MA, from 1999-2005. During my time at Motorola, I established and headed product design processes for Motorola Personal Communication Systems (PCS) and later for iDEN Subscribers Group and Nextel and created overall design vision and strategy for Motorola PCS, iDEN technology portfolios (including special edition products). I also created, developed, and implemented a comprehensive product portfolio for

Motorola CDMA and GSM global technologies as well as conceived, designed, and developed the implementation of Sprint/Nextel's design strategy.

12. From 2005-2007, I served as the Vice President of Design Exploration and Advanced Development at Herman Miller in Holland, MI. In that role, I spearheaded all stages of design exploration, research, and advanced development for future products and services, including integrating connectivity technologies such as Wi-Fi, Bluetooth, and radio-frequency identification ("RFID").

13. From 2007-2009, I worked in the role of Vice President and Managing Director for Pininfarina SpA (an Italian Design Studio), in Turin, Italy and Ft. Lauderdale, FL. My responsibilities included directing the design, brand management, and business and marketing strategy for North and Latin American clients, as well as the development of numerous design products and concepts. I designed and developed several luxury project implementations for worldwide customers including Bombardier, Gulfstream, Challenger powerboats, Maserati, and Motorola.

14. From 2007-2010, I also served as the founder and Chief Creative Officer (CCO) of Bionics in Action, located in Weston, Florida. I founded this design atelier to facilitate collaboration with industry and academic partners implementing bio-design methodologies. While at Bionics in Action, I launched the

Slider product with Motorola and developed handheld products using Android-based telemedicine applications in partnership with EOS Health, Motorola, Sprint/Nextel Networks, and the University of South Florida.

15. In 2010, I returned to Motorola Mobility as the Head of Product Innovation. In that role, which I held until 2013, I represented Motorola Mobility products and services for existing and new business engagements and provided support in overall project management. I also coordinated the detailed design of product components, such as the Motorola Nextel dual SIM and the first Android-based fitness watch.

16. From 2013-2015, I served as the Head of Wearable Technology for VSN Mobil Technologies Inc. (now Hoyos), in Ft. Lauderdale, FL. I developed and implemented the product platform strategy for wearable technology products through the creation and implementation of technology, in the areas of biometric health sensing and monitoring, sport dynamics, and telecommunications. Specific examples of the wearable technology products include a 360-degree HD camera with 7 stack lenses and a device, system, and method for adjusting biometric sensing rate based on available energy. I also helped obtain 15 patents as a result of my work in that area, and I developed three Android and iOS Applications for wearable solutions in collaboration with Foxconn.

17. From 2015-2018, I provided product design and innovation consulting services for various consumer companies and businesses through my consulting company, Bionics in Action (now called Lodato Design). One of my clients was Skylabs in New York City, and I worked with them on projects for customers such as Pepsi Co. Specifically, I helped explore the integration of relevant technologies into smart, connected devices, facilitated the engineering conceptualization and development of wearable and portable technologies, and delivered functional lab prototypes and IP proposals. Additionally, I have worked on individual projects, including collaborating with Prof. Walter Bender, former director and co-founder of MIT Media Lab, to implement a unique concept for an industrial design school in Wynwood, Miami.

18. Since 2017, I have been affiliated as a research associate member for the Institute for Human Machine Cognition (IHMC). My research efforts are focused on user interface design for new technologies in extreme environments (aerospace and underwater applications) using methodologies inspired by nature. Additionally, from 2018 to 2020 I worked as the Senior Vice President of Global Design for Kids2 Inc. in Atlanta, GA. I have global responsibility for industrial design, engineering, and research and development teams comprising 70 members around the globe. I leverage industrial design, user experience, research and development, and design principles to develop internal strategic growth plans.

19. From 2020 to 2023, I worked for Masimo Inc., a medical technology company in Irvine, California, as their Senior Director of Industrial Design and User Experience for their luxury products. I directed the strategic shift from B2B hospital solutions to B2C luxury wearables at Masimo, successfully redefining brand perception and establishing the company in a competitive luxury market. I led efforts to educate consumers on medical-grade technology while differentiating products through premium materials, sustainable practices, and consumer-centric design. I formed strategic partnerships with luxury brands, created an intuitive user experience, and developed new distribution channels, effectively blending healthcare expertise with luxury market demands. I also spearheaded the launch of the Masimo Freedom Smartwatch, a flagship product showcasing the company's medical technology innovation.

20. Since 2023, I have been serving as the Senior Business and Design Advisor for Pininfarina. I developed a five-year innovation roadmap that expanded Pininfarina's presence in the U.S. by diversifying into architecture and lifestyle products, forming strategic partnerships with U.S. firms, and adapting the brand's European design language to American tastes while prioritizing sustainability and cross-industry innovation. I also mentored design teams to incorporate sustainable practices across all projects, with a focus on reducing environmental impact,

innovating with eco-friendly materials, and ensuring economic viability and positioning Pininfarina as a leader in sustainable design.

A. Materials Considered

21. My opinions are based on my education, training, research, knowledge, and personal and professional experience. In connection with this report, I have reviewed the following:

- Ex. 1001 – U.S. Patent No. 9,473,602 (“the ’602 Patent”);
- Ex. 1002 – File History of the ’602 Patent;
- Ex. 1003 – Declaration of Steven Visser (“Visser” or “Ex. 1003”);
- Ex. 1004 – U.S. Patent Application Publication No. 2012/0194997 (“McClure-997”);
- Ex. 1005 – U.S. Patent Application Publication No. 2012/0194998 (“McClure-998”);
- Ex. 1006 – U.S. Patent Application Publication No. 2004/0214619 (“Chiang”);
- Ex. 1007 – International Design Magazine, August 2002;
- Ex. 1008 – Motorola Razr v3 Repair Manual, April 2005;
- Ex. 1009 – U.S. Patent No. 7,787,618 (“the ’618 Patent”);
- Ex. 1010 – File History of the ’618 Patent;
- Ex. 1011 – File History for U.S. Patent No. 8,953,480;
- Ex. 1012 – File History for U.S. Patent No. 8,615,077;

- Ex. 1024 – Excerpts from Chris Lefteri, *Metals Materials for Inspirational Design*;
- Ex. 2003 – Motorola SLVR L7 Full Phone Specifications (Wayback Machine 2006)¹;
- Ex. 2004 – Motorola SLVR L7 Pictures (Wayback Machine 2006)²;
- Ex. 2005 – Motorola SLVR L7 – Mobile Phone Museum³; and
- Paper 1 – Petition for Inter Partes Review of U.S. Patent No. 9,473,602.

III. PERSON OF ORDINARY SKILL IN THE ART (POSITA)

22. I understand that the meanings of terms should be interpreted from the perspective of an individual with average skills in the relevant field.

23. I understand that the level of ordinary skill in the art may depend on factors such as: (A) the types of problems encountered in the field; (B) existing solutions to those problems; (C) how quickly innovations are made; (D) the

¹ Ex. 2003 is a true and accurate copy of https://web.archive.org/web/20060110072607/http://www.gsmarena.com:80/motorola_slvr_l7-1053.php.

² Ex. 2004 is a true and accurate copy of https://web.archive.org/web/20060111091533/http://gsmaerna.com:80/motorola_slvr_l7-pictures-1053.php.

³ Ex. 2005 is a true and accurate copy of <https://mobilephonemuseum.com/phone-detail/motorola-slvr-l7>.

complexity of the technology; and (E) the educational level of workers in the field. It's important to note that not every factor may be present in a specific situation, and some factors may be more significant than others.

24. Based on the materials and information I have reviewed and based on my experience in the technical areas relevant to the '602 Patent, a person of ordinary skill in the art at the time of the invention of the '602 Patent would have had either (1) a bachelor of science in industrial design or mechanical engineering and three years of experience designing mobile phones or (2) a master of science in industrial design or mechanical engineering and two years of experience in designing mobile phones. A person with a different degree but with additional relevant experience could still qualify if the additional experience compensates for the different educational background. A person with less experience designing mobile phones could still qualify if the person has additional education that compensates for their lesser experience.

25. I understand that Petitioner takes the position that the field of the '602 Patent is the form factor design of portable electronic devices. Petition, 16. I also understand that Petitioner takes the position that a person with ordinary skill in the art would have had a (1) Bachelor's degree in industrial design, fine arts, or a similar field, and (2) at least two years of practical experience in industrial design. Additional experience can substitute for the level of education and vice-versa.

26. I acknowledge that the level of ordinary skill in the art for the '602 Patent that I propose is similar to the definition proposed by Petitioner. I have surpassed both the Patent Owner's and the Petitioner's levels of ordinary skill in the art as of the conception date of the '602 Patent. Therefore, regardless of which level of skill in the art is applied, my analysis and conclusions in this report remain consistent.

IV. LEGAL STANDARD FOR PATENTABILITY

27. I use the legal principles below, of which counsel informed me, as a guide in formulating my opinions.

A. Claim Interpretation

28. My opinions concern what I believe the person of ordinary skill in the art would have understood the meaning of specific claim terms to be based on the patent documents.

29. I have learned that evaluating the legitimacy of a patent claim involves a two-step process. The first step entails interpreting the claim language accurately to establish its scope and significance. The second step involves comparing the properly interpreted claim to the alleged prior art to determine if the elements of the claim are satisfied by the prior art.

30. In order to understand the meaning of claim phrases, I began by carefully studying the patent. I focused on the claims themselves, followed by the

background, detailed specifications, figures, and other patent content. After that, I examined the prosecution history to identify any clarifications or limitations that might be associated with claim terms. In certain cases, I also referred to other documents, such as references cited by the patent office.

31. I understand that during an inter partes review, claim terms should be interpreted based on their ordinary and customary meaning as understood by a person of ordinary skill in the relevant field, considering the entire disclosure at the time of the invention. It's important not to interpret a specific example from the written description as part of the claim if the claim language is broader. Additionally, any special definition for a claim term must be clearly, deliberately, and precisely stated.

32. I have been informed that this standard is the same as that used in United States district courts, in which claim terms are given their ordinary and customary meaning as would be understood by a person of ordinary skill in the art at the time of the invention having taken into consideration the language of the claims, the specification, and the prosecution history of record under the *Phillips* claim construction standard.

B. Prior Art

33. It has been explained to me by Counsel that information that satisfies one of the categories of prior art outlined in 35 U.S.C. § 102 (pre-AIA) may be used

in an invalidity analysis under §§ 102 or 103. If information is not classified correctly as prior art under one of the subsections of § 102 of the Patent Code, it may not form the basis of an anticipation or obviousness determination.

C. Anticipation

34. It has been explained to me by Counsel that a patent claim is invalid due to anticipation under 35 U.S.C. § 102 if each and every element of the patent claim is disclosed in a single asserted prior art reference. I am informed that such disclosure may be either explicit or inherent. I also understand that a disclosure of an asserted prior art reference can be “inherent” if the missing element is necessarily present or is the inevitable outcome of the process and/or thing that is explicitly described in the asserted prior art reference.

35. I understand that for something to be considered as anticipatory prior art, it must also be enabling. This means that it should teach a person with average skills in that field how to create or execute the claimed invention without needing too much experimentation.

D. Obviousness

36. I have been informed that a patent claim is considered invalid under 35 U.S.C. § 103 (pre-AIA) if it would have been obvious to a person of ordinary skill in the relevant field in view of the prior art at the time the application was filed. In simpler terms, even if the claimed invention is not exactly described in a single prior

art reference, a patent claim can be invalidated for obviousness if the differences between the claimed invention and the prior art are such that the overall subject matter would have been obvious at the time the invention was made to a person with ordinary skill in the relevant field.

37. I have been informed that when making a determination of obviousness, the following factors are considered: (i) determining the scope and content of the prior art; (ii) ascertaining the differences between the prior art and the claims at issue; and (iii) resolving the level of ordinary skill in the pertinent art.

38. I understand that whether there are any relevant differences between the prior art and the claimed invention is to be analyzed from the view of a person of ordinary skill in the art at the time of the invention. For purposes of this IPR proceeding, I used an alleged date of invention for the challenged claims of no later than March 29, 2006.

39. In analyzing the relevance of the differences between the claimed invention and the prior art, I understand that I must consider the impact, if any, of such differences on the obviousness or non-obviousness of the invention as a whole, not merely some portion of it.

40. The person of ordinary skill faced with a problem can utilize their experience and abilities to solve the problem and may also refer to any available prior art to aid in the solution.

41. I understand that a reference may be modified and/or combined with one or more other references and/or with the knowledge of one of ordinary skill in the art if such person of ordinary skill in the art would have found the modification and/or combination obvious. In other words, I understand that I do not need to look for precise teaching in the prior art directed to the subject matter of the claimed invention. I understand that I may take into account the inferences and creative steps that a person of ordinary skill in the art would have employed in reviewing the prior art at the time of the invention.

42. In determining whether a piece of prior art could have been combined with other prior art or with other information within the knowledge of a person having ordinary skill in the art, it is my understanding that the following are examples of approaches and rationales that may be considered to support a conclusion of obviousness:

- 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;

- Applying a technique or approach that would have been “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 a person having ordinary skill in the art; or
- 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.

43. I understand that if the claimed invention combined elements known in the prior art and the combination yielded results that were predictable to a person of ordinary skill in the art at the time of the invention, then this evidence would make it more likely that the claim was obvious.

44. I understand that an invention would be considered obvious if a person with ordinary skills in the relevant field would have recognized an obvious benefit to the solutions attempted by the applicant, given the wide range of needs arising from advancements in the field. When there is a need for a design or market pressure to solve a problem and only a finite number of identified, predictable solutions exist, it would be obvious to a person with ordinary skills to try the known options. If a technique has been used to improve one device, and a person with ordinary skills in

the field would recognize that it could improve similar devices in the same way, using the technique would be considered obvious.

45. I understand that a key inquiry is whether any improvement allegedly achieved by a claimed invention is more than the predictable use of prior art elements according to their established functions.

46. I understand that a claimed invention may be obvious if some teaching, suggestion, or motivation exists that would have led a person of ordinary skill in the art to combine the invalidating references. I also understand that this suggestion or motivation may come from sources such as explicit statements in the prior art, or from the knowledge of a person having ordinary skill in the art. Alternatively, any need or problem known in the field at the time and addressed by the patent may provide a reason for combining elements of the prior art.

47. I also understand that when there is a design need or market pressure, and there are a finite number of predictable solutions, a person of ordinary skill may be motivated to apply both his skill and common sense in trying to combine the known options in order to solve the problem.

48. I understand that a reason to modify or combine prior art may support an obviousness determination, provided there is a reasonable expectation of success. I further understand that whether a proposed modification or combination of the

prior art has a reasonable expectation of success is determined at the time the invention was made.

49. On the other hand, if the combination of known elements yielded unexpected or unpredictable results, or if the prior art teaches away from combining the known elements, then this evidence would make it more likely that the claim that successfully combined those elements was not obvious. I understand that hindsight must not be used when comparing the prior art to the invention for obviousness.

50. I am also aware that before concluding a claim is obvious, secondary considerations of non-obviousness, to the extent they exist, must be considered, such as: long-felt need, failure of others, copying by others, praise by others in the industry, licensing of the claimed invention, departure from accepted principles, widespread recognition by those in the art of the invention's significance, and commercial success. I understand that there must be a demonstrated nexus between the claimed invention and these secondary considerations for them to be considered.

V. OVERVIEW OF THE '602 PATENT

51. The '602 Patent, titled "Portable Electronic Device," relates generally to "form factor configuration of a portable electronic device." Ex. 1001, Cover, 1:18-21.

52. The '602 Patent recognized a desire at the time for "[u]ltra thin telephone products," and the emphasis on "mechanical thickness, allowing the

feature set and industrial design to be adjusted to suit this goal.” Ex. 1001, 1:23-34.

The ’602 Patent recognized a desire for “maintain[ing] aesthetic balance in proportions” and “allow[ing] added thickness to avoid a ‘squeezed appearance.’” Ex. 1001, 1:35-39.

53. The ’602 Patent addresses the technological limitations associated with thickness of telephone products at the time by presenting several embodiments of a “portable electronic device” in which different configurations provide for a reduction in thickness of the device.

54. The ’602 Patent presents solutions to the technical problem of reducing thickness in a device by providing for unique configurations of an engine section, a battery, and a user input section relative to one another. While the ’602 Patent depicts, as one example, a “flip-phone type of telephone comprising a first section 12 connected to a second section 14,” the ’602 Patent discloses that “features of the invention could be used in other types of portable electronic devices, such as a PDA or a hand-held gaming device.” Ex. 1001, 2:60-67. The ’602 Patent also discloses that “[t]he configurations shown in FIGS. 11-13 could be used in candy-bar style telephone handsets as well as flip-phone style handsets.” Ex. 1001, 5:58-60.

55. The '602 Patent also notes that “the invention can be embodied in many alternate forms of embodiments,” and “[i]n addition, any suitable size, shape or type of elements or materials could be used.” Ex. 1001, 2:52-59.

56. The '602 Patent discloses a “first housing member 28,” an “engine 30,” a “battery 32,” and a “user input section 34.” Ex. 1001, 3:27-32. The “first housing member 28 generally comprises a one-piece tubular member,” which “could be formed from an extruded member with holes punched into it after it is extruded.” Ex. 1001, 3:30-36.

57. The “user input section [34] generally comprises keymats 50, an EL backlight foil 52, a keymat dome sheet 54 and a keymat stiffener 56,” and “in alternate embodiments, any suitable user input section could be provided.” Ex. 1001, 3:54-62.

58. The “engine 30 generally comprises a printed circuit board, a transceiver, a processor, and a memory, among other components.” Ex. 1001, 3:63-65. The '602 Patent discloses that “the width of the engine 30 is only about less than half the width 22 of the telephone.” Ex. 1001, 3:65-67.

59. The '602 Patent goes on to provide additional details regarding the solutions to the technical problem of reducing thickness of the handheld device. Also shown in both FIGs. 7 and 8, the '602 Patent shows that “[t]he battery 32 is located adjacent the lateral side of the engine 30 and is also about less than half the

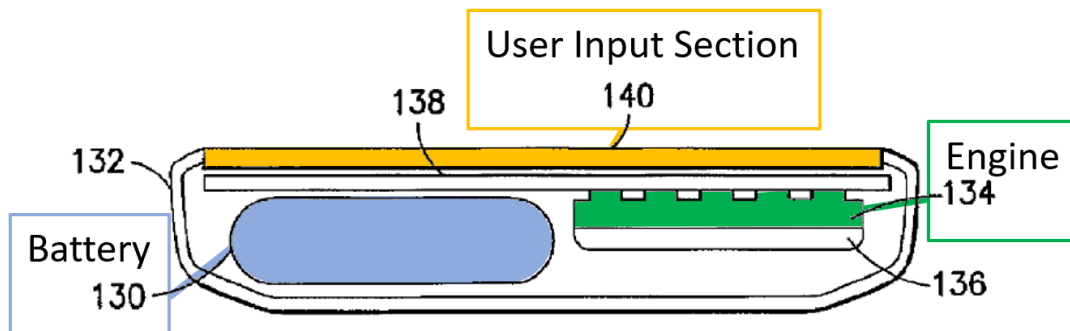
width 22 of the telephone.” Ex. 1001, 3:67-4:2. The ’602 Patent emphasizes the benefits of such a configuration, stating that, “[u]nlike conventional telephones which have the engine located above the battery, the configuration of the side-by-side engine/battery allows the battery and the engine to have a practical design thickness and still provide a reduced thickness 24 as compared to conventional flip-phones.” Ex. 1001, 4:2-7.

60. Underscoring the focus of the ’602 Patent on solving the problem of device thickness by way of providing a unique configuration of the battery, engine, and user input section, the ’602 Patent provides “alternate embodiments of positioning the battery relative to the engine” in FIGs. 11-13, which, as stated above, the ’602 Patent states can be used in candy-bar style telephone handsets as well as flip-phone style handsets.” Ex. 1001, 5:40-41, 5:58-60. The ’602 Patent describes, with reference to FIGS. 11-13, a “one-piece metal tubular housing member 118” housing “components 112 [battery], 114 [engine], and 116 [keypad].” Ex. 1001, 5:42-48.

61. The ’602 Patent depicts, in FIG. 13, a configuration where the “battery 130 is about half the width of the tubular housing member 132,” and the “engine 134 comprises a portion 136 located at the lateral side of the battery 130 and another portion 138 located between the battery and the keypad 140.” Ex. 1001, 5:53-58. The ’602 Patent notes that “[t]he configurations shown in FIGS. 11-

13 could be used in candy-bar style telephone handsets as well as flip-phone style handsets.” Ex. 1001, 5:58-60. The ’602 Patent provides an example of a candy-bar style telephone handset, stating that “[c]andy-bar shaped mobile phones can have smaller thicknesses, such as the Motorola SLIVR...” Ex. 1001, 1:31-33.

Ex. 1001, FIG. 13 (annotated)



62. The ’602 Patent underscores that “the side-by-side positioning of the battery/engine can further allow a reduction in thickness of the handset versus conventional stacked battery/engine handsets.” Ex. 1001, 6:1-4. Therefore, invention of the ’602 Patent is a novel and thinner structure than previously known or used, which resulted in improved thickness reduction over prior systems.

VI. PROSECUTION HISTORY OF THE ’602 PATENT

63. U.S. Patent Application No. 14/612,712 (“the ’712 application”) was filed February 3, 2015, as a continuation in a family of U.S. Patent Application No. 14/067,249 (“the ’249 application,” now U.S. Patent No. 8,953,780) filed October

30, 2013, U.S. Patent Application No. 13/741,781 (“the ’781 application,” now U.S. Patent No. 8,615,077) filed January 15, 2013, U.S. Patent Application No. 12/860,234 (“the ’234 application,” now U.S. Patent No. 8,363,824) filed August 20, 2010, and U.S. Patent Application No. 11/393,510 (“the ’510 application,” now U.S. Patent No. 7,787,618) filed March 29, 2006. Ex. 1002, pp. 2-67.

64. Claim 15 of the ’510 application was not limited to a flip-phone configuration, as it recited:

A mobile telephone, comprising:

an engine section comprising a printed circuit board, a transceiver, a processor and a memory;
a battery located adjacent the engine section; and
a user input section comprising a keypad located above the engine section and the battery, wherein the user input section is located directly opposite the battery without a portion of the engine section therebetween.

Ex. 1010, p. 23.

65. The ’712 application was filed with original claims 1-24, along with a preliminary amendment canceling claims 1-24 and presenting new claims 25-42. Ex. 1002, pp. 20-23, 52-57. Claim 25 recited “a user input section located above the engine section and a battery, wherein the user input section is located adjacent the battery and the engine section.” *Id.*

66. A Non-Final Office Action was issued September 24, 2015, in which the Examiner identified that the “application [was] being examined under the pre-AIA first to invent provisions,” which I understand to mean that the application was governed by “pre-AIA first to invent provisions” based on its effective filing date. The Office Action issued double patenting rejections over U.S. Patent No. 8,953,780 and rejections under 35 U.S.C. §112 for antecedent basis related to “the portable electronic device” in claims 30 and 37. Ex. 1002, pp. 80-85. There was no mention of lack of written description support by the Examiner. *Id.*

67. The Applicant responded to the September 24, 2015, Office Action on December 28, 2015, with amendments to the claims to change “apparatus” in the preamble to “portable electronic device,” and amendments to the independent claims to replace “a hole through a front side of the housing” with “an opening between said exterior lateral sides of said one piece housing of the portable electronic device.” Ex. 1002, pp. 80-85, 103-112. The Applicant also added claims 43-60, including additional “portable electronic device” dependent claims and a set of claims directed to a “mobile phone.” *Id.* The Applicant asserted that the amendments overcame the double patenting rejections over U.S. Patent No. 8,953,780 and the 112 rejections. *Id.*

68. A Final Office Action was issued March 31, 2016, in which the Examiner again identified that the “application [was] being examined under the

pre-AIA first to invent provisions,” and maintained the double patenting rejections over U.S. Patent No. 8,953,780. Ex. 1002, pp. 667-676. The Examiner also rejected claims 36, 37, and 40 under pre-AIA 35 U.S.C. § 102(b) over “applicant’s cited reference US 2004/0252220 (Oda et al hereinafter Oda),” which has a filing date of June 15, 2004 and a publication date of December 16, 2004. *Id.* The Examiner also rejected claims 36, 37, 40 and 41 under pre-AIA 35 U.S.C. § 102(b) over “applicant’s cited reference JP 2002-125031 (Hiroshi),” which appears to have a filing date of October 18, 2000 and a publication date of April 26, 2002. *Id.* The Examiner also rejected claims 38, 39 and 42 as unpatentable under pre-AIA 35 U.S.C. § 103(a) over Oda or Hiroshi. *Id.* Here, as in the previous Non-Final Office Action, the Examiner made no mention of lack of written description support. *Id.* Based on the filing and publication dates of the cited references, the Examiner afforded the application the priority date of March 29, 2006, and never raised any concern over written description or priority.

69. The Applicant responded on May 27, 2016, with a terminal disclaimer over U.S. Patent 8,953,780 (*see* Ex. 1002, p. 703), and amended claim 36 to recite:

wherein the battery and engine section are configured to be housed in the housing section such that the user input section is located above the engine section and the battery, and wherein the user input section is located adjacent the battery and the engine section.

Ex. 1002, p. 694. The Applicant explained that paragraph [0028] of the originally-filed specification as well as Figs. 7-8 provided support for the amendment. Ex. 1002, p. 700. Paragraph [0028] of the originally-filed Specification (column 4 lines 2-7 of the '602 Patent) states:

Unlike conventional telephones which have the engine located above the battery, the configuration of the side-by-side engine/battery allows the battery and the engine to have a practical design thickness and still provide a reduced thickness 24 as compared to conventional flip-phones.

Ex. 1002, p. 46, ¶[0028]. In addition, the Applicant distinguished over the references by relying on the amended claim language, arguing that “there is no teaching or disclosure in Oda to provide the battery and engine section to be housed in the housing such that the user input section is located above the engine section and the battery, and wherein the user input section is located adjacent the battery and the engine section.” Ex. 1002, p. 700. The Applicant argued the same over Hiroshi. Ex. 1002, p. 701.

70. In light of the amendment and arguments, a Notice of Allowance was mailed June 15, 2016. Ex. 1002, pp. 710-734.

VII. PRIORITY DATE

71. It is my understanding that to be entitled to a priority date of an earlier-filed application, the earlier-filed application must provide support for the invention claimed in the later-filed application as required by the “written description” requirement of 35 U.S.C. § 112. I have been informed that an adequate written description requires showing that the inventor was in possession of the invention at the time of the patent application’s filing.

72. It is also my understanding that in order to show possession of the claimed invention, a POSITA must discern the claimed invention with all of its limitations based on the disclosure of the patent at issue, including the originally filed claims, specifications, and/or drawings.

VIII. CLAIM CONSTRUCTION

73. I understand from Counsel that the claims are to be construed in light of the specification as would be read by a POSITA at the time the application was filed. I understand that the claim terms are given their ordinary and customary meaning as would be understood by a POSITA in the context of the entire disclosure. For the purposes of this report and the arguments made herein regarding institution, I have relied on the ordinary and customary meanings of the claim terms. If instituted, I reserve the right to address constructions of the claim terms, if needed. I understand that the Petitioner has discusses possible

constructions for the claimed “housing.” Petition, pp. 16-17. While I reserve the right to address the construction of this term, if instituted, my analyses below do not change based on which interpretation of the claimed “housing” is adopted.

IX. THE '602 PATENT IS ENTITLED TO A PRIORITY DATE OF AT LEAST MARCH 29, 2006.

74. I understand that there is a dispute as to whether the originally-filed specification of the '602 Patent, filed March 29, 2006, provides sufficient disclosure to entitle the claims of the '602 Patent to a priority date of at least March 29, 2006.

75. I further understand that Petitioner and Dr. Visser argue that the originally-filed specification of the '602 Patent does not provide sufficient disclosure to support the limitation “a camera located in [a one piece housing] and extending to [a] cut out at [a] rear side [of said housing]” because the originally-filed specification of the '602 Patent allegedly does not disclose a “camera located in the same section or housing as the battery, engine, and user input section.” Petition, pp. 12-13; Ex. 1003, ¶¶21-25.

76. The '602 Patent is a continuation application of U.S. Patent Application Ser. No. 14/067,249 filed October 30, 2013, now U.S. Patent No. 8,953,780, which is a continuation application of U.S. Patent Application Ser. No. 13/741,781 filed January 15, 2013, now U.S. Patent No. 8,615,077, which is a continuation application of U.S. Patent Application Ser. No. 12/860,234 filed

August 20, 2010, now U.S. Patent No. 8,363,824, which is a continuation application of U.S. Patent Application Ser. No. 11/393,510 filed March 29, 2006, now U.S. Patent No. 7,787,618. Ex. 1001, 1:6-14. I agree with Petitioner's Expert, Dr. Visser, that all patents in this chain of continuations share the same specification, with the exception of cross-references to related applications. Ex. 1003, ¶19. While there is no dispute that all patents in this chain of continuations share the same specification, I provide references to both the specification of the '602 Patent as well as the originally-filed specification (contained in the File History of the '618 Patent, or Ex. 1010) in my analysis.

77. As I explain below, the originally-filed written description of the '602 Patent discloses and provides support for the claimed invention with all of its limitations. Thus, the '602 Patent is entitled to its earliest priority date of at least March 29, 2006.

- A. The '602 Patent provides support for “a one piece housing forming enclosed exterior lateral sides and a rear side,” “a cut out in the rear side of said housing,” and “a camera located in said housing and extending to said cut out at said rear side.”**

78. Contrary to the conclusory assertions by the Petitioner and Dr. Visser, the '602 Patent discloses support for the claim elements “a one piece housing forming enclosed exterior lateral sides and a rear side,” “a cut out in the rear side of said housing,” and “a camera located in said housing and extending to said cut

out at said rear side,” and the specification of the ’602 Patent reasonably conveyed such elements to a person of ordinary skill in the art.

79. I disagree with Petitioner and Dr. Visser that the specification of the ’602 Patent is limited to a flip phone housing configuration where the camera is in a second top section. Ex. 1003, ¶¶21-23. To the contrary, the specification of the ’602 Patent underscores its specific adaptability to a broader range of device categories.

80. The ’602 Patent also explicitly provides multiple examples of alternative form factors of portable electronic devices in which the claimed features of the ’602 Patent are used and to which the disclosed one-piece housings are applied. Specifically, the ’602 Patent discloses one-piece housings, which can include cameras and other claimed components, and the application of such one-piece housings to PDAs, hand-held gaming devices, and candy bar style form factors. *See, e.g.*, Ex. 1001, 5:42-48 (“The components 112, 114, 116 are housed in a one-piece metal tubular housing member 118.”); Ex. 1001, 2:61-64 (“...features of the invention could be used in other types of portable electronic devices, such as a PDA...”); Ex. 1001, 5:58-60 (“The configurations shown in FIGS. 11-13 could be used in candy-bar style telephone handsets as well as flip-phone style handsets.”); Ex. 1010, p. 18, ¶[0035] (“The components 112, 114, 116 are housed in a one-piece metal tubular housing member 118.”); Ex. 1010, p. 12, ¶[0023]

(“However, in alternate embodiments, features of the invention could be used in other types of portable electronic devices, such as a PDA or a hand-held gaming device, for example.”); Ex. 1010, pp. 18-19, ¶[0036] (“The configurations shown in Figs. 11-13 could be used in candy-bar style telephone handsets as well as flip-phone style handsets.”).

81. As a first example of a form factor disclosed by the '602 Patent that is not a flip phone, the '602 Patent states that “[h]owever, in alternate embodiments, features of the invention could be used in other types of portable electronic devices, such as a PDA or a hand-held gaming device, for example.” Ex. 1001, 2:61-64 (Ex. 1010, p. 5, ¶[0023] (“However, in alternate embodiments, features of the invention could be used in other types of portable electronic devices, such as a PDA or a hand-held gaming device, for example.”)).

82. A person of ordinary skill in the art would have been familiar with the form factor of a personal digital assistant or PDA. PDAs at the time, in my experience, generally included a housing that included all of its components (e.g., camera, input section, engine, battery, etc.) . Thus, because the “features of the invention” could be applied to a PDA, the person of ordinary skill in the art would have understood that the disclosed camera would have been located in the one-piece housing. Accordingly, the statement in the '602 Patent that “features of the invention could be used in other types of portable electronic devices, such as a

PDA” conveyed to the person of ordinary skill in the art that the features of the invention could be applied to a PDA. The disclosure of a PDA also conveyed to the person of ordinary skill in the art that the ’602 Patent was not limited to flip phone form factors.

83. The ’602 Patent also explicitly discloses a camera that extends to a cutout of the housing. For example, the ’602 Patent discloses that “[t]he camera 70 extends to the rear side,” and “[t]he camera 70 is housed at an exterior side of the portable electronic device by a junction 98 of a cutout portion.” Ex. 1001, 5:15-19; Ex. 1010, p. 17, ¶[0033] (“The camera 70 extends to the rear side 76 of the second section 14. The camera is housed at an exterior side of the portable electronic device by a junction 98 of a cutout portion...”). The ’602 Patent also discloses “[b]y providing a projecting portion of the housing flush with the camera, this allows the rest of the telephone to have the reduced thickness 24, but still use a standard size camera.” Ex. 1001, 5:21-25; Ex. 1010, p. 17, ¶[0033] (“By providing a projecting portion of the housing for the camera, this allows the rest of the telephone to have the reduced thickness 24, but still use a standard size camera.”). The original claims filed in the application that issued as the ’618 Patent (i.e., the originally-filed specification), recited a “camera is housed at an exterior side of the portable electronic device.” Ex. 1010, p.22, cl. 12. A camera is disclosed as being

in a “second housing member, which “preferably comprises a one-piece member having a general tubular shape.” Ex. 1001, 4:52-55; Ex. 1010, p. 16, ¶[0031].

84. The explicit disclosure of a PDA in the ’602 Patent, which a person of ordinary skill in the art would have understood included a housing that included all of its components (e.g., camera, input section, engine, battery, etc.) as opposed to a flip phone that would include multiple housings connected by a hinge, as well as the explicit disclosure of the camera that extends to a cutout of the housing, conveyed to the person of ordinary skill in the art “a one piece housing forming enclosed exterior lateral sides and a rear side,” “a cut out in the rear side of said housing,” and “a camera located in said housing and extending to said cut out at said rear side.”

85. The explicit disclosure in the ’602 Patent that “features of the invention could be used in other types of portable electronic devices, such as a PDA” is left unaddressed by Petitioner and Dr. Visser. I understand that Dr. Visser does not allege that, nor explain why, this particular disclosure, along with the remaining disclosure of the ’602 Patent, would not have conveyed to the person of ordinary skill in the art that the specification of the ’602 Patent contemplated configurations outside of the alleged flip phone housing configuration. Nor does Dr. Visser allege that, or explain why, this particular disclosure, along with the disclosure of the camera that extends to a cutout of the housing the ’602 Patent,

would not have conveyed a “a one piece housing forming enclosed exterior lateral sides and a rear side,” “a cut out in the rear side of said housing,” and “a camera located in said housing and extending to said cut out at said rear side,” to a person of ordinary skill in the art.

86. As a second example of a form factor that is not a flip phone that is disclosed by the '602 Patent, the '602 Patent states that “[t]he configurations shown in FIGS. 11-13 could be used in candy-bar style telephone handsets as well as flip-phone style handsets.” Ex. 1001, 5:58-60; Ex. 1010, pp. 18-19, ¶[0036] (“The configurations shown in Figs. 11-13 could be used in candy-bar style telephone handsets as well as flip-phone style handsets.”). The person of ordinary skill in the art would have understood that the configurations shown in FIGS. 11-13 included the same features as depicted and described in the preceding figures (FIGS. 1-10), but simply were labeled as alternative embodiments because they showed a different arrangement of the engine and battery. And, when applied to a candy-bar form factor, a person of ordinary skill in the art would have known that the components would be in the same housing.

87. A person of ordinary skill in the art was familiar with candy-bar style telephone handsets and would have readily understood that a candy-bar style telephone handset was a device with a housing that included all of its components (e.g., camera, input section, engine, battery, etc.) . Thus, because disclosed

configurations were used in a candy-bar style telephone handset, and the '602 Patent disclosed one-piece housings that comprised the claimed components, the person of ordinary skill in the art would have understood that the disclosed camera would have been located in the one-piece housing. The disclosure of a candy-bar style device also conveyed to the person of ordinary skill in the art that the '602 Patent was not limited to flip phone form factors.

88. The '602 Patent also provides an explicit example of a candy-bar style telephone handset. The '602 Patent states that “[c]andy-bar shaped mobile phones can have smaller thicknesses, such as the Motorola SLIVR...” Ex. 1001, 1:31-33; Ex. 1010, p. 8, ¶[0002] (“Candy-bar shaped mobile phones can have smaller thicknesses, such as the Motorola SLIVR with a thickness of about 0.45 inch....”). That is, the '602 Patent referred to a “Motorola SLIVR” as an example of a “candy-bar shaped mobile phone,” and a person of ordinary skill in the art would have been aware that a “Motorola SLIVR” was a device with a housing that included all of its components (e.g., camera, input section, engine, battery, etc.) . For example, an example depiction of a Motorola SLVR⁴ from January 2006 is depicted below.

⁴ A person of ordinary skill in the art understood that the Motorola SLIVR was a reference to the Motorola SLVR.

Ex. 2003

89. The explicit disclosure in the '602 Patent of one-piece housings, as well as that disclosed configurations “could be used in candy-bar style telephone handsets as well as flip-phone style handsets,” (along with the example of a candy-bar style form factor as discussed above), conveyed to the person of ordinary skill in the art that the disclosed features of the claimed invention of the '602 Patent were housed in a one-piece housing.

90. Moreover, a person of ordinary skill in the art would have been familiar with the Motorola SLVR product, and would have known that it had a camera that extended to the rear of the housing of the device. An example depiction of the Motorola SLVR product from around the time of the invention of the '602 Patent is shown below, which confirms what the person of ordinary skill

in the art knew – that the SLVR was a candy-bar style handset with a camera depicted extending to the rear of the housing.

Ex. 2005 (annotated)



91. The '602 Patent also explicitly discloses a camera that extends to a cutout of the housing and conveyed the same to the person of ordinary skill in the art. For example, the '602 Patent discloses that “[t]he camera 70 extends to the rear side,” and “[t]he camera 70 is housed at an exterior side of the portable electronic device by a junction 98 of a cutout portion.” Ex. 1001, 5:15-19; Ex. 1010, p. 17, ¶[0033] (“The camera 70 extends to the rear side 76 of the second section 14. The

camera is housed at an exterior side of the portable electronic device by a junction 98 of a cutout portion...”). The ’602 Patent further discloses “[b]y providing a projecting portion of the housing flush with the camera, this allows the rest of the telephone to have the reduced thickness 24, but still use a standard size camera.” Ex. 1001, 5:21-25; Ex. 1010, p. 17, ¶[0033] (“By providing a projecting portion of the housing for the camera, this allows the rest of the telephone to have the reduced thickness 24, but still use a standard size camera.”). Having the projecting portion of the housing for the camera, rather than making the housing flush with the camera is explained as an advantage - an advantage that the person of ordinary skill in the art would understand to apply equally to candy-bar phones and PDAs. In each description in the ’602 Patent, the camera is described as coupled to the engine and is proximate the display module and the speaker. Ex. 1001, 5:7-9 (“The display module 68, camera 70 and a speaker or sound transducer 88 are coupled to the engine 30 by a flex cable assembly 90 which extends through the hinge 16.”); Ex. 1010, p. 17, ¶[0032] (“The display module 68, camera 70 and a speaker or sound transducer 88 are coupled to the engine 30 by a flex cable assembly 90 which extends through the hinge 16.”). The person of ordinary skill in the art would have understood that, in a one-piece housing configuration, components would have been coupled in the same manner as described.

92. Thus, the explicit disclosure of candy-bar style telephone handsets, as well as the explicit disclosure of the camera that extends to a cutout of the housing in the '602 Patent, conveyed to the person of ordinary skill in the art “a one piece housing forming enclosed exterior lateral sides and a rear side,” “a cut out in the rear side of said housing,” and “a camera located in said housing and extending to said cut out at said rear side.” That is, a person of ordinary skill in the art would have understood that, once applied to the candy-bar form factor, the disclosed and claimed components would be in the same housing. Moreover, the explicit disclosure of candy-bar style telephone handsets conveyed to the person of ordinary skill in the art that the '602 Patent was not limited to flip phone form factors.

93. The disclosure in the '602 Patent that configurations “could be used in candy-bar style telephone handsets as well as flip-phone style handsets” (along with the example of a candy-bar style form factor as discussed above), is left unaddressed by Petitioner and Dr. Visser. I understand that Dr. Visser does not allege that, nor explain why, this particular disclosure, along with the remaining disclosure of the '602 Patent, would not have conveyed to the person of ordinary skill in the art that the specification of the '602 Patent contemplated configurations outside of the alleged flip phone housing configuration. Nor does Dr. Visser allege that, or explain why, this particular disclosure, as well as disclosure of the camera

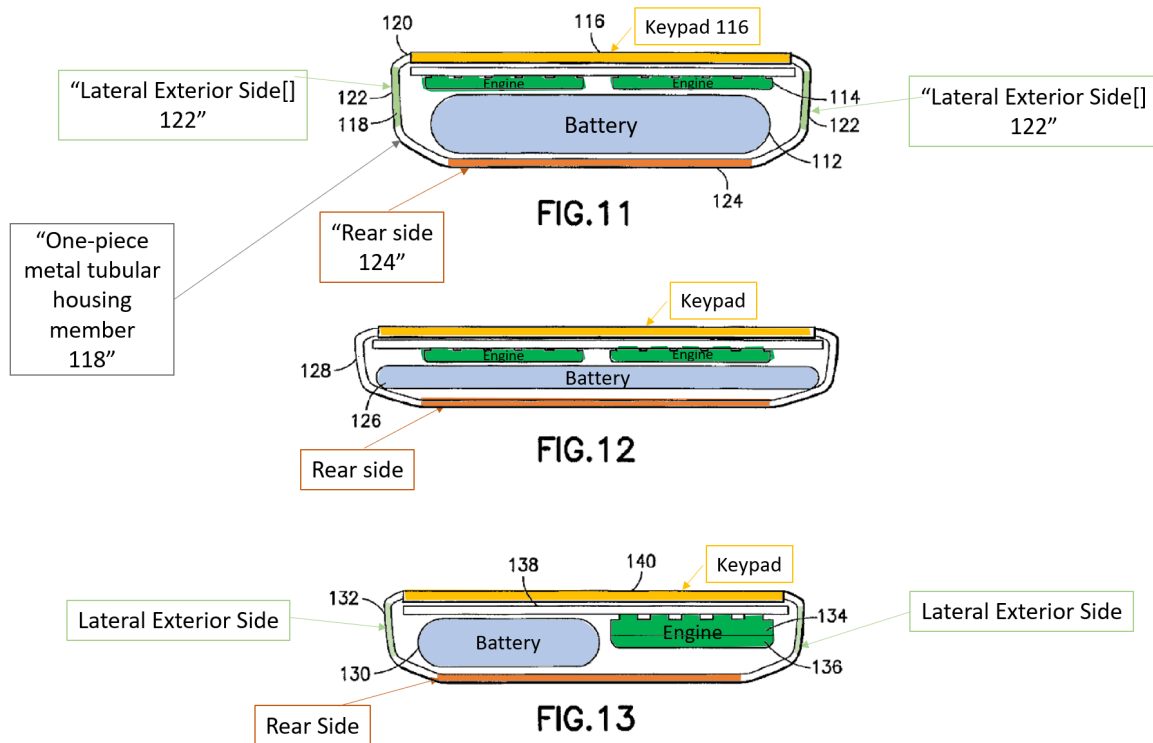
that extends to a cutout of the housing the '602 Patent, would not have conveyed a “a one piece housing forming enclosed exterior lateral sides and a rear side,” “a cut out in the rear side of said housing,” and “a camera located in said housing and extending to said cut out at said rear side,” to a person of ordinary skill in the art.

94. I disagree with Dr. Visser’s conclusion that “there is no disclosure of a camera that extends to a cutout of the housing that also includes the battery and engine section.” Ex. 1003, ¶¶23, 25. The '602 Patent does in fact disclose support for the claim element “a camera located in said housing and extending to said cut out at said rear side.” The '602 Patent discloses “[t]he camera 70 extends to the rear side,” and “[t]he camera 70 is housed at an exterior side of the portable electronic device by a junction 98 of a cutout portion.” Ex. 1001, 5:15-19; Ex. 1010, p. 17, ¶[0033] (“The camera 70 extends to the rear side 76 of the second section 14. The camera is housed at an exterior side of the portable electronic device by a junction 98 of a cutout portion...”). The '602 Patent further discloses “[b]y providing a projecting portion of the housing flush with the camera, this allows the rest of the telephone to have the reduced thickness 24, but still use a standard size camera.” Ex. 1001, 5:21-25; Ex. 1010, p. 17, ¶[0033] (“By providing a projecting portion of the housing for the camera, this allows the rest of the telephone to have the reduced thickness 24, but still use a standard size camera.”).

A person of ordinary skill in the art would have understood that the camera would extend to the cutout of the one-piece housing.

95. The '602 Patent also discloses a one-piece housing. As shown in annotated FIGs. 11-13 below, the '602 Patent explicitly discloses a “one-piece metal tubular housing member 118” with “components 112, 114, and 116” housed therein, where component 112 is a battery, component 114 is an engine, and component 116 is a keypad. Ex. 1001, 5:42-48; Ex. 1010, p. 18, ¶[0035] (“The components 112 [battery], 114 [engine], 116 [keypad] are housed in a one-piece metal tubular housing member 118.”). The '602 Patent also explicitly states that the “keypad is located at a hole through the front side 120 of the housing member 118.” *Id.* The '602 Patent also explicitly discloses that the “housing member 118” forms enclosed lateral exterior sides 122 and rear side 124.” *Id.*; Ex. 1010, p. 18, ¶[0035] (“The keypad is located at a hole through the front side 120 of the housing member 118. Otherwise, the housing member 118 forms enclosed lateral exterior sides 122 and rear side 124.”).

Ex. 1001, FIGs. 11-13 (annotated); Ex. 1010, p. 32, FIGs. 11-13



96. That is, the '602 Patent explicitly discloses "a one piece housing forming enclosed exterior lateral sides and a rear side." Ex. 1001, 5:42-48 ("[A] one-piece housing member 118...forms enclosed lateral exterior sides 122 and rear side 124."); Ex. 1010, p. 18, ¶[0035] ("The keypad is located at a hole through the front side 120 of the housing member 118. Otherwise, the housing member 118 forms enclosed lateral exterior sides 122 and rear side 124."); Ex. 1010, p. 18, ¶[0035] ("The components 112 [battery], 114 [engine], 116 [keypad] are housed in a one-piece metal tubular housing member 118."). The '602 Patent also explicitly discloses "[t]he camera 70 extends to the rear side," and "[t]he camera 70 is housed

at an exterior side of the portable electronic device by a junction 98 of a cutout portion.” Ex. 1001, 5:15-19; Ex. 1010, p. 17, ¶[0033] (“The camera 70 extends to the rear side 76 of the second section 14. The camera is housed at an exterior side of the portable electronic device by a junction 98 of a cutout portion...”). Thus, a person of ordinary skill in the art would have understood that the housing of the ’602 Patent housed a battery and an engine section, as well as a camera extending to a cut out of a rear side of the housing.

97. According to the ’602 Patent, FIGs. 11-13 are embodiments that describe alternate embodiments of the battery relative to the engine. Ex. 1001, 5:40-41 (“FIGS. 11-13 show other alternate embodiments of positioning the battery relative to the engine.”); Ex. 1010, p. 18, ¶[0035] (“Figs. 11-13 show other alternate embodiments of positioning the battery relative to the engine.”). These embodiments, and the relative placement of the battery/engine, would have been understood by the person of ordinary skill in the art as not having an impact on the placement of the other components of the ’602 Patent. The person of ordinary skill in the art would have understood that the alternate embodiments of FIGS. 11-13 would have included the same components, for example, a display, a camera, and the like. Accordingly, and in view of the flexibility of the ’602 Patent disclosure, the person of ordinary skill in the art would have understood that the camera, as well as other components, was present in the embodiments shown in FIGS. 11-13.

Thus, once applied to a candy-bar form factor, the person of ordinary skill in the art would have understood that the configurations in FIGS. 11-13 would include the claimed components in a one-piece housing.

98. The explicit disclosure in FIGs. 11-13 and accompanying description in the '602 Patent, the explicit disclosure of that the configurations of FIGs. 11-13 could be used in candy-bar style telephone handsets, and the explicit disclosure of a camera extending to a cut out of a rear side, would have all conveyed to the person of ordinary skill in the art “a cut out in the rear side of said housing,” and “a camera located in said housing and extending to said cut out at said rear side.” Thus, in my opinion, the '602 Patent conveyed to the person of ordinary skill in the art that the inventor possessed the claimed invention.

99. The disclosure of FIGs. 11-13 and accompanying descriptions in the '602 Patent are left unaddressed by Petitioner and Dr. Visser. I understand that Dr. Visser does not allege that, nor explain why, this particular disclosure, along with the remaining disclosure of the '602 Patent, would not have conveyed “a one piece housing forming enclosed exterior lateral sides and a rear side,” “a cut out in the rear side of said housing,” and “a camera located in said housing and extending to said cut out at said rear side,” to a person of ordinary skill in the art.

100. Thus, in my opinion, by specifically disclosing a candy-bar style handset, a PDA, as well as one-piece housings, the '602 Patent reasonably

conveyed to a person of ordinary skill in the art the claimed invention.

Accordingly, I disagree with the Petitioner and Dr. Visser's conclusion that the specification of the '602 Patent is limited "to a flip phone where the camera is in the second (top) section" because the specification provides explicit support for one-piece housing form factors.

101. In addition to the explicit disclosure in the '602 Patent of the claimed invention of the '602 Patent, the '602 Patent also provides several passages that underscore to the person of ordinary skill in the art that the selection of a specific form factor was flexible and was not limited, as suggested by Dr. Visser, to a flip phone configuration. The '602 Patent states that "[i]t should be understood that the foregoing description is only illustrative of the invention" and "[v]arious alternatives and modifications can be devised by those skilled in the art without departing from the invention." Ex. 1001, 6:13-16; Ex. 1010, p. 19, ¶[0039] ("It should be understood that the foregoing description is only illustrative of the invention. Various alternatives and modifications can be devised by those skilled in the art without departing from the invention.")). The '602 Patent also notes that "the invention can be embodied in many alternate forms of embodiments," and "[i]n addition, any suitable size, shape or type of elements or materials could be used." Ex. 1001, 2:52-59; Ex. 1010, p. 12, ¶[0022] ("the invention can be embodied in many alternate forms of embodiments...any suitable size, shape or

type of elements or materials could be used.). These statements would have directly conveyed to the person of ordinary skill in the art that the description of the '602 Patent was merely illustrative and that devices with a housing that included all of its components (e.g., camera, input section, engine, battery, etc.), including the PDAs and candy-bar style handsets discussed above, were contemplated by the inventor. These statements are also left unaddressed by Petitioner and Dr. Visser. I understand that Dr. Visser does not allege that, nor explain why, these particular statements would not have conveyed to the person of ordinary skill in the art that the specification of the '602 Patent contemplated configurations outside of the alleged flip phone housing configuration, nor more specifically why these particular statements, along with the remaining disclosure of the '602 Patent, would not have conveyed the claimed configuration to a person of ordinary skill in the art.

B. The '602 Patent provides support for “an engine section comprising a printed circuit board, a transceiver, a processor, and a memory.”

102. The '602 Patent discloses support for the claim element “an engine section comprising a printed circuit board, a transceiver, a processor and a memory.” For example, the '602 Patent discloses “[t]he engine 30 generally comprises a printed circuit board, a transceiver, a processor, and a memory, among other components.” Ex. 1001, 3:63-65, Figure 8; Ex. 1010, p. 14, ¶[0028] (“The

engine 30 generally comprises a printed circuit board, a transceiver, a processor, and a memory, among other components.”).

C. The '602 Patent provides support for “a user input section.”

103. The '602 Patent discloses support for the claim element “a user input section.” For example, the '602 Patent discloses “[t]he user input section generally comprises keymats 50, an EL backlight foil 52, a keymat dome sheet 54 and a keymat stiffener 56” and “in alternative embodiments, any suitable user input section could be provided.” Ex. 1001, 3:54-57, Figure 7; Ex. 1010, p. 14, ¶[0027] (“The user input generally comprises keymats 50, an EL backlight foil 52, a keymat dome sheet 54 and a keymat stiffener 56...in alternate embodiments, any suitable user input section could be provided.”).

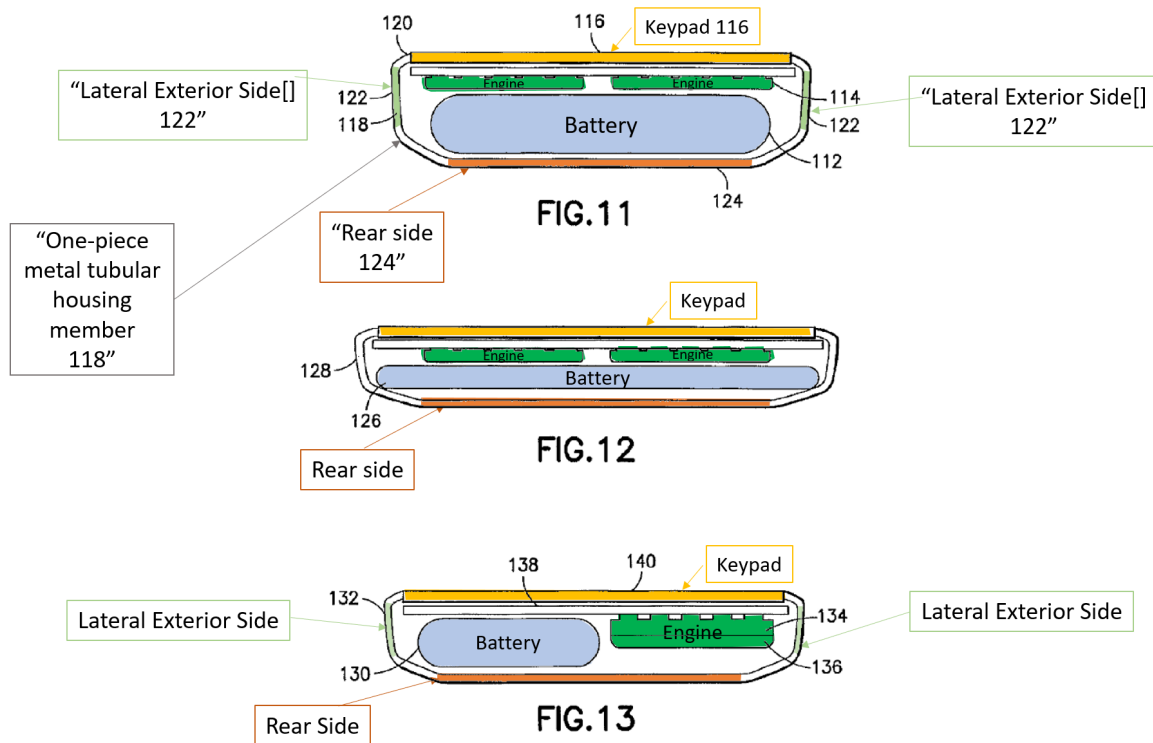
104. The '602 Patent explicitly states that the “keypad is located at a hole through the front side 120 of the housing member 118.” Ex. 1001, 5:42-48; Ex. 1010, p. 18, ¶[0035] (“The keypad is located at a hole through the front side 120 of the housing member 118. Otherwise, the housing member 118 forms enclosed lateral exterior sides 122 and rear side 124.”). To be clear, the user input (keypad 116) is shown as being located in an opening between the lateral exterior sides. Thus, in view of all of the foregoing, the '602 Patent explicitly discloses a one-piece housing with a user input located in an opening between lateral sides of the housing.

D. The '602 Patent provides support for “a user input section located above the engine section and a battery, wherein the user section is located adjacent the battery and the engine section.”

105. The '602 Patent discloses support for the claim elements “a user input section located above the engine section and a battery, wherein the user section is located adjacent the battery and the engine section.” For example, the '602 Patent discloses “[t]he keypads are located above the engine section 30 and the battery 32, wherein the user input section 34 is located directly opposite the battery 32 without a significant portion of the engine section 30 therebetween.” Ex. 1001, 4:7-10; Ex. 1010, p. 17, ¶[0034]. The '602 Patent further discloses that, in other embodiments, “the battery 112 is located below the engine 114” and the “keypad 116 is located above the engine.” Ex. 1001, 5:41-43; Ex. 1010, p. 18, ¶[0035].

106. Moreover, in FIG. 13 below, the '602 Patent explicitly discloses a split side-by-side configuration where the keypad is located above the engine section and the battery, and the keypad is adjacent the engine section and the battery. *See* Ex. 1001, FIG. 13.

Ex. 1001, FIGs. 11-13 (annotated); Ex. 1010, p. 32, FIGs. 11-13



107. This explicit disclosure in the '602 Patent conveyed to the person of ordinary skill in the art "a user input section located above the engine section and the battery."

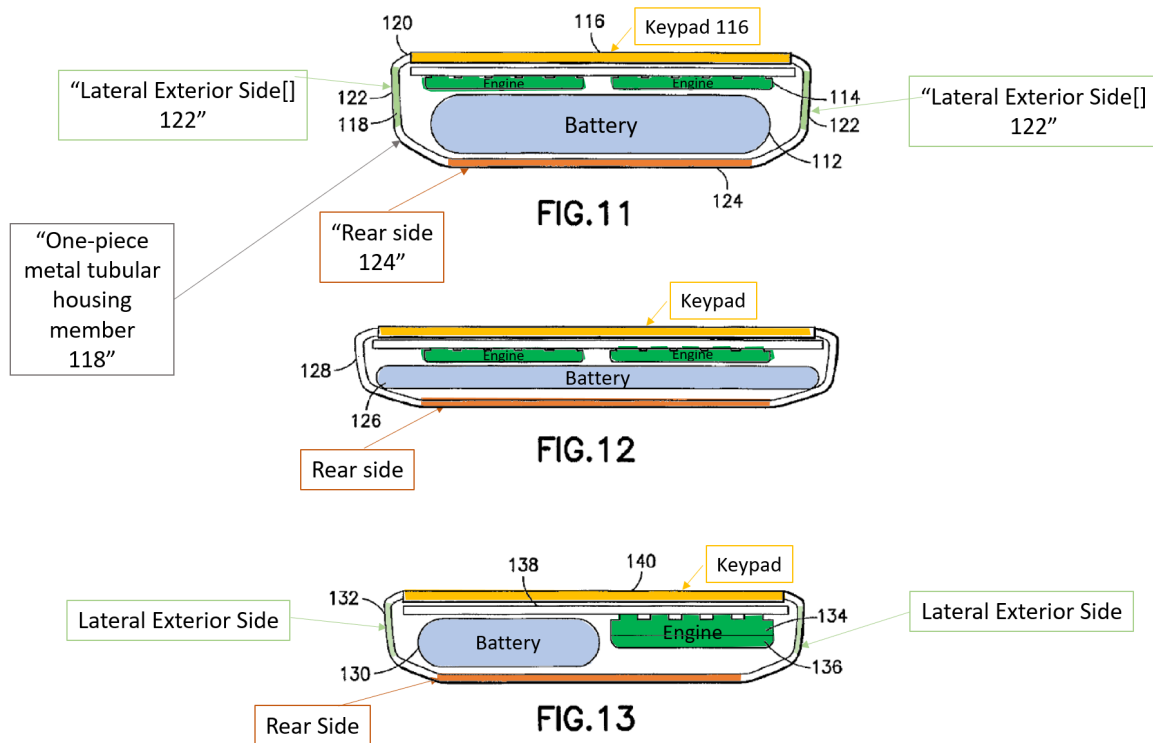
E. The '602 Patent provides support for "wherein the battery and engine section are housed in the housing and the user input is located in an opening between said exterior lateral sides of said one piece housing of the portable electronic device."

108. The '602 Patent discloses "wherein the battery and engine section are housed in the housing and the user input is located in an opening between said exterior lateral sides of said one piece housing of the portable electronic device." Specifically, contrary to Dr. Visser's statement that "there is no disclosure of the

user input being located in an opening between lateral sides of a housing with a camera,” (see Ex. 1003, ¶23), the ’602 Patent discloses “opposite exterior lateral sides” of housing sections that house the components disclosed in the ’602 Patent, including the “engine section,” “battery,” “user input section,” and “camera.” See Ex. 1001, 1:51-2:15; Ex. 1010, p. 9, ¶[0006].

109. Moreover, as shown in annotated FIGs. 11-13 below, the ’602 Patent explicitly discloses a “one-piece metal tubular housing member 118” with “components 112, 114, and 116” housed therein, where component 112 is a battery, component 114 is an engine, and component 116 is a keypad. Ex. 1001, 5:42-48; Ex. 1010, p. 18, ¶[0035] (“The components 112 [battery], 114 [engine], 116 [keypad] are housed in a one-piece metal tubular housing member 118.”). The ’602 Patent also explicitly states that the “keypad is located at a hole through the front side 120 of the housing member 118.” *Id.* The ’602 Patent also explicitly discloses that the “housing member 118” forms enclosed lateral exterior sides 122 and rear side 124.” *Id.*; Ex. 1010, p. 18, ¶[0035] (“The keypad is located at a hole through the front side 120 of the housing member 118. Otherwise, the housing member 118 forms enclosed lateral exterior sides 122 and rear side 124.”). Thus, the user input (keypad 116) is shown and disclosed as being located in an opening between the lateral exterior sides.

Ex. 1001, FIGs. 11-13 (annotated) ; Ex. 1010, p. 32, FIGs. 11-13



110. The explicit disclosure of the '602 Patent in FIGs. 11-13 and their accompanying descriptions conveyed to the person of ordinary skill in the art a “battery and engine section are housed in the housing.” Ex. 1001, 5:43-45. (“The components 112, 114, 116 are housed in a one-piece metal tubular housing member 118.”); Ex. 1010, p. 18, ¶[0035] (“The components 112 [battery], 114 [engine], 116 [keypad] are housed in a one-piece metal tubular housing member 118.”). The explicit disclosure of the '602 Patent in FIGs. 11-13 and their accompanying descriptions conveyed to the person of ordinary skill in the art that “the user input is located in an opening between said exterior lateral sides of said

one piece housing of the portable electronic device.” Ex. 1001, 5:45-48 (“The keypad is located at a hole through the front side 120 of the housing member 118. Otherwise, the housing member 118 forms enclosed lateral exterior sides 112 and rear side 124.”); Ex. 1010, p. 18, ¶[0035] (“The keypad is located at a hole through the front side 120 of the housing member 118. Otherwise, the housing member 118 forms enclosed lateral exterior sides 122 and rear side 124.”).

111. This explicit disclosure in the ’602 Patent is left unaddressed by both Petitioner and Dr. Visser. I understand that Dr. Visser does not allege that, nor explain why, this particular disclosure, along with the remaining disclosure of the ’602 Patent, would not have conveyed to the person of ordinary skill in the art “wherein the battery and engine section are housed in the housing and the user input is located in an opening between said exterior lateral sides of said one piece housing of the portable electronic device.”

112. Given the explicit support provided by the written description of the ’602 Patent, a person of ordinary skill in the art would conclude that the inventor had possession of the claimed invention of the ’602 Patent when the Applicant filed the original application on March 29, 2006. As stated above, notably, the ’602 Patent also did not receive any rejections regarding the “written description” requirement of 35 U.S.C. § 112 during its prosecution. *See* Ex. 1002. As such, in my opinion, the ’602 Patent satisfies the “written description” requirement of 35

U.S.C. § 112, and therefore, is entitled to at least the priority date of the original application filed on March 29, 2006.

X. PETITIONER'S GROUNDS FAIL AT LEAST BECAUSE THE REFERENCES ARE NOT PRIOR ART TO THE '602 PATENT.

113. Each of the grounds of the Petition relies on McClure-997, and two of the three grounds rely on McClure-997 along with McClure-998. Because neither McClure-997 nor McClure-998 is prior art to the '602 Patent, Grounds 1, 2, and 3 are deficient for failing to demonstrate that the claimed limitations are taught or suggested by the cited references.

114. McClure-997 was filed January 31, 2011, and published August 2, 2012, as acknowledged by Dr. Visser. Ex. 1003, ¶60; Ex. 1004, Cover. Because, as I explain above, the '602 Patent is entitled to a priority date of at least March 29, 2006, which predates the filing date of McClure-997, I understand that McClure-997 does not qualify as prior art to the '602 Patent.

115. McClure-998 was filed January 31, 2011, and published August 2, 2012, as acknowledged by Dr. Visser. Ex. 1003, ¶64; Ex. 1005, Cover. Because, as I explain above, the '602 Patent is entitled to a priority date of at least March 29, 2006, which predates the filing date of McClure-998, I understand that McClure-998 does not qualify as prior art to the '602 Patent.

A. Grounds 1 and 2 fail at least because McClure-997 and McClure-998 are not prior art.

116. I understand that Ground 1 relies entirely on McClure-997 for alleged teachings of claims 1-8, 11-29, and 32-36 of the '602 Patent, and that Ground 2 relies on a combination of McClure-997 and McClure-998 for alleged teachings of claims 1-8, 11-29, and 32-36 of the '602 Patent. Petition, 19; Ex. 1003, ¶¶31, 50-51.

117. Because neither McClure-997 nor McClure-998 qualifies as prior art to the '602 Patent, and because the Petitioner does not advance any other purported teachings of the limitations of claims 1-8, 11-29, and 32-36, Grounds 1 and 2 do not demonstrate that any of the limitations of claims 1-8, 11-29, and 32-36 of the '602 Patent. Accordingly, Grounds 1 and 2 fail to demonstrate that claims 1-8, 11-29, and 32-36 are rendered obvious.

B. Ground 3 fails at least because McClure-997 and McClure-998 are not prior art.

118. I understand that Ground 3 relies entirely on a combination of McClure-997, McClure-998, and Chiang for alleged teachings of claims 1-36 of the '602 Patent, where, like Ground 2, McClure-997 and McClure-998 are relied upon for the independent claims. Petition, 19; Ex. 1003, ¶¶31, 50-51.

119. Petitioner and Dr. Visser rely on Chiang for an alleged teaching of “a cut-out portion around the camera that projects outward from the housing,” and on McClure-997 and McClure-998 for the remaining claimed limitations. Petition, pp. 94-95. Because neither McClure-997 nor McClure-998 qualifies as prior art to the

'602 Patent, and because the Petitioner does not advance any other purported teachings of the limitations by Chiang, Ground 3 does not demonstrate that claims 1-36 are rendered obvious.

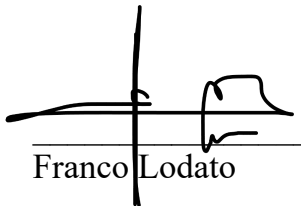
XI. CONCLUSION

120. In signing this declaration, I recognize that this declaration will be filed as evidence in a contested case before the Patent Trial and Appeal Board of the United States Patent and Trademark Office. I also recognize that I may be subject to cross-examination in the case.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code.

Executed this 30th day of October, 2024.

Respectfully submitted,



Franco Lodato