

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

LUXOTTICA OF AMERICA INC.,
Petitioner,

v.

E-VISION SMART OPTICS, INC.,
Patent Owner.

IPR2024-01072
U.S. Patent No. 10,598,960

DECLARATION OF JOHN FELAND, PH.D.

TABLE OF CONTENTS

	Page No.
I. BACKGROUND	2
A. Experience and Qualifications	2
B. Applicable Legal Standards	5
C. Person of Ordinary Skill in the Art	10
II. THE TECHNOLOGY	12
III. THE '960 PATENT	14
A. Summary of the '960 Patent.....	14
1. The Specification	14
2. The Claims	16
B. Priority Date of the '960 Patent.....	17
C. Claim Construction	18
IV. THE PRIOR ART	19
A. Jannard-740	19
B. Osterhout	21
C. Rosenblatt.....	22
D. Gunaratne	24
E. Nielsen.....	25
F. Chen.....	25

TABLE OF CONTENTS
(cont'd)

	Page No.
V. JANNARD-740 RENDERS OBVIOUS CLAIMS 1-3 AND 6-10.....	26
A. Claim 1	27
1. Preamble.....	27
2. Limitation 1[a]: “an eyewear frame having a first temple and a second temple”	27
3. Limitation 1[b]: “a speaker supported by the eyewear frame”	28
4. Limitation 1[c]: “an application module mechanically coupled to the eyewear frame and operably coupled to the speaker”	30
5. Limitation 1[d]: “the application module comprising: a microphone and a wireless chip”	32
6. Limitation 1[e]: the microphone and the wireless chip “to receive a verbal query from a wearer of the eyewear, wirelessly transmit the verbal query to an external device, receive a response to the verbal query, and provide the response to the wearer via the speaker”	33
B. Claim 2	39
C. Claim 3	40
D. Claim 6	40
E. Claim 7	42
F. Claims 8 and 9.....	43

TABLE OF CONTENTS

(cont'd)

	Page No.
1. Claim 8	43
2. Claim 9	45
G. Claim 10	45
VI. OSTERHOUT RENDERS OBVIOUS CLAIMS 1-8 AND 10	47
A. Claim 1	47
1. Preamble.....	47
2. Limitation 1[a]: “an eyewear frame having a first temple and a second temple”	47
3. Limitation 1[b]: “a speaker supported by the eyewear frame”	48
4. Limitation 1[c]: “an application module mechanically coupled to the eyewear frame and operably coupled to the speaker”	49
5. Limitation 1[d]: “the application module comprising: a microphone and a wireless chip”	50
6. Limitation 1[e]: the microphone and the wireless chip “to receive a verbal query from a wearer of the eyewear, wirelessly transmit the verbal query to an external device, receive a response to the verbal query, and provide the response to the wearer via the speaker”	52
B. Claims 2 and 3	53
C. Claims 4 and 5	54

TABLE OF CONTENTS
(*cont'd*)

	Page No.
D. Claim 6	55
E. Claim 7	55
F. Claim 8	56
G. Claim 10	57
VII. JANNARD-740 AND OSTERHOUT RENDER OBVIOUS	
CLAIMS 1-10	57
A. Combination of Jannard-740 and Osterhout	58
B. Claim 1	63
1. Preamble and Limitations 1[a]-1[b]	63
2. Limitations 1[c]-[d]	63
3. Limitation 1[e]	64
C. Claims 2 and 3	64
D. Claims 4 and 5	64
E. Claims 6-10	66
VIII. JANNARD-740 AND ROSENBLATT RENDER OBVIOUS	
CLAIMS 11-18, 20-24, AND 26	66
A. Combination of Jannard-740 and Rosenblatt	66
B. Claim 11	69
1. Preamble	69

TABLE OF CONTENTS
(cont'd)

	Page No.
2. Limitation 11[a]: “an eyewear frame having a first temple and a second temple”	69
3. Limitation 11[b]: “an application module mechanically coupled to the eyewear frame”	69
4. Limitation 11[c]: “the application module including a wireless chip to communicate with a wireless enabled device”	69
5. Limitation 11[d]: “wherein the wireless enabled device is configured to recognize a presence of a wearer of the eyewear based at least in part on communication with the wireless chip”	71
C. Claim 12	72
D. Claim 13	73
E. Claim 14	74
F. Claim 15	75
G. Claim 16	77
H. Claim 17	77
I. Claim 18	78
J. Claim 20	78
K. Claim 21	78
L. Claim 22	79
1. Preamble.....	79

TABLE OF CONTENTS

(cont'd)

	Page No.
2. Limitation 22[a]: “an eyewear frame having a first temple and a second temple”	79
3. Limitation 22[b]: “an application module mechanically coupled to the eyewear”	79
4. Limitation 22[c]: “the application module comprising a transmitter and a wireless chip”	79
5. Limitation 22[d]: the transmitter and the wireless chip “to wirelessly transmit a password from the application module from a wearer of the eyewear to a computer to access the computer”	80
M. Claim 23	82
N. Claim 24	82
O. Claim 26	83
IX. JANNARD-740, ROSENBLATT, AND GUNARATNE RENDER OBVIOUS CLAIM 19.....	83
X. JANNARD-740, ROSENBLATT, AND NIELSEN RENDER OBVIOUS CLAIM 25.....	85
XI. CHEN AND ROSENBLATT RENDER OBVIOUS CLAIMS 11-18, 20-24, AND 26	87
A. Combination of Chen and Rosenblatt	87
B. Claim 11	90
1. Preamble.....	90

TABLE OF CONTENTS

(cont'd)

	Page No.
2. Limitation 11[a]: “an eyewear frame having a first temple and a second temple”	90
3. Limitation 11[b]: “an application module mechanically coupled to the eyewear frame”	91
4. Limitation 11[c]: “the application module including a wireless chip to communicate with a wireless enabled device”	92
5. Limitation 11[d]: “wherein the wireless enabled device is configured to recognize a presence of a wearer of the eyewear based at least in part on communication with the wireless chip”	94
C. Claims 12-18	95
D. Claim 20	95
E. Claim 21	95
F. Claim 22	96
1. Preamble and Limitations 22[a]-22[b].....	96
2. Limitation 22[c]	96
3. Limitation 22[d]	97
G. Claims 23, 24, and 26.....	98
XII. CHEN, ROSENBLATT, AND GUNARATNE RENDER OBVIOUS CLAIM 19.....	98
XIII. CHEN, ROSENBLATT, AND NIELSEN RENDER OBVIOUS CLAIM 25	99

TABLE OF CONTENTS
(cont'd)

	Page No.
XIV. SECONDARY CONSIDERATIONS	100
XV. CONCLUSION	101

I, John Feland, Ph.D., declare as follows:

1. I am making this declaration at the request of Luxottica of America Inc. (“Luxottica”).

2. I am being compensated for my work in this matter and I am being reimbursed at cost for my expenses. My compensation in no way depends upon the outcome of this proceeding. I do not own any stock in Luxottica and, to my knowledge, I have no financial interest in Luxottica.

3. In preparing this declaration, I considered the following materials:

Exhibit No.	Description
1001	U.S. Patent No. 10,598,960 to Blum et al. (“’960 patent”)
1002	File History of U.S. Patent No. 10,598,960
1005	U.S. Patent App. Publ. No. 2012/0105740 to Jannard et al. (“Jannard-740”)
1006	U.S. Patent App. Publ. No. 2011/0214082 to Osterhout et al. (“Osterhout”)
1007	U.S. Patent App. Publ. No. 2009/0006846 to Rosenblatt (“Rosenblatt”)
1008	U.S. Patent App. Publ. No. 2010/0238034 to Gunaratne (“Gunaratne”)
1009	U.S. Patent No. 6,665,842 to Nielsen (“Nielsen”)
1010	U.S. Patent No. 7,306,332 to Chen et al. (“Chen”)
1011	Excerpts from Microsoft Computer Dictionary, Fifth Edition, 2002
1012	U.S. Patent No. 6,185,537 to Oh et al. (“Oh”)

Exhibit No.	Description
1013	U.S. Patent No. 6,325,507 to Jannard et al. (“Jannard-507”)
1014	Graf, Modern Dictionary of Electronics, 7th Edition, 1999
1015	U.S. Patent No. 6,929,365 to Swab et al. (“Swab”)
1016	U.S. Patent App. Publ. No. 2011/0014932 to Estevez (“Estevez”)
1017	U.S. Patent App. Publ. No. 2006/0132382 to Jannard et al. (“Jannard-382”)
1019	Int’l Patent App. Publ. No. 01/95625 to Calderone et al. (“Calderone”)
1020	Int’l Patent App. Publ. No. 99/53612 to Blum et al. (“Blum”)
1021	YouTube Siri Demo Screenshots
1022	Texas Instruments OMAP White Paper

4. I have also relied on my education, training, and experience, and my knowledge of pertinent literature in the field of the ’960 patent.

I. BACKGROUND

A. Experience and Qualifications

5. My experience and qualifications are summarized in my *curriculum vitae*, a copy of which is provided as Exhibit 1004.

6. I have over 30 years of experience in mechanical engineering, electromechanical engineering, and mechatronics. I graduated from the Massachusetts Institute of Technology with a bachelor of science degree in mechanical engineering in 1994. After graduating from MIT, I attended Stanford

University, where I received an M.S. in 1996 and then a Ph.D. in 2005, both also in mechanical engineering. Although my degrees were in mechanical engineering, I completed coursework and research involving electronic circuitry, electromechanical engineering, and mechatronics.

7. Beginning in June 1996, I worked as a mechatronic design engineer for IDEO Product Development. From March 1997 to April 1999, I worked for the National Air Intelligence Center as a Program Manager, Defense Intelligence Systems, managing mission requirements and software development for an \$18 billion missile warning satellite program. From April to July 1999, I served as Director, Measurement and Signals Intelligence Systems, for the Joint Analysis Center, supervising classified intelligence support for Operation Allied Force in Kosovo.

8. From August 1999 to July 2001, I was an Assistant Professor of Engineering Mechanics for the United States Air Force Academy. In that time, I launched the Academy's first mechatronics course. From 2002 to 2004, I worked as a design strategy consultant for Trusted Nomad, taught at Stanford, and worked as Senior Mechanical Engineer for Symyx Technologies, developing MEMS industrial sensors.

9. From December 2004 to August 2008, I worked at Synaptics. While at Synaptics, I designed and built several mobile devices and mobile-device

accessories. The team I managed retrofitted or designed from scratch hundreds of capacitive touch interfaces for multiple consumer electronic devices. Through this work, I gained deep experience with manufacturing electronic assemblies and integrating them into a wide array of consumer electronics. This work also provided me with significant experience in the path to mass production, including how to deliver technological improvements that could be mass produced, as we recommended these prototypes as potential product features for customers. My work at Synaptics included architecting the Onyx, a working multitouch-controlled mobile phone prototype, which gained international recognition in 2006, winning the Red Dot Design Concept Award months ahead of Apple's 2007 launch of the iPhone.

10. After Synaptics, I was Chief Technologist at SK Telecom Americas from September 2008 to September 2009. While at SK Telecom Americas, I evaluated several user experience designs across a range of interfaces, including voice, touch, and gesture. From October 2009 to September 2011, I held positions at Stanford, including Executive Director of the Global Design Innovation course that connects graduate students with corporate partners, as well as Consulting Assistant Professor in the Design Group of the Mechanical Engineering department. In 2012, I served as Distinguished Lecturer at Cogswell Polytechnical College, teaching courses in robotics and entrepreneurship.

11. After leaving SK Telecom in September 2009, I founded Argus Insights, a consulting firm that I have run for nearly 15 years. Some of my projects have included analyzing what UX aspects are driving adoption in autonomous vehicles and designing UX for industrial cutting tools to lower training requirements and increase operator effectiveness.

12. I am currently a Principal Strategist at CableLabs, a non-profit think tank for the broadband industry. I pursue a mixture of quantitative and qualitative research on consumer behaviors and preferences. I also coach innovation teams and work extensively in artificial intelligence strategy. From April 2017 to September 2018, I served as forum chair and moderator for the IoT (Internet of Things) Forum in Silicon Valley. Since August 2018, I have also taught engineering at the Nueva School.

13. As shown in my CV, I have authored or co-authored over 30 publications, most of which relate to engineering or design. I am a named inventor on at least six issued patents.

B. Applicable Legal Standards

14. I have been asked to provide my opinion as to whether certain claims of U.S. Patent No. 10,598,960 would have been obvious to a person of ordinary skill in the art (“POSITA”) at the time of the alleged invention, in view of the prior art.

15. I am an engineer and product designer by training and profession. The opinions I am expressing in this report involve the application of my training and technical knowledge and experience to the evaluation of certain prior art with respect to the '960 patent.

16. Although I have been involved as a technical expert in patent matters before, I am not an expert in patent law. Therefore, the attorneys from Knobbe, Martens, Olson & Bear, LLP have provided me with guidance as to the applicable patent law in this matter. The paragraphs below express my understanding of how I must apply legal principles relating to patent validity in my analysis.

17. It is my understanding that in determining whether a patent claim is obvious in view of the prior art, the Patent Office construes the claim by giving the claim its ordinary and customary meaning ascribed to it by a person of ordinary skill in the art at the time of the invention, consistent with the specification. I also understand that in reading the claim, I must not import limitations from the specification into the claim terms; in other words, I must not narrow the scope of the claim terms by implicitly adding disclosed limitations that have no express basis in the claims.

18. It is my understanding that a claim is "obvious" if the claimed subject matter as a whole would have been obvious to a person of ordinary skill in the art at the time of the alleged invention. I also understand that an obviousness analysis

takes into account the scope and content of the prior art, the differences between the claimed subject matter and the prior art, and the level of ordinary skill in the art at the time of the invention.

19. In determining the scope and content of the prior art, it is my understanding that a reference is considered appropriate (e.g., analogous) prior art if it falls within the field of the inventor's endeavor. In addition, a reference is prior art if it is reasonably pertinent to the particular problem with which the inventor was involved. A reference is reasonably pertinent if it logically would have commended itself to an inventor's attention in considering his problem. If a reference relates to the same problem as the claimed invention, that supports use of the reference as prior art in an obviousness analysis.

20. To assess the differences between prior art and the claimed subject matter, it is my understanding that the law requires the claimed invention to be considered as a whole. This "as a whole" assessment requires showing that one of ordinary skill in the art at the time of invention, confronted by the same problems as the inventor and with no knowledge of the claimed invention, would have selected the elements from the prior art and combined them in the claimed manner.

21. It is my understanding that something is "inherent in," and therefore taught by, the prior art, if it necessarily flows from the explicit disclosure of the prior art. I understand that the fact that a certain result or characteristic may be present in

the prior art is not sufficient to establish inherency. However, if the result or characteristic is necessarily present based upon the explicit disclosure in the prior art, it is inherent in the prior art and is therefore disclosed.

22. It is my further understanding that the law recognizes several rationales for combining references or modifying a reference to show obviousness of claimed subject matter. Some of these 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; a predictable use of prior art elements according to their established functions; applying a known technique to a known device (method or product) ready for improvement to yield predictable results; choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success; and 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.

23. I understand that a prior art reference may also suggest a limitation of the claims. In that case, even if the prior art reference does not explicitly or inherently disclose the limitation, the motivation to modify the prior art reference to include the limitation may exist within the prior art reference itself. Thus, the limitation would have been obvious over that prior art reference alone. This is the case if a person of ordinary skill in the art would have had a simple design choice or

a finite number of identified, predictable solutions, for example, and if the modification furthers the goals of the prior art reference.

24. I further understand that the obviousness analysis must be performed from the perspective of a person of ordinary skill in the art at the time of the alleged invention. This is to avoid using impermissible hindsight in the analysis. The claims of the patent must not be used to provide a road map for obviousness; instead, the claims would have been obvious if a person of ordinary skill in the art would have been motivated to combine the teachings of the prior art to arrive at the claimed invention and had a reasonable expectation of success in doing so.

25. I also understand that an obviousness analysis must consider whether there are additional factors that would indicate that the invention would not have been obvious. These factors include whether there was: (i) a long-felt need in the industry; (ii) any unexpected results; (iii) skepticism of the invention; (iv) a teaching away from the invention; (v) commercial success; (vi) praise by others for the invention; and (vii) copying by other companies. I am not aware of any evidence that would suggest that the claims of the '960 patent would have been non-obvious. To the extent Patent Owner submits such evidence during the course of the *inter partes* review, I may provide my opinion on such evidence if asked to do so by counsel.

C. Person of Ordinary Skill in the Art

26. It is my understanding that when interpreting the claims of the '960 patent, I must do so based on the perspective of a person of ordinary skill in the art at the relevant priority date. As discussed below, I understand the earliest possible priority date to be January 6, 2012.

27. I understand that in determining the level of ordinary skill in the art, several factors are considered. Those factors may include: (i) the type of problems encountered in the art; (ii) prior art solutions to those problems; (iii) the rapidity with which innovations are made; (iv) the sophistication of the technology; and (v) the educational level of active workers in the field. A person of ordinary skill in the art must have the capability of understanding the scientific and engineering principles applicable to the pertinent art.

28. The '960 patent describes the use of well-known technologies relating to eyewear with electronics. Based on my review of the specification and claims of the '960 patent, it is my opinion that a person of ordinary skill in the art would be a person having at least a bachelor's degree in mechanical or manufacturing engineering; mechatronics; electrical engineering plus coursework in mechanical engineering, manufacturing engineering, or mechatronics; or a similar technical degree. A POSITA would have also had at least 2 years of experience designing consumer electronics, such as eyewear with electronics. Additional work experience

could serve as a substitute for a formal degree and vice versa. However, my opinions do not turn on this specific definition of the level of ordinary skill. The claims would be obvious from the perspective of a person of ordinary skill under any reasonable definition.

29. I am able to make this assessment because in the 2000s, I was familiar with design and operation principles common in the mechanical, manufacturing, and mechatronic domains as they relate to the design, specification, and manufacturing of consumer electronic components. I, and the engineers that I worked with during the 2000s, had the requisite knowledge to make and use eyewear as described in the claims of the '960 patent. Because I have worked with and supervised designers, engineers, and software developers, I know very well what their capabilities were in the 2000s, how they would interpret and understand the claims of the '960 patent, and how they would understand the disclosures in the prior art discussed herein. Additionally, I have been a professor of mechanical engineering undergraduate and graduate programs where I developed novel curriculum that integrated mechatronic course content within existing mechanical engineering curriculums. As of May 2007, I had been an assistant professor at the United States Air Force Academy, as well as a graduate teaching assistant at Stanford University within the departments of Engineering Mechanics and Mechanical Engineering respectively.

30. In my opinion, as set forth in more detail below, a person having ordinary skill in the art at the time of the invention would have considered the devices and methods claimed in the '960 patent to be obvious in view of the prior art. My conclusions that the claims of the '960 patent would have been obvious would remain the same even if the invention date, field of endeavor, or level of ordinary skill were slightly different.

II. THE TECHNOLOGY

31. The '960 patent is "... directed to electronic eyewear modules and systems to be worn by a wearer" Ex. 1001 ('960 patent), 1:66-2:4. The modularity provides "... a user with a variety of interchangeable applications" and "[i]n the event that the electronic application modules break, they can also be easily replaced without replacing the entire system." Ex. 1001 ('960 patent), 2:7-11.

32. The '960 patent's claims encompass eyewear in which the eyewear's application modules (i) receive and wirelessly transmit a verbal query (claim 1), (ii) enable another device to recognize a wearer's presence (claim 11), and (iii) wirelessly transmit a password (claim 22). Ex. 1001 ('960 patent), 24:54-26:42. Eyewear with applications modules that implement such features was well known at the time of the '960 patent's priority date of January 2012.

33. For instance, Petitioner filed Jannard-740 in August 2011.¹ Ex. 1005 (Jannard-740), Front Page. Jannard-740 discloses eyewear having detachable modules which support voice commands, wireless communication, and other features. Ex. 1005 (Jannard-740), [0086], [0195]; *see also* Ex. 1005 (Jannard-740), [0187], [0161]. Jannard-740 also incorporated by reference another patent application, Jannard-382 (Ex. 1017). Ex. 1005 (Jannard-740), [0188], [0192]. Jannard-382 published in June 2006 and discloses, for instance, electronic eyewear that communicates with another device, including to query the other device for an email and read aloud the email via a speaker of the eyewear. Ex. 1017 (Jannard-382), Front Page, [0295]-[0299]; *see also* Ex. 1017 (Jannard-382), [0073]-[0074].

34. In another example, Osterhout disclosed in February 2011 eyewear with communications circuitry that wirelessly send a verbal query to another device and then receive a response to the query. Ex. 1006 (Osterhout), [0135]-[0136], [0309]-[0310].

35. In yet another example, Rosenblatt disclosed in January 2009 an electronic module that is referred to as a “key.” Ex. 1007 (Rosenblatt), Front Page, [0043]. Rosenblatt’s module may be incorporated in or attached to accessories, such as fashion accessories. Ex. 1007 (Rosenblatt), [0043]-[0044], [0058]. The module

¹ Petitioner filed Jannard-740 through subsidiary Oakley, Inc.

wirelessly communicates with other devices, such as a computer, multimedia system, automobile, lamp, or heating/air conditioning system, and may transmit a password to enable operations of the other devices. Ex. 1007 (Rosenblatt), [0005]-[0006], [0060]-[0061], [0095].

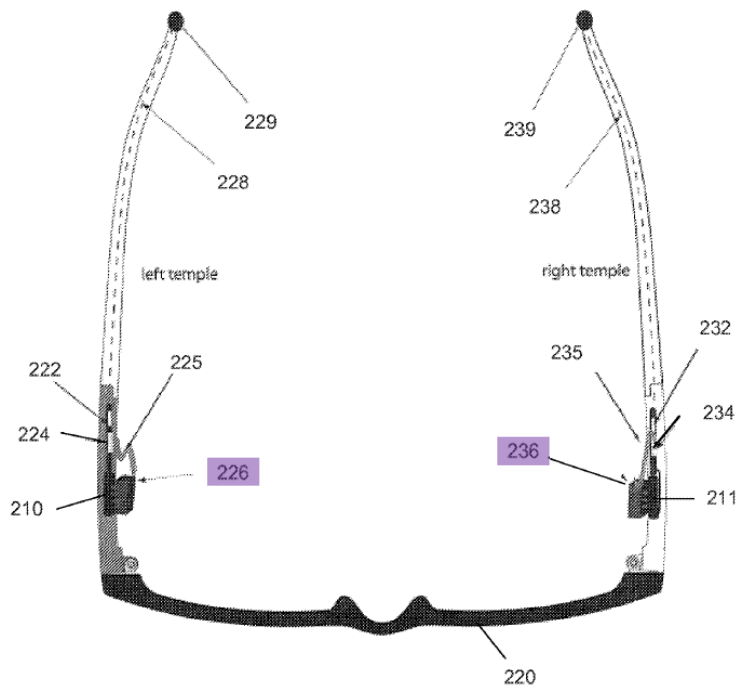
36. Thus, eyewear with the claimed features were well known to persons of ordinary skill in the art.

III. THE '960 PATENT

A. Summary of the '960 Patent

1. The Specification

37. The '960 patent discloses electronic eyewear, such as electro-active spectacles or eyeglasses. Ex. 1001 ('960 patent), 14:19-21. According to the '960 patent, its "... electronic eyewear system with a docking station can be easily joined with a plurality of electronic application modules" Ex. 1001 ('960 patent), 1:66-2:4. These application modules can be "sized to fit within a recess in an eyewear frame [or] attached external to the eyewear frame." Ex. 1001 ('960 patent), 9:28-31. The '960 patent's Figure 3 shows application modules 226, 236 (purple) which connect to the left and right temples of an eyewear.



Ex. 1001 ('960 patent), Fig. 3.²

38. The application modules facilitate interchangeable applications and “may include one or more electronic device(s) configured to perform one or more functions such as, for example, of audio playback, audio recording, ... alertness monitoring, ... [and] wireless communication (e.g. cellular phone, Bluetooth, WiFi, IR, etc.) ... to a user via the eyewear.” Ex. 1001 ('960 patent), 2:7-9, 9:32-43.

39. The application modules can incorporate a wireless chip that wirelessly communicates with other devices, facilitating different functions. Ex. 1001 ('960 patent), 19:4-11. Such communication permits the eyewear to send a verbally query or a password or for another device to recognize and respond to the presence of the

² Figures in this declaration are colored and annotated for clarity.

eyewear's wearer based on the communication. Ex. 1001 ('960 patent), 20:2-13, 19:50-55, 19:32-50.

2. The Claims

40. The '960 patent includes 26 claims, of which three (claims 1, 11, and 22) are independent. I offer opinions regarding all 26 claims in this declaration.

41. Claim 1 is set forth below:

Claim 1	
1[pre]	Eyewear comprising:
1[a]	an eyewear frame having a first temple and a second temple;
1[b]	a speaker supported by the eyewear frame;
1[c]	an application module mechanically coupled to the eyewear frame and operably coupled to the speaker, the application module comprising:
1[d]	a microphone and a wireless chip
1[e]	to receive a verbal query from a wearer of the eyewear, wirelessly transmit the verbal query to an external device, receive a response to the verbal query, and provide the response to the wearer via the speaker.

42. Claim 11 is set forth below:

Claim 11	
11[pre]	Eyewear comprising:
11[a]	an eyewear frame having a first temple and a second temple; and
11[b]	an application module mechanically coupled to the eyewear frame,
11[c]	the application module including a wireless chip to communicate with a wireless enabled device,
11[d]	wherein the wireless enabled device is configured to recognize a presence of a wearer of the eyewear based at least in part on communication with the wireless chip.

43. Claim 22 is set forth below:

Claim 22	
22[pre]	Eyewear comprising:
22[a]	an eyewear frame having a first temple and a second temple;
22[b]	an application module mechanically coupled to the eyewear
22[c]	the application module comprising a transmitter and a wireless chip
22[d]	to wirelessly transmit a password from the application module from a wearer of the eyewear to a computer to access the computer.

B. Priority Date of the '960 Patent

44. For purposes of this analysis, I have been asked to assume that the '960 patent's earliest possible priority date is its earliest claimed priority date, January 6, 2012.

C. Claim Construction

45. It is my understanding that in determining whether a patent claim is obvious in view of the prior art, the Patent and Trademark Office construes the claim by giving the claim terms their plain and ordinary meaning, as they would have been understood by a person of ordinary skill in the art at the time of the invention in view of the intrinsic record (patent claims, patent specification, and file history). For the purposes of this review, and to the extent necessary, I have interpreted each claim term in accordance with its plain and ordinary meaning as it would have been understood by a person of ordinary skill in the art at the time of the invention, in view of the intrinsic record.

46. I understand that a patent and its prosecution history are considered “intrinsic evidence” and are the most important sources for interpreting claim language in a patent. I also understand that in reading the claim, I must not import limitations from the specification into the claim terms; in other words, I must not narrow the scope of the claim terms by implicitly adding disclosed limitations that have no express basis in the claims. The prosecution history of related patents and applications can also be relevant.

47. I understand that sources extrinsic to a patent and its prosecution history (such as dictionary definitions and technical publications) may also be used to help interpret the claim language, but that such extrinsic sources cannot be used to

contradict the unambiguous meaning of the claim language that is evident from the intrinsic evidence.

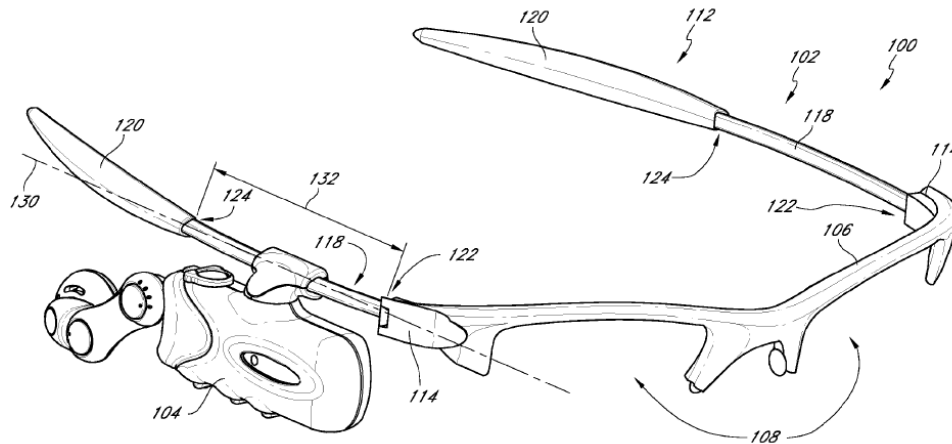
48. Unless expressly stated herein, I have applied the plain and ordinary meaning of the claim terms, which I understand is the meaning that a person of ordinary skill in the art would have given to terms at the time of the claimed invention based on a review of the intrinsic evidence.

IV. THE PRIOR ART

49. In this declaration, I rely on several references that are prior art to the '960 patent. These references include Jannard-740 (U.S. Patent App. Publ. No. 2012/0105740) (Ex. 1005), Osterhout (U.S. Patent App. Publ. No. 2011/0214082) (Ex. 1006), Rosenblatt (U.S. Patent App. Publ. No. 2009/0006846) (Ex. 1007), Gunaratne (U.S. Patent App. Publ. No. 2010/0238034) (Ex. 1008), Nielsen (U.S. Patent No. 6,665,842) (Ex. 1009), and Chen (U.S. Patent No. 7,306,332) (Ex. 1010).

A. Jannard-740

50. Jannard-740 discloses electronic eyewear, including those with “a detachable adjustable electronics module.” Ex. 1005 (Jannard-740), Title, Abstract, [0079]. As one example, Jannard-740's Figure 3 illustrates a module 104 which is supported by an eyewear frame's temple. Ex. 1005 (Jannard-740), [0083]-[0084].



Ex. 1005 (Jannard-740), Fig. 3.

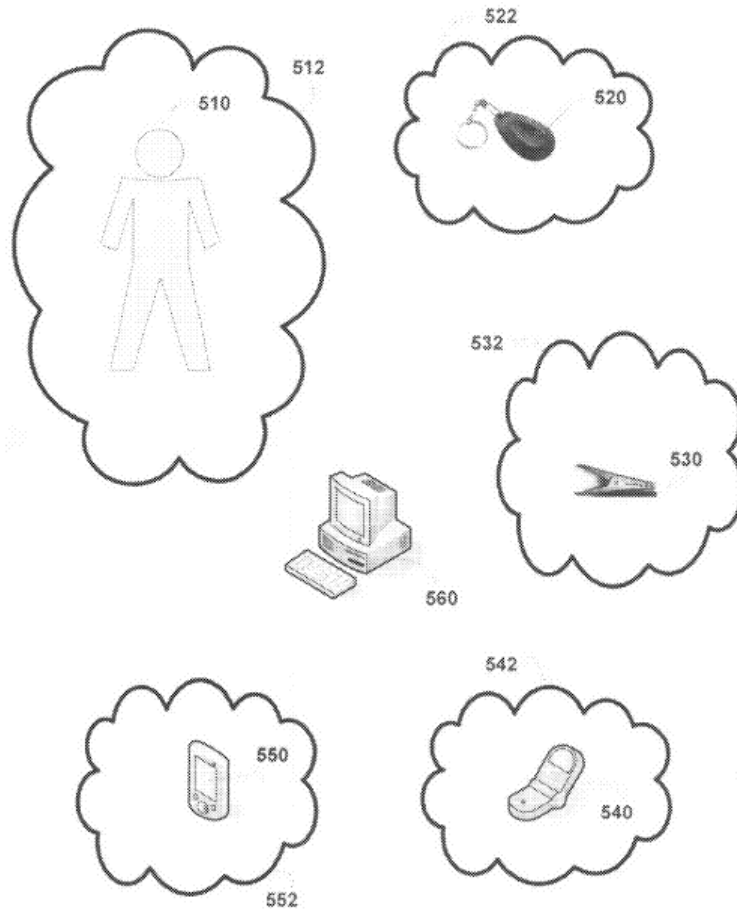
51. The modules in Jannard-740 may include “a communication module, a music module, an audio-video module, and/or another electronics module.” Ex. 1005 (Jannard-740), [0086]. For instance, a module can have “... a speaker, a microphone, a power supply and a Bluetooth or other radio frequency transceiver for wirelessly communicating with a remote device such as a cellular telephone.” Ex. 1005 (Jannard-740), [0086].

52. According to Jannard-740, its module may use voice commands from a wearer to select between input sources. Ex. 1005 (Jannard-740), [0161], [0220]. The input sources may store and communicate content, such as audio files, news, and music. Ex. 1005 (Jannard-740), [0236]. In one example, Jannard-740’s wearable device allows a wearer to speak into the device’s microphone to send a voice command to a cellular phone that communicates with a remote network. Ex. 1005 (Jannard-740), [0195], [0198]. Furthermore, Jannard-740 incorporates by

C. Rosenblatt

54. Rosenblatt provides “[a] system that includes a key for remotely causing a host device to perform an operation.” Ex. 1007 (Rosenblatt), [0005]. Rosenblatt’s key is a module, which has communications circuitry “... to create a relatively short-range personal area network” and communicate via different protocols. Ex. 1007 (Rosenblatt), [0006], [0028]-[0030]. According to Rosenblatt, “the key or its functionality may be incorporated in an electronic device,” such as “... a cellular telephone, a mobile communications device, a pocket-sized personal computer (e.g., an iPAQ or a Palm Pilot) a personal media device (e.g., an iPod), ... or any other suitable electronic device.” Ex. 1007 (Rosenblatt), [0007]. The key may also be “... clipped or attached to a user’s wallet, cellular telephone, personal media device (e.g., an iPod), wired headset, wireless headset, ... or any other suitable object.” Ex. 1007 (Rosenblatt), [0043].

55. Rosenblatt’s Figure 5 illustrates keys 510/520/530/540/550 that create communications networks 512/522/532/542/552. Ex. 1007 (Rosenblatt), [0057].



Ex. 1007 (Rosenblatt), Fig. 5. The communications network can encompass a host device, such as the host device 560. Ex. 1007 (Rosenblatt), [0028]-[0030]. Rosenblatt discloses that its host device “... perform[s] any suitable operation when the key is placed in proximity of the host device such that the personal area network of the key encloses the host device.” Ex. 1007 (Rosenblatt), [0060]. The host devices can be electronic devices, such as a “... computer 610, laptop 612, television system 620, multimedia system 630, automobile 640, door 650, lamp 660, heating and/or air conditioning system 670, elevator 680, and motor 690.” Ex. 1007 (Rosenblatt), [0061]. For example, Rosenblatt provides that “computer 610 and

laptop 612 may automatically load a user's profile or preferences when the key is brought in proximity of the system.” Ex. 1007 (Rosenblatt), [0061]. As another example, Rosenblatt provides that “lamp 660 may be configured to be turned on a particular level (e.g., dim lights) when the key is brought in proximity of lamp 660.” Ex. 1007 (Rosenblatt), [0065].

56. According to Rosenblatt, “the user may be required to enter private information in addition to having the key present to perform an operation (e.g., a password for a more secure login to the computer).” Ex. 1007 (Rosenblatt), [0061]. In one example, “... the user may provide login data to the key for transmission to computer 110 or 112.” Ex. 1007 (Rosenblatt), [0061].

D. Gunaratne

57. Gunaratne discloses a system that “rapidly detect[s] the drowsiness of an individual operating a machine,” including a motor vehicle. Ex. 1008 (Gunaratne), [0018]. According to Gunaratne, an actuator may “... alert the individual that he or she is becoming drowsy and may fall asleep unless proper action is taken.” Ex. 1008 (Gunaratne), [0026]. The actuator may be “an audio actuator such as ... a radio in a motor vehicle....” Ex. 1008 (Gunaratne), [0026]. Gunaratne provides that its drowsiness-alert functionality “... has utility as a safety feature for a machine” and “... improve[s] the performance and/or safety of the individual,

other individuals in the vicinity of the machine and the like.” Ex. 1008 (Gunaratne), [0017]-[0018].

E. Nielsen

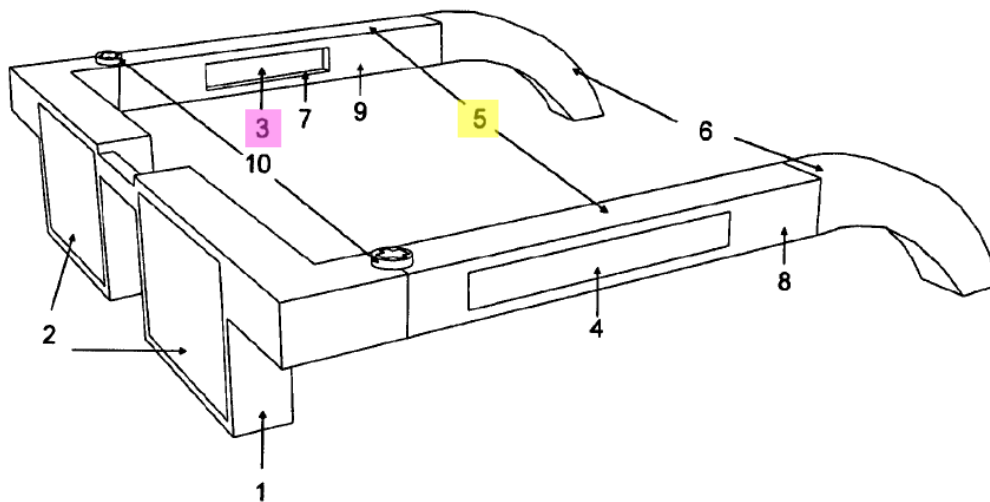
58. Nielsen discloses “... adaptively changing the font size with which information retrieved over a network is displayed.” Ex. 1009 (Nielsen), 1:9-11. According to Nielsen, previous approaches do not “provide a way for adapting font size in a browser or other User Interface based on user font-size preferences for retrieved documents.” Ex. 1009 (Nielsen), 1:55-57. Nielsen provides that adapting of font size “accommodate[s] the needs of a variety of network users who have different individual preferences for viewing documents ...” and “account[s] for display differences which may cause the same document to appear differently on different displays.” Ex. 1009 (Nielsen), 1:58-63.

F. Chen

59. Chen provides eyewear which “... provides the flexibility to add functionalities ... in an integrated and concealed manner.” Ex. 1010 (Chen), 2:43-46. According to Chen, its “temple assembly invention is comprised of a temple, removable cartridge, cartridge compartment that can accommodate and conceal one or multiple said cartridge(s), and temple tip” Ex. 1010 (Chen), 2:55-59. Chen discloses that “[t]he removable cartridge comprises of materials and components, including electronic or non-electronic or any combination thereof ...,” “allow[ing]

the addition of diverse functions to eyewear through the installment of cartridge(s) comprised of different, unique capabilities.” Ex. 1010 (Chen), 2:60-63, 4:22-24.

60. Chen discloses that the “cartridge compartment can be within the temple, within the temple tip, or be comprised of sub-compartments within the temple and temple tip.” Ex. 1010 (Chen), 2:63-65. Chen’s Figure 1 shows a cartridge 3 (pink) is positioned within a temple 5 (yellow) in one implementation.



Ex. 1010 (Chen), Fig. 1.

V. JANNARD-740 RENDERS OBVIOUS CLAIMS 1-3 AND 6-10

61. As I explain below, Jannard-740 discloses, or at least suggests, each element of claims 1-3 and 6-10, and thus renders obvious these claims.

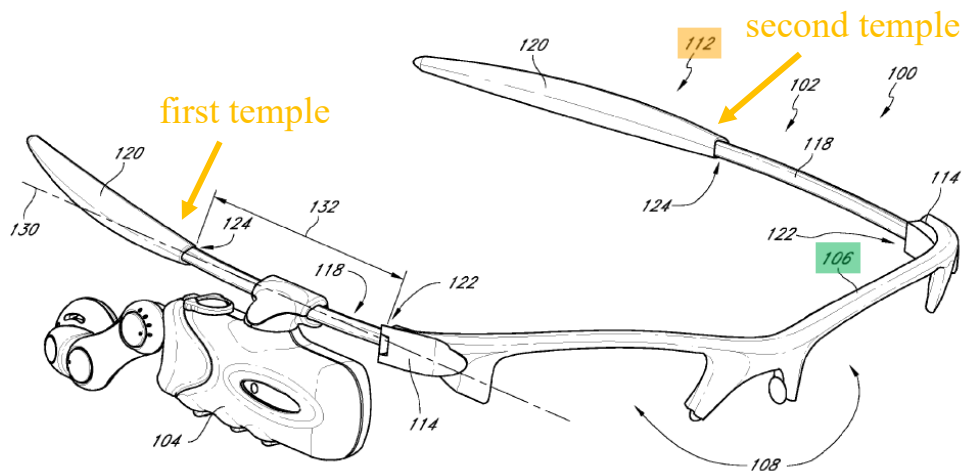
A. Claim 1

1. Preamble

62. The preamble of claim 1 recites: “Eyewear.” Jannard-740 discloses eyewear. Ex. 1005 (Jannard-740), Title (“Eyewear with detachable adjustable electronics module”), Abstract, [0080], [0154], [0167], [0215], [0237].

2. Limitation 1[a]: “an eyewear frame having a first temple and a second temple”

63. Jannard-740 discloses limitation 1[a]. Jannard-740 illustrates in Figure 3 that eyewear includes a frame 106 (green) having first and second temples 112 (orange). Ex. 1005 (Jannard-740), [0082]-[0083]; *see also* Ex. 1005 (Jannard-740), [0010], [0160], [0189]-[0191].



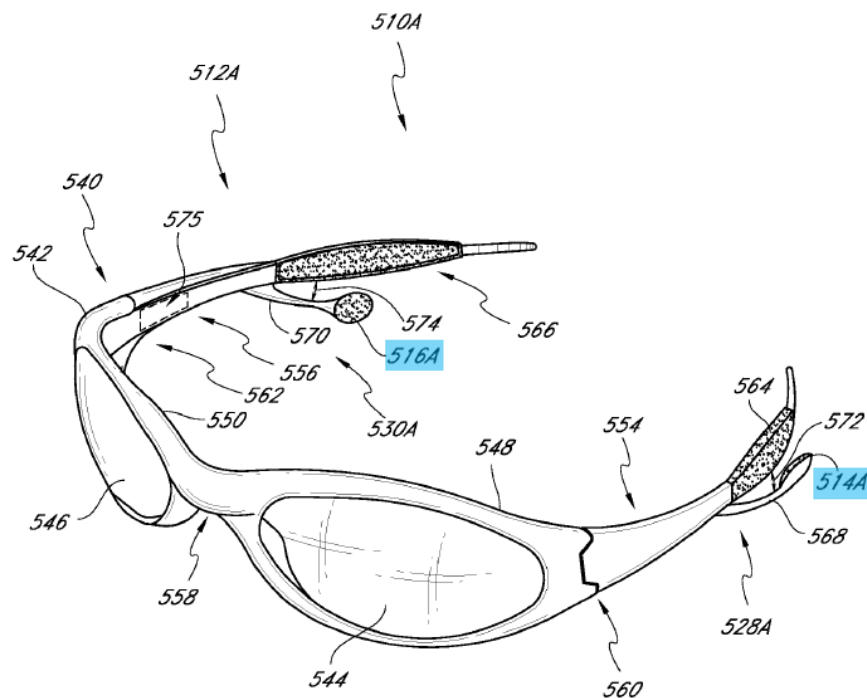
Ex. 1005 (Jannard-740), Fig. 3. Jannard-740 discloses “eyewear frame” as the phrase is used in the ’960 patent. Ex. 1001 (’960 patent), 8:17-24.

3. **Limitation 1[b]: “a speaker supported by the eyewear frame”**

64. Jannard-740 discloses limitation 1[b]. For example, Jannard-740 provides:

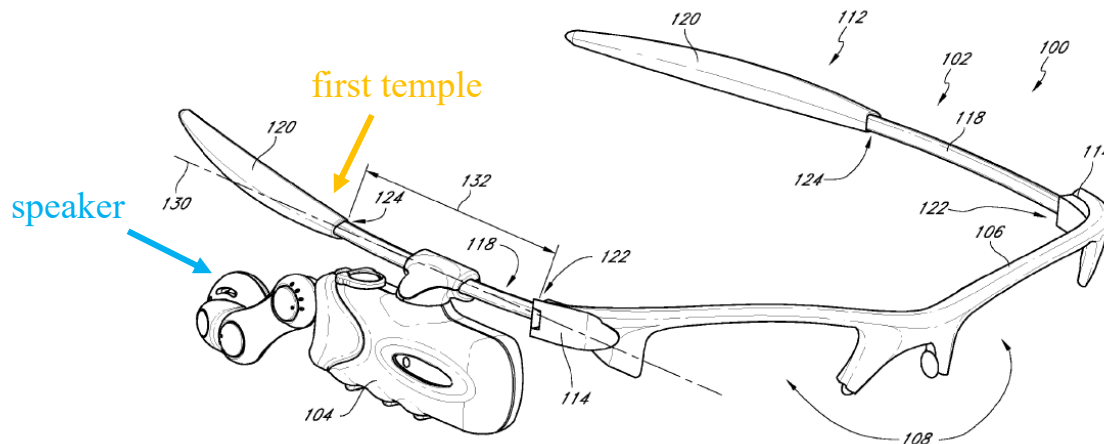
The system comprises an eyeglass, having a right earstem and a left earstem. A first speaker is supported by the right earstem, and a second speaker is supported by the left earstem. An electronics module is supported by the eyeglass and in electrical communication with each of the first and second speakers.

Ex. 1005 (Jannard-740), [0010]; *see also* Ex. 1005 (Jannard-740), Claim 1 (“a first speaker supported by one of the right and left earstems”). Jannard-740’s Figure 49 illustrates one embodiment having dual speakers (blue) that are attached directly to and supported by the eyewear frame. Ex. 1005 (Jannard-740), [0191]; *see also* Ex. 1005 (Jannard-740), Fig. 43, [0160] (“... communication from the cellular telephone is received by the first detachable module 304 and audio signals are provided to a user’s first ear by a speaker coupled to the first detachable module 304 and audio signals from the cellular telephone are provided to the wearer’s second ear via a speaker coupled to the second detachable module 306 that is in communication with the first detachable module 304”).



Ex. 1005 (Jannard-740), Fig. 49.

65. Additionally, Jannard-740 discloses other embodiments that have a single speaker, such as in Figure 3 which illustrates a speaker (blue) supported by the eyewear frame (i.e., the first temple (orange)). Ex. 1005 (Jannard-740), [0093]-[0094].



Ex. 1005 (Jannard-740), Fig. 3, [0089] (disclosing “rail” and “module clamp”), [0091] (disclosing “speaker”).

66. Therefore, Jannard-740 discloses a speaker supported by the eyewear frame.

4. **Limitation 1[c]: “an application module mechanically coupled to the eyewear frame and operably coupled to the speaker”**

67. Jannard-740 discloses limitation 1[c]. For example, as I explained for limitation 1[b], Jannard-740 provides “[a]n electronics module is supported by the eyeglass and in electrical communication with each of the first and second speakers.”

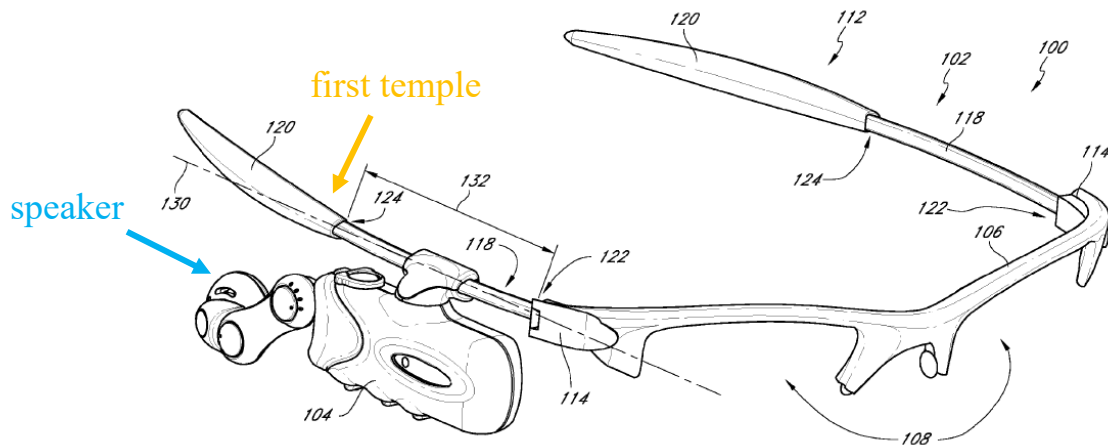
Ex. 1005 (Jannard-740), [0010]; *supra* §V.A.3. In addition, Jannard-740 discloses “[t]he electronics module 172 includes electronics for receiving signals from an external source and providing audio signals to the wearer through the speaker 144....” Ex. 1005 (Jannard-740), [0104]. Jannard-740 also provides:

[C]ommunication from the cellular telephone is received by the first detachable module 304 and audio signals are provided to a user’s first

ear by a speaker coupled to the first detachable module 304 and audio signals from the cellular telephone are provided to the wearer's second ear via a speaker coupled to the second detachable module 306 that is in communication with the first detachable module 304.

Ex. 1005 (Jannard-740), [0160]. Accordingly, Jannard-740 discloses an “application module” as the phrase is used in the '960 patent. Ex. 1001 ('960 patent), 21:59-62.

68. Moreover, Jannard-740 depicts an application module that is mechanically coupled to the eyewear frame. As illustrated in Figure 3, Jannard-740's module 104 is mechanically coupled to the first temple 112 (orange) and operably coupled to the speaker (blue). Ex. 1005 (Jannard-740), [0084], [0094].



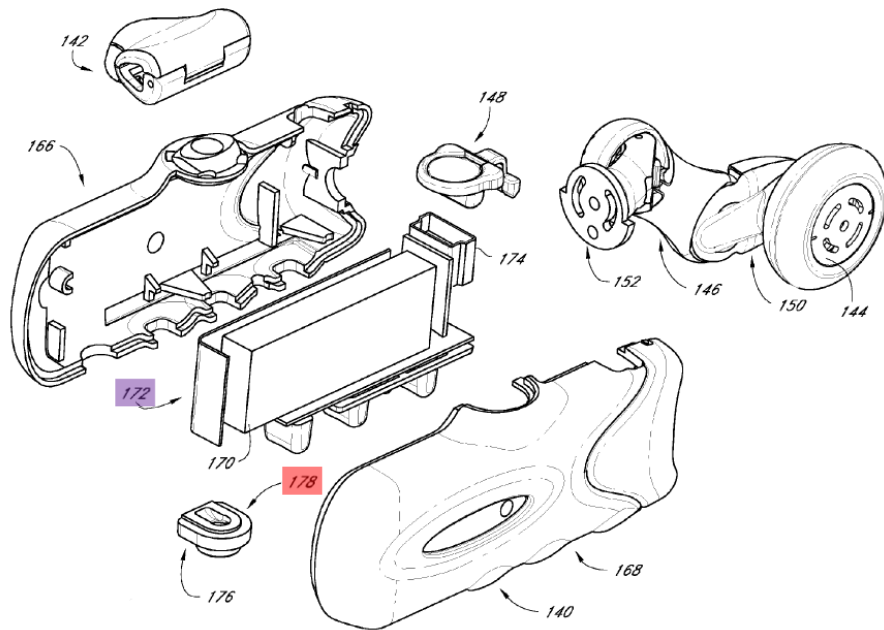
Ex. 1005 (Jannard-740), Fig. 3. The eyewear system in Jannard-740 has “coupled” components, including an eyewear frame mechanically coupled to an application

module and a speaker operably coupled to an application module, per the broad usage of “coupled” by the ’960 patent. Ex. 1001 (’960 patent), 7:47-65.

69. Therefore, Jannard-740 discloses an application module that is mechanically coupled to the eyewear frame and operably coupled to the speaker.

5. Limitation 1[d]: “the application module comprising: a microphone and a wireless chip”

70. Jannard-740 discloses limitation 1[d]. For example, Jannard-740 provides that “...[a]t least partially inside of [the module 104’s] housing 140 are a power module 170, an electronics module 172, a data port 174 and a holder 176 that supports a microphone 178.” Ex. 1005 (Jannard-740), [0102]. Figure 12 of Jannard-740 illustrates the microphone 178 (red) and electronics module 172 (purple).



Ex. 1005 (Jannard-740), Fig. 12. Jannard-740 discloses that, in some embodiments, “... [the] electronics module 172 includes a Bluetooth transceiver” for “...

wirelessly communicating with a remote device such as a cellular telephone.” Ex. 1005 (Jannard-740), [0104], [0086]. According to Jannard-740, such a transceiver can be implemented as a RF transceiver chip. Ex. 1005 (Jannard-740), [0235] (“Texas Instruments, National Semiconductor, Motorola manufacture and develop single RF transceiver chips”). A chip such as a RF transceiver chip is a wireless chip. Jannard-740 also provides other embodiments that have microphones and transceivers. Ex. 1005 (Jannard-740), [0194]-[0196], [0205]-[0206].

71. Therefore, Jannard-740 discloses the application module comprising a microphone and a wireless chip.

6. **Limitation 1[e]: the microphone and the wireless chip “to receive a verbal query from a wearer of the eyewear, wirelessly transmit the verbal query to an external device, receive a response to the verbal query, and provide the response to the wearer via the speaker”**

72. Jannard-740 discloses limitation 1[e].

73. For example, Jannard-740’s eyewear “... can include software that provides the wearer with oral and/or visual popdown-type menus for navigating through the multitude of commands that may be available.” Ex. 1005 (Jannard-740), [0161]. Jannard-740 confirms that “by providing voice control over system functionality, the user need not manipulate mechanical buttons, switches or controls on the support assembly 300 in order to select different support assembly communication, audio, video functions.” Ex. 1005 (Jannard-740), [0161]. This voice control can permit the wearer to “... control[] selection between primary and

secondary sources 602, 604 based upon verbal commands provided by the wearer.” Ex. 1005 (Jannard-740), [0220]; *see also* Ex. 1005 (Jannard-740), [0185] (“... allow the user to more conveniently select input from any of a variety of sources”), [0202] (“The primary source 602 and secondary source 604 may be any source, conduit, or provider of audio, video or audio/video information selected by the wearer or by the manufacturer.”), [0206] (“The source electronics may alternatively be carried by or internal to (carried in a cavity or alternatively embedded within) the wearable electronic interface 601.”) (“The secondary source may be a cell phone, GPS device or other external device which is in radio communication as needed, with the interface.”). Jannard-740 explains that the sources store content accessible to the wearer and comprise “... any of a variety of information sources, including but not limited to, audio files, entertainment, news, media, music, photos, videos, advertising, etc.” Ex. 1005 (Jannard-740), [0193]-[0194], [0236], [0211]; *see also* Ex. 1005 (Jannard- 740), [0196].

74. Furthermore, Jannard-740 discloses that “the electronics module 172 may also allow signals received by the electronics module 172 through the microphone 178 to be transmitted to an external receiver. For example, in one embodiment, electronics module 172 includes a Bluetooth transceiver,” which communicates wirelessly. Ex. 1005 (Jannard-740), [0104], [0086]. Jannard-740 also explains that “[t]he electronics module 172 includes electronics for receiving

signals from an external source and providing audio signals to the wearer through the speaker 144, such as for receiving audio, audio-video or video only signals.” Ex. 1005 (Jannard-740), [0104]. In one example, Jannard-740’s module 510C communicates with an external device B, such as a cellular phone, and the external device B in turn communicates with a remote network R, such as wireless internet service provider. Ex. 1005 (Jannard-740), [0193]-[0195], Fig. 51. According to Jannard-740, “the user U can send voice signals or commands to the cellular phone by speaking into a microphone on the audio device 510C” Ex. 1005 (Jannard-740), [0195]. “The headset may nonetheless communicate with a remote source R, by relaying the signal through the off board electronics B with or without modification.” Ex. 1005 (Jannard-740), [0198].

75. Therefore, Jannard-740 discloses that its microphone and Bluetooth transceiver chip (wireless chip) receive a verbal query through the microphone, transmit the query to an external device, receive a response (such as a particular audio file or news) to the query, and provide that response via the speaker. Jannard-740 accordingly discloses every limitation of claim 1.

76. To the extent Jannard-740’s disclosure differs from claim 1, a POSITA would have found this claim obvious. According to Jannard-740, its eyewear systems include “... interface electronics for interacting with a wireless network and/or providing content to a user.” Ex. 1005 (Jannard-740), [0003]; *see also* Ex.

1005 (Jannard-740), [0240] (“display/indicators 726 indicate a song selection”); Ex. 1017 (Jannard-382) (incorporated by reference in Ex. 1005 (Jannard-740)), [0187] (“Thus, the transceiver 114 can receive audio signals from the microphone 124 through the interface 116. As such, the audio device 10C can wirelessly interact with an interactive audio device, such as a cellular phone, cordless phone, or a computer which responds to voice commands.”), [0290] (“According to the headset profile, certain commands can be issued from a headset, such as the audio devices 10, 10A, 10A’, 10B, 10C, 10D, and 10E, using an AT command protocol. In such a protocol, text commands must be input to the BLUETOOTH™ device, which the BLUETOOTH™ device then transmits wirelessly to a synchronized BLUETOOTH™ enabled device. Such commands include, for example, but without limitation, initiating a call, terminating a call, and redialing a previously dialed number.”), [0296]. To enable requesting and providing content, such as particular emails, audio files, or news, a POSITA would have been motivated to use Jannard-740’s application module, with its microphone and wireless chip (e.g., transceiver chip), to (i) receive a verbal query through the microphone, (ii) wirelessly transmit that query to an external source device, (iii) receive a response to that query from the external source device, and (iv) provide the response to the wearer via a speaker. *See also* Ex. 1005 (Jannard-740), [0236], [0210] (“[T]he primary source

602 provides a photograph, a video clip, an email, a videomail or a voicemail message in accordance with any of the embodiments described herein.”), [0205].

77. For example, Jannard-740 provides that its disclosure incorporates by reference Jannard-382 (Ex. 1017) (Ex. 1005 (Jannard-740), [0188], [0192]), and Jannard-382 further discloses limitation 1[e]. According to Jannard-382, a user can provide voice commands through an eyewear’s microphone to control an external source device, such as a cellular phone. Ex. 1017 (Jannard-382), [0297]; *see also* Ex. 1017 (Jannard-382), [0073]-[0074] (audio device 10 may be eyewear), [0296]. Jannard-382 further provides that its eyewear communicates with the source device and may provide responses from the source device via the speakers on the eyewear. Ex. 1017 (Jannard-382), [0295]; *see also* Ex. 1017 (Jannard-382), [0073]-[0074], [0296]-[0299]. Jannard-382 also discloses:

The user can send a signal to the source device so as to open the email.

The text-to-speech engine can be configured to read the email to the user. Thus, a user can “listen” to email through the audio device 10, 10A, 10A’, 10B, 10C, 10D, 10E, without manually operating the source device.

Ex. 1017 (Jannard-382), [0295]. A POSITA would have been motivated to combine Jannard-382’s verbal query feature with Jannard-740’s embodiments to realize known benefits, such as [i] allowing Jannard-740’s wireless chip (e.g., transceiver

chip) to use voice commands to query an external source device and then provide to the speaker of the eyewear content received from the source device and [ii] allowing access to external source device content from Jannard-740's application module when the wearer wears the eyewear (which is especially desirable if the wearer has disability or mobility issues or if the wearer accessing the external source device would be inconvenient or dangerous during activities, such as driving, cooking, or exercising), without requiring the wearer to manually operate the source device, as explained in Jannard-382. A POSITA would have reasonably expected success using a transceiver chip in Jannard-740's application module for receiving and transmitting such a verbal query and then receiving and providing a response. This would have involved minimal changes, if any, to the application module's software or hardware and merely implemented a known use case disclosed in Jannard-382.

78. The '960 patent also fails to explain any specifics about how to implement the voice-control operations of limitation 1[e]. Instead, the '960 patent provides that voice-control operations could relate to the weather. Ex. 1001 ('960 patent), 20:2-21. Such limited disclosure of implementation details is unsurprising because this limitation would have been obvious to a POSITA. Using an electronic device to process queries, such as a query related to the weather, was widely known prior to the earliest claimed priority date of January 6, 2012. For example, Apple held a widely viewed demo of its Siri technology on October 4, 2011. Ex. 1021 is a

series of screenshots of a YouTube video documenting this demo (available at <https://www.youtube.com/watch?v=SpGJNPShzRc>). One of the first demo examples of the Siri technology was the query: “What is the weather like today?” Ex. 1021 (YouTube Siri Demo Screenshots), 1. The Siri technology responded with: “Here’s the forecast for today:” followed by temperatures and sky conditions. Ex. 1021 (YouTube Siri Demo Screenshots), 2. Other examples of queries from the demo included: “What time is it in Paris,” “How’s the NASDAQ doing today,” “Find me a great Greek restaurant in Palo Alto,” “Give me directions to Hoover Tower,” “Define mitosis,” “How many dollars is €45,” and “How many days are there until Christmas.” Ex. 1021 (YouTube Siri Demo Screenshots), 3-15.

79. Therefore, Jannard-740 renders obvious the microphone and the wireless chip to receive a verbal query from a wearer of the eyewear, wirelessly transmit the verbal query to an external device, receive a response to the verbal query, and provide the response to the wearer via the speaker.

B. Claim 2

80. Claim 2 depends from claim 1 and recites: “wherein the external device is a smart phone.”

81. Jannard-740 discloses “wherein the external device is a smart phone.” For example, as I explained for limitations 1[d]-1[e], Jannard-740’s transceiver chip (wireless chip) may communicate with “... a telephone, a cellular telephone, a

personal digital assistant (PDA), a BLACKBERRY®, or a pager.” Ex. 1005 (Jannard-740), [0205]; *see also* Ex. 1005 (Jannard-740), [0236] (“The content source 702 is any of a variety of information sources, including, ... a communications-enabled device, such as a telephone (including a BLUETOOTH enabled telephone), a PDA, a BLACKBERRY, the Internet, or the like.”).

82. Therefore, Jannard-740 renders obvious claim 2.

C. Claim 3

83. Claim 3 depends from claim 1 and recites: “wherein the external device is a computer.”

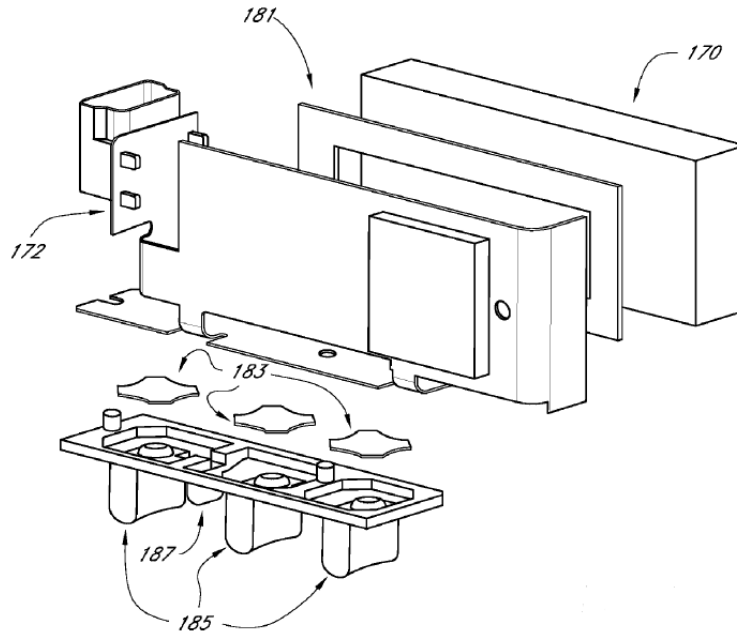
84. Jannard-740 discloses “wherein the external device is a computer.” For example, Jannard-740 provides that the transceiver chip (wireless chip) of its module interacts with sources such as a computer. Ex. 1005 (Jannard-740), [0236]; *see also* Ex. 1005 (Jannard-740), [0196] (“[T]he source electronics such as the ... computer or the like may be off board, or located remotely from the audio device 510C.”), [0194] (“... ‘body borne’ source device B such as ... a palmtop computer, or a laptop computer”).

85. Therefore, Jannard-740 renders obvious claim 3.

D. Claim 6

86. Claim 6 depends from claim 1 and recites: “wherein the application module further includes at least one electronic device.”

87. Jannard-740 discloses “wherein the application module further includes at least one electronic device.” For example, according to Jannard-740, “[a]t least partially inside of [the module 104’s] housing 140 are a power module 170, an electronics module 172, a data port 174 and a holder 176 that supports a microphone 178.” Ex. 1005 (Jannard-740), [0102]. Jannard-740’s Figure 16 depicts the internal assembly of the module 104, including other module components such as LED 187. Ex. 1005 (Jannard-740), [0045].



Ex. 1005 (Jannard-740), Fig.16. Jannard-740’s module also “... can include noise cancellation hardware and/or software to reduce or eliminate noise provided to the wearer of the support assembly 300 during use and communication.” Ex. 1005 (Jannard-740), [0162]; *see also* Ex. 1017 (Jannard-382) (incorporated by reference in Ex. 1005 (Jannard-740)), [0165] (“noise cancellation electronics”), [0265]

(“ASIC-based noise-canceling technology”), [0326] (“static and/or noise correction, and/or active or passive noise cancellation”). Each of the power module 170, electronics module 172, LED 187, and noise cancellation hardware in Jannard-740 is an electronic device.

88. Therefore, Jannard-740 renders obvious claim 6.

E. Claim 7

89. Claim 7 depends from claim 6 and recites: “wherein the application module is further configured to control at least one function of the at least one electronic device.” Jannard-740 renders obvious claim 7 for at least two reasons.

90. First, according to Jannard-740, its module’s “LED 187 provides status indication to the wearer.” Ex. 1005 (Jannard-740), [0119]. The LED’s functions include activating and deactivating to provide the status indication. Control circuitry of the application module (e.g., electronics module 172) controls the LED’s activation and deactivation. *See e.g.*, Ex. 1005 (Jannard-740), [0102], [0104], [0118]. Therefore, the LED’s activation and deactivation are functions of the LED which the application module controls.

91. Second, as I explained for claim 6, Jannard-740 provides that its module’s noise cancellation hardware reduces or eliminates noise during use and communication. *Supra* §V.D; *see also* Jannard-382 (Ex. 1017) (incorporated by reference in Ex. 1005 (Jannard-740)), [0165] (“noise cancellation electronics”),

[0265] (“ASIC-based noise-canceling technology”), [0326] (“static and/or noise correction, and/or active or passive noise cancellation”). Control circuitry of the application module (e.g., electronics module 172) controls the processing of data through the noise cancellation hardware. *See e.g.*, Ex. 1005 (Jannard-740), [0102], [0104], [0118]. Therefore, the noise-cancelled audio output of the noise cancellation hardware is a function of the noise cancellation hardware which the application module controls.

F. Claims 8 and 9

92. Claim 8 depends from claim 7 and recites: “wherein the at least one function includes providing audio power to the at least one external device.” Claim 9 depends from claim 7 and recites: “wherein the at least one function includes providing electrical power to the at least one external device.”

93. These claims refer to “the at least one external device.” This phrase derives its antecedent basis from “an external device” in claim 1.

1. Claim 8

94. The phrase “audio power” appears in the ’960 patent only in claim 8. The ’960 patent does, however, use the phrases “audio out” and “power supply” in the specification. *See e.g.*, Ex. 1001 (’960 patent), 10:3-14. I understand the phrase “audio power” to refer to “audio out” rather than “power supply” consistent with the ’960 patent’s specification, so I apply this interpretation in my analysis.

95. As I explained for claim 7, Jannard-740's application module is configured to control its noise cancellation hardware to reduce or eliminate noise during use and communication. *Supra* §VI.F. The application module's reduction or elimination of noise results in the noise cancellation hardware (at least one electronic device) processing microphone audio output and then transmitting audio power to the cellular phone (at least one external device) in the form of noise-cancelled microphone audio output. *See also supra* §§V.A.5-6, V.E. Therefore, Jannard-740 renders obvious claim 8.

96. I also understand that Patent Owner has taken the position in the district court case that claim 8's application module can simply be an application module that controls audio output with voice control and wirelessly provides audio output to a smart phone. The limitations of the application module in claim 1, however, already include a microphone and wireless chip, leaving no other electronic device identified by Patent Owner which the application module "further includes" (as required by claim 6 upon which claim 8 depends) and which facilitates the functionality of claim 8. I accordingly disagree with Patent Owner's interpretation of claim 8.

97. Despite my disagreement with Patent Owner's interpretation of claim 8, claim 8 is obvious for an independent reason under Patent Owner's interpretation. For example, as I explained for limitation 1[e], Jannard-740's application module

provides voice control and commands to the external device, such as the cellular phone. *Supra* §V.A.6. Therefore, under Patent Owner’s interpretation, claim 8 is also obvious for this independent reason.

2. Claim 9

98. According to Jannard-740, its module may “... transmit and receive data signals to and from the source device B...,” such as a cellular phone. Ex. 1005 (Jannard-740), [0194]. In addition, Jannard-740 provides its module may communicate via “... a physical connection, such as a wire, cable, fiberoptic cable, or trace on a PC board,” with a source device like a cellular phone. Ex. 1005 (Jannard-740), [0212], [0200], [0205]. A wired connection, such as a cable (e.g., USB cable), includes a set of conductors which electrically communicates data. Ex. 1011 (Microsoft Computer Dictionary), 8 (USB meaning “universal serial bus”), 3-4 (bus being “[a] set of hardware lines (conductors) used for data transfer among the components of a computer system”). Those conductors provide electrical power from the module to the cellular phone through the conductors during the process of transferring the data.

99. Therefore, Jannard-740 renders obvious claim 9.

G. Claim 10

100. Claim 10 depends from claim 1 and recites: “wherein the application module further comprises a voice recognition chip.”

101. Jannard-740 discloses claim 10 at least through its incorporation by reference of Jannard-382. Ex. 1005 (Jannard-740), [0188], [0192]. For example, Jannard-382 provides electronic eyewear that “... include ASIC-based noise-canceling technology, such as is available in chips from Andrea Electronics Corporation (AEC), to enable voice recognition in ambient noise up to about 130 Db or more.” Ex. 1017 (Jannard-382), [0265]. A POSITA would have been motivated to incorporate a voice recognition chip in Jannard-740’s application module in view of Jannard-382 to enable the voice functions described in Jannard-740 and/or Jannard-382. As confirmed by Caldron (Ex. 1019), which published in 2001, a POSITA would have commonly used and been motivated to incorporate a voice recognition chip for voice functionality. Ex. 1019 (Caldron), 1:9-13 (“Currently, voice operated functions using the latest voice recognition technologies are limited to a handful of applications, such as toys, appliances, some computers, voice dictation, cellular phones, and voice control of one’s home. Most of these applications use voice recognition technology running on a computer or voice recognition chip technology.”); *see also* Ex. 1020 (Blum), 19:28-20:1 (disclosing use of “voice recognition chip”). A POSITA would have had a reasonable expectation of success of incorporating the voice recognition chip because the voice recognition chip is an off-the-shelf solution that provides voice recognition

functionality. *See also* Ex. 1019 (Caldrone), 1:9-13; Ex. 1020 (Blum), 19:28-20:1 (disclosing use of “voice recognition chip”); Ex. 1012 (Oh), 3:52-64.

102. Therefore, Jannard-740 renders obvious claim 10.

VI. OSTERHOUT RENDERS OBVIOUS CLAIMS 1-8 AND 10

103. As I explain below, Osterhout discloses, or at least suggests, each element of claims 1-8 and 10, and thus renders obvious these claims.

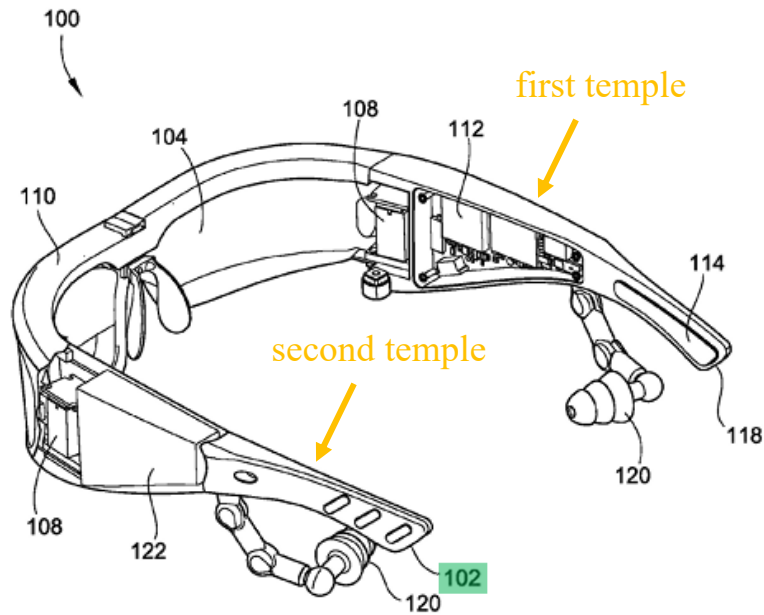
A. Claim 1

1. Preamble

104. The preamble of claim 1 recites: “Eyewear.” Osterhout discloses eyewear. Ex. 1006 (Osterhout), Abstract, Fig. 1, [0406].

2. Limitation 1[a]: “an eyewear frame having a first temple and a second temple”

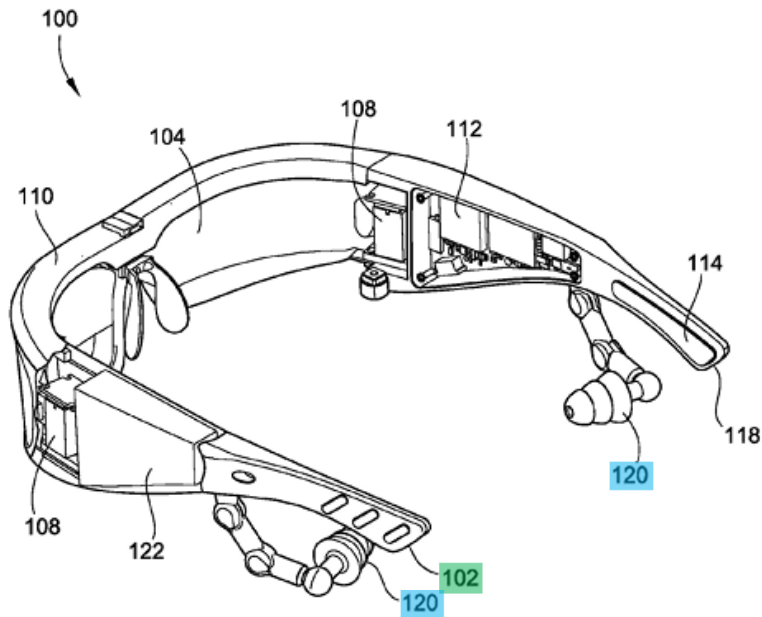
105. Osterhout discloses limitation 1[a]. Osterhout illustrates in Figure 1 a frame 102 (green) with a first and second temple (orange).



Ex. 1006 (Osterhout), Fig. 1; *see also* Ex. 1006 (Osterhout), [0125], [0135]. Osterhout discloses “eyewear frame” as the phrase is used in the ’960 patent. Ex. 1001 (’960 patent), 8:17-24.

3. **Limitation 1[b]: “a speaker supported by the eyewear frame”**

106. Osterhout discloses limitation 1[b]. For example, Osterhout illustrates in Figure 1 speakers 120 (blue) supported by the frame 102 (green).



Ex. 1006 (Osterhout), Fig. 1; *see also* Ex. 1006 (Osterhout), [0126], [0135]; Ex. 1001 ('960 patent), 13:22-25 (“eyewear frame may include a speaker, such as earbuds....”).

4. Limitation 1[c]: “an application module mechanically coupled to the eyewear frame and operably coupled to the speaker”

107. Osterhout discloses, or at least suggests, limitation 1[c]. For example, Osterhout’s eyewear has electronics, including an open multimedia applications processor (OMAP) and a communications system on a chip (SOC), which may be in a cavity of the temple of the eyewear (for instance, temple housing 2116 in Figs. 21-22). Ex. 1006 (Osterhout), [0126], [0136], [0267], Figs. 1, 20-21. According to Osterhout, the electronics operably couple to the ear buds to cause the ear buds to “... deliver[] sounds to ears of the user.” Ex. 1006 (Osterhout), [0138]. Osterhout

thus discloses an application module (electronics) mechanically coupled to the eyewear frame and operably coupled to the speaker.

108. For the reasons I explain in Section VII.A below, a POSITA would have been motivated to dispose Osterhout's electronics into a module (and reasonably expected success in doing so) to mechanically couple to an eyewear because this would make the electronics modular. *Supra* §VII.A. Therefore, Osterhout renders obvious this limitation.

109. I understand that Patent Owner has asserted in the district court case that an "electronics assembly" disposed within an eyewear's temple is a module. I disagree. Disposing of an "electronics assembly" directly within the temple is not encompassed by the plain and ordinary meaning of "module" because that structure does not have modularity. However, under Patent Owner's interpretation that a "module mechanically coupled to the eyewear" encompasses disposing electronics within the temple of eyewear, limitation 1[c] is disclosed by Osterhout.

5. Limitation 1[d]: "the application module comprising: a microphone and a wireless chip"

110. Osterhout discloses, or at least suggests, limitation 1[d]. For example, according to Osterhout, its electronics include a microphone which may be disposed in the temple of eyewear. Ex. 1006 (Osterhout), [0378], Figs. 39; *see also* Ex. 1006 (Osterhout), [0135]. Osterhout's microphone facilitates "[a]udio data capture." Ex. 1006 (Osterhout), [0026], [0361]. Osterhout also provides that its electronics

include the communications SOC, as I explained for limitation 1[c]. *Supra* §VI.A.4. Osterhout's communications SOC provides "one or more communications capabilities, including a wide local area network (WLAN), BlueTooth™ communications," which include wireless communication protocols. Ex. 1006 (Osterhout), [0136], [0150]; *see also* Ex. 1006 (Osterhout), [0191]. Osterhout's communications SOC (system on a chip) is a wireless chip.

111. To the extent Osterhout does not expressly provide its microphone is positioned within the same cavity and housing as Osterhout OMAP and communications SOC (for instance, temple housing 2116), a POSITA would have found it obvious to position the microphone in the same cavity and housing. This positioning would have provided known benefits such as: (i) space optimization: facilitating a more compact and streamlined design, (ii) reduced manufacturing complexity: simplifying assembly process and reducing manufacturing steps, (iii) improved performance: affording a shorter signal paths to decrease latency and increase processing speed for telephony or voice command and to minimize environmental noise interference, (iv) improved durability and protection: using the same sealed cavity enables protection against environmental factors like moisture, dust, and debris in a single robust housing, and (v) improved aesthetics: providing a design without need for additional external components which might detract from appearance. This positioning also represents nothing more than the simple addition

of one known element (microphone in temple) to another known element (Osterhout's electronics in temple housing) to obtain predictable results (a module with both microphone and Osterhout's electronics in temple housing).

112. Therefore, Osterhout discloses, or at least suggests, the application module comprising a microphone and a wireless chip.

6. **Limitation 1[e]: the microphone and the wireless chip “to receive a verbal query from a wearer of the eyewear, wirelessly transmit the verbal query to an external device, receive a response to the verbal query, and provide the response to the wearer via the speaker”**

113. Osterhout discloses limitation 1[e]. For example, according to Osterhout, voice commands “may be detected through a microphone on the eyepiece.” Ex. 1006 (Osterhout), [0267]; *see also* Ex. 1006 (Osterhout), [0309], [0299]. Osterhout also provides that its communications SOC receives and wirelessly transmits the voice commands to access information “located remotely, such as a database accessible over the Internet.” Ex. 1006 (Osterhout), [0309]-[0310]; *see also* Ex. 1006 (Osterhout), [0226] (“...querying a database...”). “Using voice commands, [the wearer] may then access the database and search within the database for particular information, such as manuals or other repair and maintenance documents.” Ex. 1006 (Osterhout), [0310]. This allows information accessed by the communications SOC of Osterhout's eyewear to be “viewed and heard” (for instance, via at least the ear buds) and provided to the wearer “promptly” and “on-the-spot.” Ex. 1006 (Osterhout), [0309]-[0310]; *see also* Ex. 1006 (Osterhout),

[0215] (Ear buds “provide audio output to the user or wearer.”), [0364] (“[E]ar buds of the ... eyepiece may also connect with the full audio ... capabilities of the device, with the ability to deliver high quality and clear sound from the included telecommunications device.”). Osterhout thus discloses a microphone and a wireless chip to receive a verbal query from a wearer of the eyewear, wirelessly transmit the verbal query to an external device, receive a response to the verbal query, and provide the response to the wearer via the speaker.

114. Therefore, Osterhout renders obvious claim 1.

B. Claims 2 and 3

115. According to Osterhout, its eyewear may wirelessly communicate through another device. For instance, Osterhout discloses that “the wearer may have to ... tether [the eyewear] to their mobile communications facility in order to establish a wireless connection.” Ex. 1006 (Osterhout), [0213], [0268]. A POSITA would have understood that tethering refers to the process by which the mobile communications facility shares its internet connection with the eyewear. Thus, in an implementation where Osterhout’s eyewear tethers to a wearer’s mobile communications facility (i.e., smart phone), Osterhout’s eyewear communicates through the smart phone so that the eyewear transmits the verbal query to the smart phone and receives the response to the verbal query through and from the smart phone. Ex. 1006 (Osterhout), [0213] (“...a mobile communications facility (e.g.

mobile phone)”), [0364] (“...cellular telephone (smart phone)...”). Furthermore, a smart phone is a computer. Ex. 1011 (Microsoft Computer Dictionary), 7 (smartphone definition), 6 (PDA definition).

116. Therefore, Osterhout renders obvious claims 2 and 3.

C. Claims 4 and 5

117. Claim 4 depends from claim 1 and recites: “wherein the verbal query includes a query about the weather.” Claim 5 depends from claim 4 and recites: “wherein a response to the query includes information about the weather.”

118. These claims are rendered obvious by Osterhout. For example, according to Osterhout, “[i]nformation and content related to ... weather ... may be accessed by the eyepiece and projected on to the lens of the eyepiece for the user to view and interact with.” Ex. 1006 (Osterhout), [0302]. In addition, Osterhout discloses that with its eyewear “content may then be searched relating to ... local weather....” Ex. 1006 (Osterhout), [0302]. A POSITA would have been motivated to enable a verbal query received by Osterhout’s electronics to include a query about the weather and for a response to that verbal query to provide weather information. This combination represents the use of a known technique (requesting information about weather with eyewear) to improve a known device and method (application module for processing voice commands and communicating with other devices) which is ready for improvement and yields predictable results (construction of

application module to process verbal request for information about weather and then receive requested information about weather).

D. Claim 6

119. Claim 6 depends from claim 1 and recites: “wherein the application module further includes at least one electronic device.”

120. Osterhout renders obvious claim 6. For example, as I explained for limitation 1[c], Osterhout’s electronics include the OMAP. *Supra* §VI.A.4. Osterhout’s OMAP is an electronic device. Ex. 1006 (Osterhout), [0136].

E. Claim 7

121. Claim 7 depends from claim 6 and recites: “wherein the application module is further configured to control at least one function of the at least one electronic device.”

122. Osterhout renders obvious claim 7. For example, Osterhout discloses that its OMAP can be a OMAP 4, which is a fourth generation OMAP. Ex. 1006 (Osterhout), [0188]. OMAP 4 provides audio playback for Osterhout’s electronics. Ex. 1016 (Estevez), [0028] (“As known in the art, [OMAP 4] applications processors are capable of ... implementing ... audio and video streaming....”). In turn, Osterhout’s electronics control audio playback by the OMAP. As a result, the OMAP’s audio playback is a function of the OMAP that the electronics control.

F. Claim 8

123. Claim 8 depends on claim 7 and recites: “wherein the at least one function includes providing audio power to the at least one external device.” The phrase “audio power” appears in the ’960 patent only in claim 8. The ’960 patent does, however, use the phrases “audio out” and “power supply” in the specification. *See e.g.*, Ex. 1001 (’960 patent), 10:3-14. I understand the phrase “audio power” to refer to “audio out” rather than “power supply” consistent with the ’960 patent’s specification, so I apply this interpretation in my analysis.

124. A POSITA would have been motivated to construct the electronics in Osterhout so that the electronics provides audio output (i.e., audio power) to other devices which are selected for connection by a user. For instance, according to Osterhout, “[t]he eyepiece may provide additional electronic elements or features, including ... audio output....” Ex. 1006 (Osterhout), [0187]; *see also* Ex. 1006 (Osterhout), [0364]. One such external device that the user would select for connection and providing audio power is the external device (for example, computer or smart phone) to which Osterhout’s electronics transmits the verbal query, which is discussed for limitation 1[e] and claims 2-3. *Supra* §§VI.A.6, VI.B. This would enable the external device to, for example, audibly present audio provided by Osterhout’s electronics and serve as a speaker separate from the eyepiece.

125. I also note that the '960 patent does not articulate why providing audio power to the external device is different from or preferable to providing audio power to any other device. *See* Ex. 1001 ('960 patent), 2:35-40, 3:43-48, 10:3-39. This is unsurprising because selecting to provide audio power to the external device, rather than to another device, is not inventive and simply selects a device for providing audio power that is in communication with the application module.

126. Thus, Osterhout renders obvious claim 8.

G. Claim 10

127. Claim 10 depends from claim 1 and recites: “wherein the application module further comprises a voice recognition chip.”

128. Osterhout renders obvious claim 10. For example, according to Osterhout, its eyewear performs voice recognition. Ex. 1006 (Osterhout), [0267]; *see also* Ex. 1006 (Osterhout), [0244]-[0245], [0365]-[0368]. According to Osterhout, machines including “chips” are used for implementing disclosed elements and functions like voice recognition. Ex. 1006 (Osterhout), [0406]; *see also* Ex. 1022 (disclosing that OMAP supported voice recognition in 2002).

VII. JANNARD-740 AND OSTERHOUT RENDER OBVIOUS CLAIMS 1-10

129. As I explain below, Jannard-740 and Osterhout disclose or suggest each element of claims 1-10, and thus together render obvious these claims.

A. Combination of Jannard-740 and Osterhout

130. I explained in Section V that Jannard-740 discloses, or at least suggests, eyewear that satisfy every limitation of claim 1. *Supra* §V.A. However, to the extent that Jannard-740 does not provide that its microphone and wireless chip (transceiver chip) receive a verbal query, wirelessly transmit that verbal query to an external device, receive a response to the verbal query, and provide the response via the speaker, this is disclosed or suggested by Osterhout. *Supra* §VI.A.6. A POSITA would have been motivated to combine Jannard-740 and Osterhout in a way that would render obvious the limitations of claim 1. Ex. 1006 (Osterhout), [0309]-[0310]; *see also* Ex. 1006 (Osterhout), [0226].

131. For many reasons, a POSITA would have been motivated to incorporate Osterhout's functionality, including the verbal content search functionality, in the application module of Jannard-740, for instance in the application module's electronics.

132. First, Jannard-740 and Osterhout suggest incorporating Osterhout's functionality, including the verbal content search functionality, in the application module of Jannard-740. Jannard-740 provides "... interface electronics for interacting with a wireless network and/or providing content to a user." Ex. 1005 (Jannard-740), [0003]. Jannard-740 provides that its wearable device is usable by a wearer to verbally select an external content source, such as a database, from which

the wearable device receives and then provides content. Ex. 1005 (Jannard-740), [0236], [0214]. According to Osterhout, its eyewear is also usable to verbally search an external content source such as a database for “... particular information, such as manuals or other repair and maintenance documents.” Ex. 1006 (Osterhout), [0309]-[0310]. A POSITA would have been motivated to incorporate Osterhout’s functionality, including the verbal content search functionality, in Jannard-740’s application module to enable the application module to search for content verbally requested by a wearer, such as particular content in a database or another collection of content (e.g., audio file from set of audio files). *See also* Ex. 1005 (Jannard-740), [0236]. Such incorporation would allow the application module to receive a verbal request for both a source of content and a particular content from that source, consistent with Jannard-740’s recommendation that “... by providing voice control over system functionality, the user need not manipulate mechanical buttons, switches or controls” Ex. 1005 (Jannard-740), [0161]. A POSITA would have been motivated to implement such incorporation for known benefits such as [i] improving user convenience by enabling a wearer to verbally select and audibly receive content from the external source device handsfree and [ii] permit quicker access to content from the external source device with the application module while the wearer wears the eyewear (which is especially desirable if the wearer has disability or mobility issues or if the wearer accessing the external source device

would be inconvenient or dangerous during activities, such as driving, cooking, or exercising).

133. Second, that combination represents nothing more than the simple addition of one known element (eyewear which processes verbal query for specific content from external source device) to another known element (eyewear application module which processes voice commands) to obtain predictable results (eyewear application module which processes verbal query for specific content from external source device).

134. Third, that combination represents the use of a known technique (verbally querying specific content with eyewear) to improve a similar device and method (application module in Jannard-740 having wireless communications for various functions) in the same way.

135. Fourth, that combination represents the use of a known technique (verbally querying specific content with eyewear) to improve a known device and method (application module in Jannard-740 that processes voice commands) that is ready for improvement and yields predictable results (constructing application module in Jannard-740 to include verbal content search functionality).

136. A POSITA would have reasonably expected success when incorporating Osterhout's functionality, including the verbal content search functionality, in the application module in Jannard-740 because that incorporation

would have been trivial for a POSITA. The incorporation would have been well within a POSITA's abilities because it would have involved limited software and/or hardware updates to Jannard-740's application module.

137. I explained in Section VI that Osterhout discloses, or at least suggests, eyewear that satisfy every limitation of claim 1. *Supra* §VI.A. However, to the extent that Osterhout does not provide the application module recited by claim 1, it would have been obvious over Jannard-740. Jannard-740 discloses an electronics module which is a self-enclosed and independent electronics module unit, which meets the application module recited by claim 1. *Supra* §V.A. A POSITA would have been motivated for many reasons to implement the electronics in Osterhout within a self-enclosed and independent unit similar to Jannard-740's detachable module (Ex. 1005 (Jannard-740), [0081], [0086]).

138. First, Jannard-740 suggests implementing Osterhout's electronics within a self-enclosed and independent unit similar to Jannard-740's. Jannard-740 provides that "[t]he housing 140 is formed by attaching the first body portion 166 to the second body portion 168 along a part line, to provide a protective outer wall which defines at least one interior cavity for housing electronics." Ex. 1005 (Jannard-740), [0102]. This enables the housing 140 to be "... formed entirely or partially by insert molding or co-molding processes to produce embedded electronics in a unitary or monolithic module." Ex. 1005 (Jannard-740), [0102]. A

POSITA would have been motivated to implement this structure for known benefits such as (i) space optimization, permitting a design which is a more compact and streamlined, (ii) reduced manufacturing complexity, simplifying the assembly process and reducing a number of manufacturing steps, (iii) improved performance, constructing a shorter signal path to reduce latency and increase processing speed for voice command or telephony and to minimize environmental noise interference, (iv) enhanced durability and protection, providing the same sealed cavity offers improved protection against environmental factors like moisture, dust, and debris, and (v) better aesthetics, avoiding the need for a greater number of external components which could detract from the eyewear's design.

139. Second, that combination represents the use of a known technique (including eyewear's electronics in self-enclosed and independent unit) to improve a known device and method (eyewear electronics in Osterhout) that is ready for improvement and yields predictable results (eyewear's electronics incorporated in self-enclosed and independent unit for known benefits).

140. Third, that construction represents nothing more than the simple addition of one known element (module having eyewear electronics) to another known element (Osterhout's electronics in temple housing) to obtain predictable results (module with electronics to be coupled to eyewear's temple providing known benefits).

141. A POSITA would have reasonably expected success in implementing Jannard-740's disclosure of a self-enclosed and independent unit in the eyewear in Osterhout because this implementation would have been trivial for a POSITA. The implementation would have been well within a POSITA's abilities because it would have involved limited structural and/or hardware updates to Osterhout's electronics and/or eyewear.

B. Claim 1

1. Preamble and Limitations 1[a]-1[b]

142. For the reasons I explained for the preamble of claim 1 and limitations 1[a]-1[b] in Sections V-VI, Jannard-740 and Osterhout each disclose the preamble and limitations 1[a]-1[b]. *Supra* §§V.A.1-3, VI.A.1-3.

2. Limitations 1[c]-1[d]

143. For the reasons I explained for limitations 1[c]-1[d] in Section V, Jannard-740 discloses limitations 1[c]-1[d]. *Supra* §§V.A.4-5. For the reasons I explained for limitations 1[c]-1[d] in Section VI, Osterhout discloses, or at least suggests, limitations 1[c]-1[d]. *Supra* §§VI.A.4-5.

144. For the reasons I explained above for the combination of Osterhout with Jannard-740, a POSITA would have been motivated to incorporate Jannard-740's disclosure of a self-enclosed and independent module unit in the eyewear in

Osterhout and reasonably expected success in implementing that combination. *Supra* §VII.A.

3. Limitation 1[e]

145. For the reasons I explained for limitation 1[e] in Section V, Jannard-740 suggests limitation 1[e]. *Supra* §V.A.6. For the reasons I explained for limitation 1[e] in Section VI, Osterhout discloses limitation 1[e]. *Supra* §VI.A.6.

146. For the reasons I explained above for the combination of Jannard-740 with Osterhout, a POSITA would have been motivated to incorporate Osterhout's verbal content search functionality in the application module in Jannard-740, for instance in the application module's electronics, and reasonably expected success in implementing that combination. *Supra* §VII.A.

147. Therefore, Jannard-740 and Osterhout render obvious claim 1.

C. Claims 2 and 3

148. For the reasons I explained for claims 2 and 3 in Sections V and VI, Jannard-740 and Osterhout each renders obvious claims 2 and 3. *Supra* §§V.B-C, VI.B.

149. Therefore, Jannard-740 and Osterhout render obvious claims 2 and 3.

D. Claims 4 and 5

150. For the reasons I explained for claims 4 and 5 in Section VI, Osterhout renders obvious claims 4 and 5. *Supra* §VI.C.

151. A POSITA would have been motivated based on Osterhout to permit a verbal query received by the application module in Jannard-740 to include a query about the weather and for a response to that query to provide information about the weather. This combination represents the use of a known technique (querying weather information with eyewear) to improve a known device and method (application module in Jannard-740 which processes voice commands and communicates with other devices) that is ready for improvement and yields predictable results (constructing application module in Jannard-740 to process verbal request for weather information and then receive requested weather information). In addition, Jannard-740 provides that its selectable sources (for instance, communications-enabled device or Internet) store content, such as “... a variety of information sources, including but not limited to, ... news, ... etc.,” which is accessible to a wearable device. Ex. 1005 (Jannard-740), [0236]. A subset of news information is weather information, and news information is specifically a type of content which Jannard-740 discloses receiving from an external source device. Moreover, as I explained for limitation 1[e] in Section V.A.6, using an electronic device to process verbal queries, such as a verbal query about the weather, was widely known prior to the earliest claimed priority date of January 6, 2012.

152. Therefore, Jannard-740 and Osterhout render obvious claims 4 and 5.

E. Claims 6-10

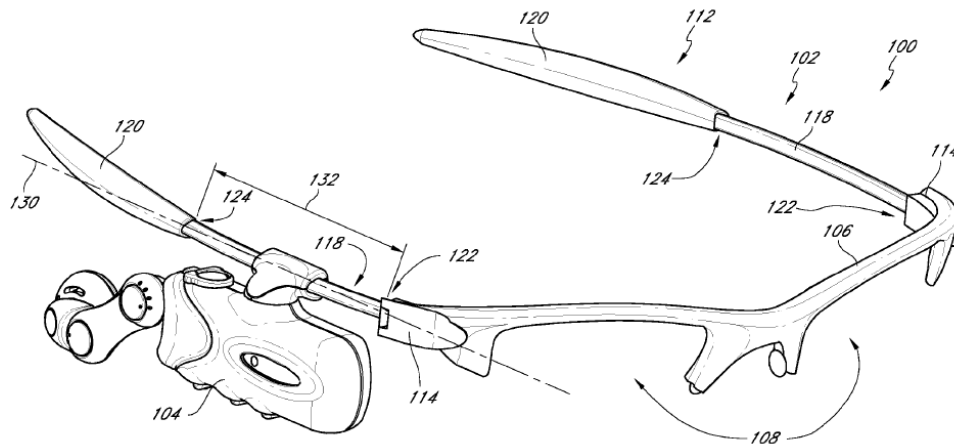
153. For the reasons I explained for claims 6-10 in Section V, Jannard-740 renders obvious claims 6-10. *Supra* §§V.D-G. For the reasons I explained for claims 6-8 and 10 in Section VI, Osterhout renders obvious claims 6-8 and 10. *Supra* §§VI.D-G.

154. Therefore, Jannard-740 and Osterhout render obvious claims 6-10.

VIII. JANNARD-740 AND ROSENBLATT RENDER OBVIOUS CLAIMS 11-18, 20-24, AND 26

A. Combination of Jannard-740 and Rosenblatt

155. As I explained for claim 1 in Section V, Jannard-740 discloses eyewear comprising an eyewear frame and an application module that is mechanically coupled to the eyewear frame. *Supra* §§V.A.1-2, V.A.4.



Ex. 1005 (Jannard-740), Fig. 3. Jannard-740 also discloses its application module includes a wireless chip and a transmitter. *Supra* §V.A.5; Ex. 1005 (Jannard-740), [0011], Claim 10. As a result, Jannard-740 discloses every limitation of claims 11

and 22 other than perhaps that [i] another device recognizes a presence of a wearer from communication with the wireless chip (claim 11) and [ii] the application module transmits a password for accessing a computer (claim 22). However, as described in Rosenblatt, it would have been well known to a POSITA to use a wireless chip and transmitter for those functions. Ex. 1007 (Rosenblatt), [0058]-[0061], [0095].

156. Rosenblatt provides that “the key or its functionality may be incorporated in an electronic device, for example in a cellular telephone, a mobile communications device, a pocket-sized personal computer (e.g., an iPAQ or a Palm Pilot) a personal media device (e.g., an iPod), a camera, a video recorder, a computer (e.g., a laptop computer), a key (e.g., car keys), a remote controller, or any other suitable electronic device.” Ex. 1007 (Rosenblatt), [0007]. A POSITA would have considered Jannard-740’s application module for eyewear to be one suitable and desirable device for incorporating Rosenblatt’s key or its functionality. Rosenblatt specifically encourages attaching its key to a wired or wireless headset (Ex. 1007 (Rosenblatt), [0043]) that is like Jannard-740’s eyewear system. A POSITA would have been motivated to incorporate Rosenblatt’s key or its functionality in the application module in Jannard-740 to achieve the benefits described in Rosenblatt with Jannard-740’s application module, such as controlling host devices according to wireless communication with the application module. Such incorporating of

Rosenblatt's key or its functionality in the application module in Jannard-740 desirably "provid[es] functional fashion having device operation capabilities," which is consistent with Rosenblatt's recommendations. *See also* Ex. 1007 (Rosenblatt), [0058].

157. Such incorporating in the application module in Jannard-740 represents nothing more than the simple addition of one known element (key or its functionality) to another known element (application module) to obtain predictable results (application module which incorporates key or its functionality). Moreover, the combination of Jannard-740 and Rosenblatt represents the use of a known technique (incorporating key or its functionality into electronic device) to improve a similar device and method (application module in Jannard-740 having wireless communications for various functions) in the same way. Additionally, the combination represents the use of a known technique (incorporating key or its functionality into electronic device) to improve a known device and method (application module in Jannard-740 for eyewear) that is ready for improvement and yields predictable results (enhancing application module in Jannard-740 by incorporating key or its functionality).

158. A POSITA would have reasonably expected success in incorporating Rosenblatt's key or its functionality in the application module in Jannard-740 based on Rosenblatt's recommendation to incorporate the key or its functionality "... in a

cellular telephone, a mobile communications device, a pocket-sized personal computer (e.g., an iPAQ or a Palm Pilot) a personal media device (e.g., an iPod) ...” or to attach the key to a wired or wireless headset. Ex. 1007 (Rosenblatt), [0007], [0043].

B. Claim 11

1. Preamble

159. The preamble of claim 11 recites “[e]yewear.” Jannard-740 discloses the preamble for the reasons discussed for the preamble of claim 1 in Section V. *Supra* §V.B.1.

2. Limitation 11[a]: “an eyewear frame having a first temple and a second temple”

160. For the reasons I explained for limitation 1[a] in Section V, Jannard-740 discloses this limitation. *Supra* §V.A.2.

3. Limitation 11[b]: “an application module mechanically coupled to the eyewear frame”

161. For the reasons I explained for limitation 1[c] in Section V, Jannard-740 discloses this limitation. *Supra* §V.A.4.

4. Limitation 11[c]: “the application module including a wireless chip to communicate with a wireless enabled device”

162. For the reasons I explained for limitation 1[d] in Section V, Jannard-740 discloses this limitation. *Supra* §V.A.5.

163. In addition, Rosenblatt discloses, or at least suggests, limitation 11[c]. For example, according to Rosenblatt, its key includes communications circuitry and “... create[s] a relatively short-range personal area network,” using protocol like “... Wi-Fi communications (e.g., one of the 802.11 standards), Bluetooth, ... and other relatively localized wireless communication protocols.” Ex. 1007 (Rosenblatt), [0006]. “In one embodiment, the short range communications circuitry may be integrated within the packaging of key 110 (e.g., integrated into a printed circuit board of the device),” which confirms that Rosenblatt discloses its key can include a wireless chip. Ex. 1007 (Rosenblatt), [0030]. Rosenblatt provides that “[w]hen a key is brought in proximity of a host device such that the host device is within the personal area network created by the key, the communications circuitry of the key and the transceiver of the host device may communicate data.” Ex. 1007 (Rosenblatt), [0010]. As a result, the key in Rosenblatt is an application module, and the host device in Rosenblatt is a wireless enabled device.

164. For the reasons I explained above related to the combination of Jannard-740 and Rosenblatt, a POSITA would have been motivated to incorporate Rosenblatt’s key or its functionality in the application module in Jannard-740 (for instance in the application module’s electronics or housing) and reasonably expected success in that incorporating. *Supra* §VIII.A.

165. Therefore, Jannard-740 and Rosenblatt render obvious that the application module includes a wireless chip to communicate with a wireless enabled device.

5. **Limitation 11[d]: “wherein the wireless enabled device is configured to recognize a presence of a wearer of the eyewear based at least in part on communication with the wireless chip”**

166. Rosenblatt discloses this limitation. For example, Rosenblatt provides “[a] system that includes a key for remotely causing a host device to perform an operation.” Ex. 1007 (Rosenblatt), [0005]. According to Rosenblatt, “[b]y virtue of the presence of a key, a personal area network may exist about person 510.” Ex. 1007 (Rosenblatt), [0058]. In turn, a host device “... perform[s] any suitable operation when the key is placed in proximity of the host device such that the personal area network of the key encloses the host device.” Ex. 1007 (Rosenblatt), [0060]. Rosenblatt discloses the host device performs the operation “... in response to receiving a signal from the key.” Ex. 1007 (Rosenblatt), [0060]. Additionally, Rosenblatt discloses “the user may be required to enter private information in addition to having the key present to perform an operation (e.g., a password for a more secure login to the computer).” Ex. 1007 (Rosenblatt), [0061]. For instance, “... the user may provide login data to the key for transmission to computer 110 or 112.” Ex. 1007 (Rosenblatt), [0061].

167. Therefore, Jannard-740 and Rosenblatt render obvious that the wireless enabled device is configured to recognize a presence of a wearer of the eyewear based at least in part on communication with the wireless chip, and claim 11 is obvious over Jannard-740 and Rosenblatt.

C. Claim 12

168. Claim 12 depends from claim 11 and recites: “wherein in response to recognizing the presence of the wearer, the wireless enabled device is configured to control light in the wearer’s environment based at least in part on the wearer’s preferences.”

169. Rosenblatt discloses that its host device may be a smart device like a smart lamp. Ex. 1007 (Rosenblatt), [0061]. For instance, Rosenblatt discloses that “[l]amp 660 may be configured to be turned on or off when a key is brought in proximity of the lamp.” Ex. 1007 (Rosenblatt), [0065]. “[A]s long as lamp 660 is within the network created by the key, lamp 660 may be turned on.” Ex. 1007 (Rosenblatt), [0065]. Rosenblatt also provides that, in the case of a host device being a lamp, the lamp controls light in the wearer’s environment according at least partly to a wearer’s preferences. Ex. 1007 (Rosenblatt), [0035], [0037], [0065]. According to Rosenblatt, a user can “... select the operation or operations that key 200 will direct a particular host device to perform” Ex. 1007 (Rosenblatt), [0039]. The key’s memory can store “... an instruction to perform an operation with a host

device, an identifier for a user profile or for user preferences, or user profile or user preference data ...” which may be transmitted to the host device. Ex. 1007 (Rosenblatt), [0037]. Rosenblatt provides, for instance, the user “... select[s] with the key whether to turn lamp 660 on or off, or select[s] the intensity for the lamp, and direct[s] the key to transmit the selection to lamp 660.” Ex. 1007 (Rosenblatt), [0065].

170. Therefore, Jannard-740 and Rosenblatt render obvious claim 12.

D. Claim 13

171. Claim 13 depends from claim 11 and recites: “wherein in response to recognizing the presence of the wearer, the wireless enabled device is configured to control temperature in the wearer’s environment based at least in part on the wearer’s preferences.”

172. Rosenblatt discloses its host device may be a smart device like a smart heating and/or air conditioning system. Ex. 1007 (Rosenblatt), [0061]. For instance, Rosenblatt discloses that “[h]eating and/or air conditioning system 670 may be configured to discharge air at a particular temperature when the key is brought in proximity of heating and/or air conditioning system 670.” Ex. 1007 (Rosenblatt), [0066]. Rosenblatt also provides that, in the case of a host device being a heating and/or air conditioning system, the heating and/or air conditioning system controls temperature in the wearer’s environment according at least partly to a wearer’s

preferences. Ex. 1007 (Rosenblatt), [0035], [0037], [0066]. Rosenblatt discloses that a user can “... select the operation or operations that key 200 will direct a particular host device to perform” Ex. 1007 (Rosenblatt), [0039]. The key’s memory can store “... an instruction to perform an operation with a host device, an identifier for a user profile or for user preferences, or user profile or user preference data ...” which may be transmitted to the host device. Ex. 1007 (Rosenblatt), [0037]. Rosenblatt provides, for instance, the user “... select[s] with the key a temperature, fan speed, or other setting, and direct[s] the key to transmit the selection to system 670.” Ex. 1007 (Rosenblatt), [0066].

173. Therefore, Jannard-740 and Rosenblatt render obvious claim 13.

E. Claim 14

174. Claim 14 depends from claim 11 and recites: “wherein in response to recognizing the presence of the wearer, the wireless enabled device is configured to control an external audio device based at least in part on an instruction from the wearer.” Rosenblatt discloses this for at least two reasons.

175. First, Rosenblatt provides that “[a]utomobile 640 may be configured to perform any of a number of operations when a key is brought in proximity of the automobile.” Ex. 1007 (Rosenblatt), [0063]. For instance, “automobile 640 may automatically activate a navigation system (e.g., a GPS system) or a media system.” Ex. 1007 (Rosenblatt), [0063]. Rosenblatt’s media system that is activated by the

automobile includes an external audio device which is external relative to Rosenblatt's key. In addition, Rosenblatt provides that "... the user may select with the key one or more particular operations for automobile 640 to perform, and direct the key to transmit the user's selections to the automobile." Ex. 1007 (Rosenblatt), [0063].

176. Second, Rosenblatt provides that when a key is placed in proximity of multimedia system 630, "media system 630 may be configured to automatically load the user profile or preferences of the user associated with the key, or login the user associated with the key (e.g., load the user's music preferences or load the user's playlists)." Ex. 1007 (Rosenblatt), [0061]-[0062]. Rosenblatt's media system includes a speaker that is external relative to Rosenblatt's key and permits the user to listen to the music. Ex. 1007 (Rosenblatt), [0062]. In addition, Rosenblatt discloses that a user may "... select the operation or operations that key 200 will direct a particular host device to perform." Ex. 1007 (Rosenblatt), [0039].

177. Therefore, Jannard-740 and Rosenblatt render obvious claim 14.

F. Claim 15

178. Claim 15 depends from claim 11 and recites: "wherein in response to recognizing the presence of the wearer, the wireless enabled device is configured to control an external video device based at least in part on an instruction from the wearer." Rosenblatt discloses this for at least two reasons.

179. First, Rosenblatt provides that “[a]utomobile 640 may be configured to perform any of a number of operations when a key is brought in proximity of the automobile.” Ex. 1007 (Rosenblatt), [0063]. For instance, “automobile 640 may automatically activate a navigation system (e.g., a GPS system) or a media system.” Ex. 1007 (Rosenblatt), [0063]. Rosenblatt’s navigation system includes an external video device that is external relative to Rosenblatt’s key and visually assists a user in navigating. In addition, Rosenblatt provides that “... the user may select with the key one or more particular operations for automobile 640 to perform, and direct the key to transmit the user’s selections to the automobile.” Ex. 1007 (Rosenblatt), [0063].

180. Second, Rosenblatt provides that “[t]elevision system 620 may be configured to automatically load a user’s profile or preferences when a key associated with the user is brought in proximity of system 620.” Ex. 1007 (Rosenblatt), [0062]. Rosenblatt’s television system includes a screen that is external to Rosenblatt’s key and permits the user to watch content. Ex. 1007 (Rosenblatt), [0062]. In addition, Rosenblatt discloses a user may “... select the operation or operations that key 200 will direct a particular host device to perform.” Ex. 1007 (Rosenblatt), [0039].

181. Therefore, Jannard-740 and Rosenblatt render obvious claim 15.

G. Claim 16

182. Claim 16 depends on claim 11 and recites “wherein the wireless enabled device is located in an automobile.”

183. Rosenblatt provides that “[a]utomobile 640 may be configured to perform any of a number of operations when a key is brought in proximity of the automobile.” Ex. 1007 (Rosenblatt), [0063]. For instance, when the key is brought in proximity of the automobile, “automobile 640 may automatically turn on the heating or air conditioning system of the automobile.” Ex. 1007 (Rosenblatt), [0063]. Rosenblatt heating or air conditioning system of the automobile is a wireless enabled device located in an automobile.

184. Therefore, Jannard-740 and Rosenblatt render obvious claim 16.

H. Claim 17

185. Claim 17 depends from claim 16 and recites: “wherein in response to recognizing the presence of the wearer, the wireless enabled device is configured to control at least one function of the automobile.”

186. As I explained for claim 16, Rosenblatt provides that an automobile automatically turns on its heating or air conditioning system when the key is brought in proximity of the automobile. *Supra* §VIII.G. This turning on of heating or air conditioning system controls an automobile’s air management function automobile.

187. Therefore, Jannard-740 and Rosenblatt render obvious claim 17.

I. Claim 18

188. Claim 18 depends from claim 16 and recites: “wherein the wireless enabled device is configured to control a seat, a radio, a temperature, and/or a speed of the automobile.”

189. As I explained for claim 16, Rosenblatt provides that an automobile automatically turns on its heating or air conditioning system when the key is brought in proximity of the automobile. *Supra* §VIII.G. The heating or air conditioning system of Rosenblatt’s automobile controls a temperature of the automobile.

190. Therefore, Jannard-740 and Rosenblatt render obvious claim 18.

J. Claim 20

191. Claim 20 depends from claim 11 and recites: “wherein the wireless chip is a Bluetooth chip.” For the reasons I explained for limitation 1[d] in Section V, Jannard-740 discloses “wherein the wireless chip is a Bluetooth chip.” *Supra* §V.A.5. For the reasons I explained for limitation 11[c] in Section VIII, Rosenblatt also discloses “wherein the wireless chip is a Bluetooth chip.” *Supra* §VIII.B.4.

192. Therefore, Jannard-740 and Rosenblatt render obvious claim 20.

K. Claim 21

193. Claim 21 depends on claim 11 and recites “wherein the wireless enabled device is at least one of a cell phone, a smart phone, a computer, an iPad, and/or a tablet.”

194. Rosenblatt's host device can be a computer or laptop. Ex. 1007 (Rosenblatt), [0061]. Rosenblatt discloses that when a key is placed in proximity of a computer or laptop, "computer 610 and laptop 612 may be configured to automatically log the user associated with the key into the computer system" or "... load a user's profile or preferences." Ex. 1007 (Rosenblatt), [0061].

195. Therefore, Jannard-740 and Rosenblatt render obvious claim 21.

L. Claim 22

1. Preamble

196. For the reasons I explained for the preamble of claim 1 in Section V, Jannard-740 discloses the preamble. *Supra* §V.A.1.

2. Limitation 22[a]: "an eyewear frame having a first temple and a second temple"

197. For the reasons discussed for limitation 1[a] in Section V, Jannard-740 discloses limitation 22[a]. *Supra* §V.A.2.

3. Limitation 22[b]: "an application module mechanically coupled to the eyewear"

198. For the reasons discussed for limitation 1[c] in Section V, Jannard-740 discloses limitation 22[b]. *Supra* §V.A.4.

4. Limitation 22[c]: "the application module comprising a transmitter and a wireless chip"

199. Jannard-740 discloses limitation 22[c]. For example, Jannard-740 provides that its application module may include "... a radio frequency transmitter

....” Ex. 1005 (Jannard-740), [0011], Claim 12 (“electronics module comprises a transmitter”). Furthermore, as I explained for limitation 1[d] in Section V, Jannard-740’s application module comprises a wireless chip. *Supra* §V.A.5.

5. Limitation 22[d]: the transmitter and the wireless chip “to wirelessly transmit a password from the application module from a wearer of the eyewear to a computer to access the computer”

200. Rosenblatt discloses limitation 22[d]. For example, as I explained for limitations 11[c] and 11[d], Rosenblatt discloses a system that includes a key with a wireless chip for remotely causing a host device like a computer to perform an operation when the key is placed in proximity of the host device. *Supra* §§VIII.B.4-5. Rosenblatt also provides “[t]he key may include a communications circuitry for transmitting data,” confirming the communications circuitry includes a transmitter for facilitating the data transmission. Ex. 1007 (Rosenblatt), Abstract; Ex. 1014 (Modern Dictionary of Electronics), 3 (transmitter being “[a]pparatus for converting electrical energy received from a source into radio-frequency electromagnetic energy capable of being radiated”); *see also* Ex. 1007 (Rosenblatt), [0037]. In addition, Rosenblatt discloses that a host device such as a computer “... authenticates the key.” Ex. 1007 (Rosenblatt), [0095]. According to Rosenblatt, the computer’s processor “... may receive authentication information from the key that processor 302 can compare to data stored for the key in storage device 304 or memory 306.” Ex. 1007 (Rosenblatt), [0095]. “Authentication information may

include, for example, a username and password combination....” Ex. 1007 (Rosenblatt), [0095]. Rosenblatt provides “... the user may provide login data to the key for transmission to [the] computer....” Ex. 1007 (Rosenblatt), [0061]. Rosenblatt further provides that, when a host device determines that the key is authenticated, “the host device identifies one or more operations to perform in response to the key’s proximity” Ex. 1007 (Rosenblatt), [0097]-[0098]. These operations can include “automatically log[ging] the user associated with the key into the computer system.” Ex. 1007 (Rosenblatt), [0061]; *see also* Ex. 1007 (Rosenblatt), [0053] (“[A] user may provide identifier information to receive authorization to access the [host] device.”).

201. A POSITA would have been motivated to incorporate Rosenblatt’s key or its functionality in the application module in Jannard-740 (for instance, in the module’s electronics or housing) and reasonably expected success in that incorporating for the reasons discussed for the combination of Jannard-740 and Rosenblatt. *Supra* §VIII.A.

202. As a result, Jannard-740 and Rosenblatt render obvious a transmitter and a wireless chip to wirelessly transmit a password from the application module from a wearer of the eyewear to a computer to access the computer.

203. Therefore, Jannard-740 and Rosenblatt render obvious claim 22.

M. Claim 23

204. Claim 23 depends from claim 22 and recites: “wherein receiving the password at the computer enables access to the computer.”

205. As I explained for limitation 22[d], Rosenblatt provides that receiving the password at Rosenblatt’s computer enables access to the computer. *Supra* §VIII.L.5.

206. Therefore, Jannard-740 and Rosenblatt render obvious claim 23.

N. Claim 24

207. Claim 24 depends from claim 22 and recites: “wherein the wireless enabled device is configured to adjust a brightness and/or a volume of the computer.” The phrase “a wireless enabled device” appears nowhere in claims 22 and 24, so “wireless enabled device” lacks an antecedent basis. As a result, the meaning of claim 24 is unclear. As best as I understand this claim language, Patent Owner intended to recite “computer” in place of “wireless enabled device.” I apply this interpretation in my analysis of claim 24.

208. Rosenblatt provides that a host device like a computer “may include a display....” Ex. 1007 (Rosenblatt), [0051]-[0053]. The display of the computer varies its brightness to visually present information to a user of the computer. Ex. 1011 (Microsoft Computer Dictionary), 5 (display being “[t]he visual output device of a computer ...”).

209. Therefore, Jannard-740 and Rosenblatt render obvious claim 24.

O. Claim 26

210. Claim 26 depends from claim 22 and recites: “wherein the wireless enabled device is configured to access an email via the computer.” As with claim 24, the phrase “a wireless enabled device” appears nowhere in claims 22 and 26, so “wireless enabled device” lacks an antecedent basis. As a result, the meaning of claim 26 is unclear. As best as I understand this claim language, Patent Owner intended to recite “computer” in place of “wireless enabled device.” I apply this interpretation in my analysis of claim 26.

211. Rosenblatt provides that a host device like a computer performs operations including “... opening a program (e.g., opening a user’s e-mail software)” Ex. 1007 (Rosenblatt), [0009], [0055]; *see also* Ex. 1005 (Jannard-740), [0210] (disclosing source includes email). The e-mail software opened on the computer accesses a user’s email with the computer.

212. Therefore, Jannard-740 and Rosenblatt render obvious claim 26.

IX. JANNARD-740, ROSENBLATT, AND GUNARATNE RENDER OBVIOUS CLAIM 19

213. Claim 19 depends from claim 16 and recites: “wherein the wireless enabled device is configured to control a functionality of the automobile to awake the wearer should the wearer fall asleep.” Jannard-740, Rosenblatt, and Gunaratne render obvious this claim.

214. Rosenblatt's host device (wireless enabled device) may be an automobile. Ex. 1007 (Rosenblatt), [0061]. A POSITA would have known that one common issue with automobiles is drowsiness of driver's while driving. Ex. 1008 (Gunaratne), [0002].

215. Gunaratne discloses a system that addresses this known issue by "rapidly detect[ing] the drowsiness of an individual operating a machine," like a motor vehicle. Ex. 1008 (Gunaratne), [0018]. An actuator may "... alert the individual that he or she is becoming drowsy and may fall asleep unless proper action is taken." Ex. 1008 (Gunaratne), [0026]. The actuator "can be an audio actuator such as ... a radio in a motor vehicle" Ex. 1008 (Gunaratne), [0026].

216. A POSITA would have been motivated to incorporate Gunaratne's drowsiness-alert functionality in the automobile in the combination of Jannard-740 and Rosenblatt since Gunaratne suggests such an incorporation. For instance, Gunaratne provides that its drowsiness-alert functionality "... has utility as a safety feature for a machine." Ex. 1008 (Gunaratne), [0017]. According to Gunaratne, rapidly detecting driver drowsiness "... improve[s] the performance and/or safety of the individual, other individuals in the vicinity of the machine and the like." Ex. 1008 (Gunaratne), [0018]. Incorporating the functionality would enable Jannard-740-Rosenblatt's automobile to realize the benefits described in Gunaratne. Moreover, the combination represents the use of a known technique (alerting drivers

that have been identified as drowsy) to improve a known device and method (Jannard-740-Rosenblatt's automobile with electronic systems) that is ready for improvement and yields predictable results (alerting drowsy automobile drivers to increase safety). This incorporating would have been trivial in view of Gunaratne's disclosure. *See also* Ex. 1007 (Rosenblatt), [0063].

217. Therefore, claim 19 is obvious in view of Jannard-740, Rosenblatt, and Gunaratne.

**X. JANNARD-740, ROSENBLATT, AND NIELSEN RENDER OBVIOUS
CLAIM 25**

218. Claim 25 depends from claim 22 and recites: "wherein the wireless enabled device is configured to adjust a font size of an application in the computer." As with claim 24, the phrase "a wireless enabled device" appears nowhere in claims 22 and 25, so "wireless enabled device" lacks an antecedent basis. As a result, the meaning of claim 25 is unclear. As best as I understand this claim language, Patent Owner intended to recite "computer" in place of "wireless enabled device." I apply this interpretation in my analysis of claim 25.

219. Jannard-740, Rosenblatt, and Nielsen render obvious this claim.

220. Rosenblatt's host device (wireless enabled device) may be a computer. Ex. 1007 (Rosenblatt), [0061]. A POSITA would have known that font sizes on computers should be adapted to user preferences. Ex. 1009 (Nielsen), 1:14-63.

221. Nielsen provides a routine method for “... adaptively changing the font size with which information retrieved over a network is displayed.” Ex. 1009 (Nielsen), 1:9-11. According to Nielsen, a document is “displayed with a size preference found in one of the databases.” Ex. 1009 (Nielsen), 2:54-56. This display can be presented by a browser application that is executed in a computer. Ex. 1009 (Nielsen), 5:29-35, 4:11-12, 2:7-14.

222. A POSITA would have been motivated to incorporate Nielsen’s adaptive font functionality in the computer in the combination of Jannard-740 and Rosenblatt since Nielsen suggests such an incorporation. For instance, Nielsen beneficially “provide[s] a way for adapting font size in a browser or other User Interface based on user font-size preferences for retrieved documents.” Ex. 1009 (Nielsen), 1:55-57. Nielsen confirms that adapting of font size “accommodate[s] the needs of a variety of network users who have different individual preferences for viewing documents ...” and “account[s] for display differences which may cause the same document to appear differently on different displays.” Ex. 1009 (Nielsen), 1:58-63. Incorporating the functionality would permit Jannard-740-Rosenblatt’s computer to realize the benefits described in Nielsen. *See also* Ex. 1007 (Rosenblatt), [0051]-[0052]. In addition, the combination represents the use of a known technique (adapting browser font size) to improve a known device and method (Jannard-740-Rosenblatt’s computer for executing applications like

browsers) that is ready for improvement and yields predictable results (adapting browser font size in computer to beneficially respond to user preferences). This incorporating would have been trivial in view of Nielsen's disclosure.

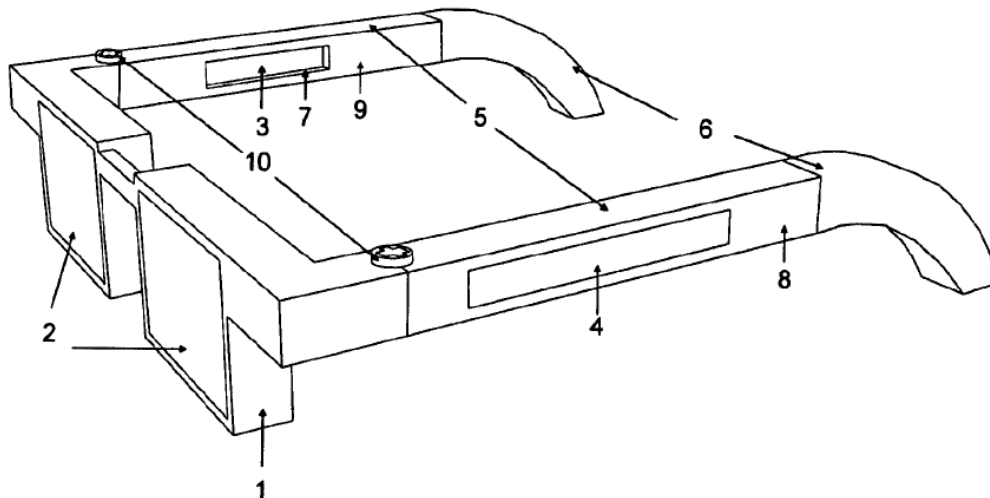
223. Therefore, claim 25 is obvious in view of Jannard-740, Rosenblatt, and Nielsen.

XI. CHEN AND ROSENBLATT RENDER OBVIOUS CLAIMS 11-18, 20-24, AND 26

A. Combination of Chen and Rosenblatt

224. Chen provides eyewear comprising an eyewear frame and an application module (cartridge) that is mechanically coupled to the eyewear frame.

Ex. 1010 (Chen), 2:55-59.



Ex. 1010 (Chen), Fig. 1. In addition, Chen discloses eyewear having wireless communication circuitry. Ex. 1010 (Chen), 1:28-31, 1:63-22; *see also* Ex. 1015 (Swab) (incorporated by reference in Ex. 1010 (Chen)), 4:19-37. As a result, Chen

discloses every limitation of claims 11 and 22 other than perhaps using a wireless chip and transmitter so that [i] another device recognizes a presence of a wearer according at least partly to communication with the wireless chip (claim 11) and [ii] the application module transmits a password to access a computer (claim 22). However, as described in Rosenblatt, it would have been well known to a POSITA to use a wireless chip and transmitter for those functions. Ex. 1007 (Rosenblatt), [0058]-[0061], [0095].

225. As I explained in Section VIII, Rosenblatt provides “the key or its functionality may be incorporated in an electronic device, for example in a cellular telephone, a mobile communications device, a pocket-sized personal computer (e.g., an iPAQ or a Palm Pilot) a personal media device (e.g., an iPod), a camera, a video recorder, a computer (e.g., a laptop computer), a key (e.g., car keys), a remote controller, or any other suitable electronic device.” Ex. 1007 (Rosenblatt), [0007]; *supra* §VIII.A. A POSITA would have considered Chen’s application module for eyewear to be one suitable and desirable device for incorporating Rosenblatt’s key or its components or functionality. Rosenblatt specifically encourages attaching its key to a wired or wireless headset (Ex. 1007 (Rosenblatt), [0043]) like Chen’s eyewear system. A POSITA would have been motivated to incorporate Rosenblatt’s key or its components or functionality in the application module in Chen to achieve the benefits described in Rosenblatt with Chen’s application module, such as

controlling host devices according to wireless communication with the application module. Such incorporating of a key or its components or functionality in the application module in Chen desirably “provid[es] functional fashion having device operation capabilities,” which is consistent with Rosenblatt’s recommendations. *See also* Ex. 1007 (Rosenblatt), [0058].

226. Such incorporating represents nothing more than the simple addition of one known element (key or its components or functionality) to another known element (application module) to obtain predictable results (application module which incorporates key or its components or functionality). Moreover, the combination of Chen and Rosenblatt represents the use of a known technique (incorporating key or its components or functionality into electronic device) to improve a similar device and method (application module in Chen having wireless communications for various functions) in the same way. Additionally, the combination represents the use of a known technique (incorporating key or its components or functionality into electronic device) to improve a known device and method (application module in Chen for eyewear) that is ready for improvement and yields predictable results (enhancing application module in Chen by incorporating key or its components or functionality).

227. A POSITA would have reasonably expected success in incorporating Rosenblatt’s key or its components or functionality in the application module in

Chen based on Chen's disclosure that "[t]he removable cartridge comprises of materials and components, including electronic or non-electronic or any combination thereof," (Ex. 1010 (Chen), 2:60-63) and Rosenblatt's recommendation to incorporate the key or its components or functionality "... in a cellular telephone, a mobile communications device, a pocket-sized personal computer (e.g., an iPAQ or a Palm Pilot) a personal media device (e.g., an iPod) ..." or to attach the key to a wired or wireless headset (Ex. 1007 (Rosenblatt), [0007], [0043]).

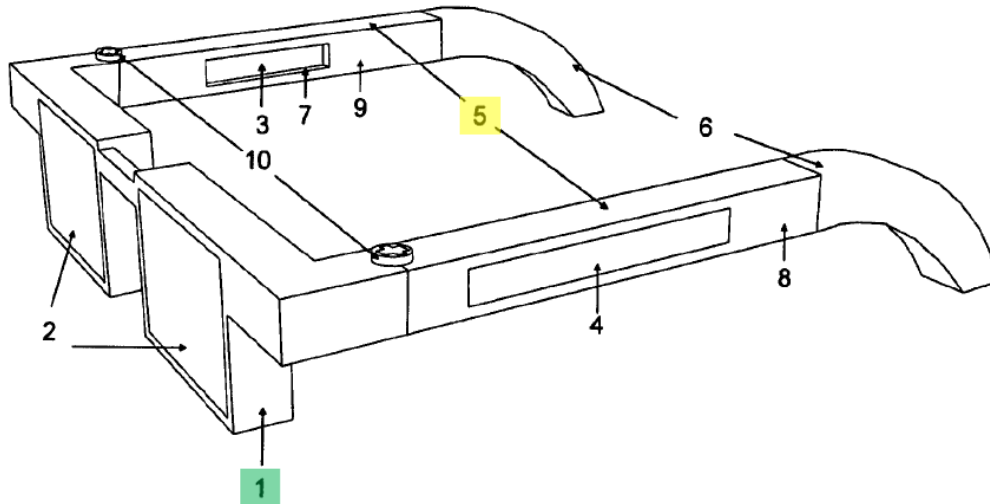
B. Claim 11

1. Preamble

228. Chen discloses eyewear, such as in Chen's title "EYEWEAR TEMPLE ASSEMBLY" and other places like the abstract and figures. Ex. 1010 (Chen), Title, Abstract, Figs. 1, 4.

2. Limitation 11[a]: "an eyewear frame having a first temple and a second temple"

229. Figure 1 in Chen discloses a frame 1 (green) having temples 5 (yellow). Ex. 1010 (Chen), 5:25-27, 2:54-55, 8:5-7.

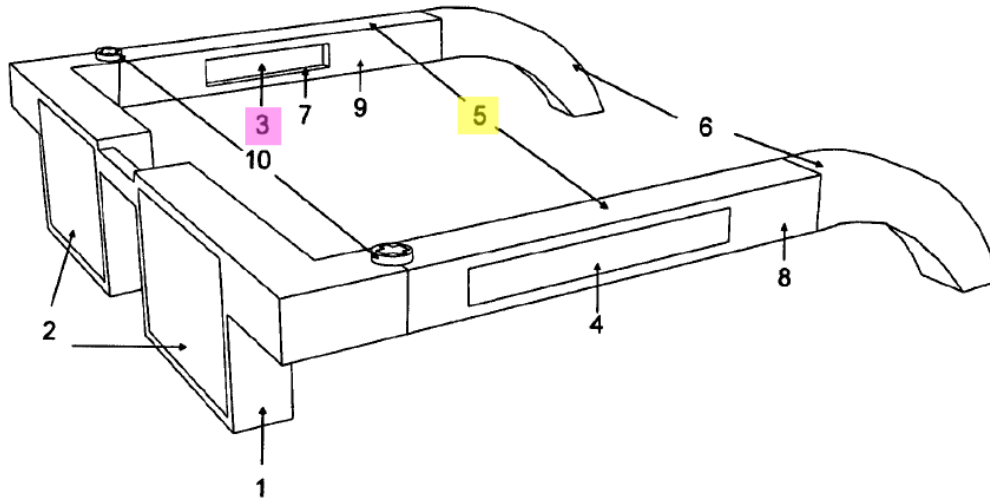


Ex. 1010 (Chen), Fig. 1; *see also* Ex. 1010 (Chen), Fig. 4. Chen discloses “eyewear frame” as the phrase is used in the ’960 patent. Ex. 1001 (’960 patent), 8:17-24.

3. Limitation 11[b]: “an application module mechanically coupled to the eyewear frame”

230. Chen discloses limitation 11[b]. For example, Chen’s “temple assembly invention is comprised of a temple, removable cartridge, cartridge compartment that can accommodate and conceal one or multiple said cartridge(s), and temple tip.” Ex. 1010 (Chen), 2:55-59. “The removable cartridge comprises of materials and components, including electronic or non-electronic or any combination thereof....” Ex. 1010 (Chen), 2:60-63. Chen’s design “allows the addition of diverse functions to eyewear through the installment of cartridge(s) comprised of different, unique capabilities.” Ex. 1010 (Chen), 4:22-24. Chen’s cartridge accordingly is an application module as the phrase is used in the ’960 patent. Ex. 1001 (’960 patent), 21:59-62; *see also* Ex. 1001 (’960 patent), 9:32-43.

231. Chen’s “cartridge compartment can be within the temple, within the temple tip, or be comprised of sub-compartments within the temple and temple tip.” Ex. 1010 (Chen), 2:63-65. Figure 1 in Chen illustrates a cartridge 3 (pink) is located in the temple 5 (yellow).



Ex. 1010 (Chen), Fig. 1; *see also* Ex. 1010 (Chen), Fig.4. The eyewear in Chen has “coupled” components according to the broad usage of the term in the ’960 patent. Ex. 1001 (’960 patent), 7:47-65.

232. Therefore, Chen discloses an application module mechanically coupled to the eyewear frame.

4. **Limitation 11[c]: “the application module including a wireless chip to communicate with a wireless enabled device”**

233. Chen discloses, or at least suggests, limitation 11[c]. For example, Chen provides eyewear that “... provide music playing and cell phone capabilities ...” and “... functionalities that go beyond the obvious features.” Ex. 1010 (Chen),

1:28-31. Chen also discusses disclosure in Swab (Ex. 1015) regarding embedding a Bluetooth component in the temple of eyewear. Ex. 1010 (Chen), 1:63-22. That Bluetooth component has a wireless chip to wirelessly communicate using the Bluetooth[®] standard with another wireless enabled device. *See e.g.*, Ex. 1015 (Swab), 4:19-37.

234. To the extent Patent Owner asserts that Chen does not disclose a cartridge includes a wireless chip, a POSITA would have been motivated to include a wireless chip in Chen's cartridge in view of Chen's highlighting of the Bluetooth component and cell phone capabilities and Chen's recommendation to "incorporate detachable parts and concealable compartments, which can store or hold additional functional components." Ex. 1010 (Chen), 1:32-34. Chen suggests this incorporating by highlighting prior designs which "if any electronic component malfunctions, then the user will have to replace a significant portion of the eyewear, such as a whole temple, rather than the individual defective component." Ex. 1010 (Chen), 2:2-5. A POSITA would have reasonably expected success in the incorporation in view of Chen's disclosure that "[t]he removable cartridge comprises of materials and components, including electronic or non-electronic or any combination thereof." Ex. 1010 (Chen), 2:60-63. As a result, Chen discloses, or at least suggests, that the application module includes a wireless chip to communicate with a wireless enabled device.

235. To the extent Patent Owner argues that Chen does not suggest a cartridge includes a wireless chip, Rosenblatt suggests including a wireless chip in a device like Chen's cartridge. Ex. 1007 (Rosenblatt), [0007], [0058]. For example, as I explained for limitation 11[c] in Section VIII, Rosenblatt provides a system that includes a key (application module) with a wireless chip for remotely causing a host device (wireless enabled device) to perform an operation. *Supra* §VIII.B.4. A POSITA would have been motivated to include Rosenblatt's key with its wireless chip or a wireless chip similar to Rosenblatt's in one of Chen's cartridges and reasonably expected success in that incorporation for the reasons discussed above for the combination of Chen and Rosenblatt. *Supra* §XI.A.

236. Therefore, Chen and Rosenblatt render obvious that the application module includes a wireless chip to communicate with a wireless enabled device.

5. **Limitation 11[d]: “wherein the wireless enabled device is configured to recognize a presence of a wearer of the eyewear based at least in part on communication with the wireless chip”**

237. For the reasons I explained for limitation 11[d] in Section VIII, Rosenblatt discloses this limitation. *Supra* §VIII.B.5. A POSITA would have been motivated to incorporate Rosenblatt's key or its components or functionality in one of Chen's cartridges and reasonably expected success in doing so for the reasons discussed above for the combination of Chen and Rosenblatt. *Supra* §XII.B.

238. Therefore, Chen and Rosenblatt render obvious claim 11.

C. Claims 12-18

239. For the reasons I explained for claims 12-18 in Section VIII, Rosenblatt discloses the dependent claim limitations of claims 12-18. *Supra* §§VIII.C-I. Therefore, Chen and Rosenblatt render obvious claims 12-18.

D. Claim 20

240. For the reasons I explained for limitation 11[c], Chen discloses, or at least suggests, that its wireless chip is a Bluetooth chip. *Supra* §XI.B.4.

241. Rosenblatt discloses “[t]he key may use any suitable communications protocol to create the personal area network including, for example, ... Bluetooth ... and other relatively localized wireless communication protocols.” Ex. 1007 (Rosenblatt), [0006]; *see also* Ex. 1007 (Rosenblatt), [0029], [0034], Title, Claim 3.

242. Therefore, Chen and Rosenblatt render obvious claim 20.

E. Claim 21

243. For the reasons I explained for claim 21 in Section VIII, Rosenblatt discloses the dependent claim limitations of claim 21. *Supra* §VIII.K. Therefore, Chen and Rosenblatt render obvious claim 21.

F. Claim 22

1. Preamble and Limitations 22[a]-22[b]

244. For the reasons I explained for the preamble of claim 11 and limitations 11[a]-11[b] in this section, Chen discloses the preamble and limitations 22[a]-22[b]. *Supra* §§XI.B.1-3.

2. Limitation 22[c]

245. For reasons I explained for limitation 11[c] in this section, Chen and Rosenblatt render obvious that the application module includes a wireless chip. *Supra* §XI.B.4.

246. Chen and Rosenblatt also disclose, or at least suggest, the application module comprising a transmitter.

247. Chen discloses embedding a Bluetooth component in an eyewear's temple. Ex. 1010 (Chen), 1:63-22. That Bluetooth component has a transmitter for facilitating its wireless communication. Ex. 1014 (Modern Dictionary of Electronics), 3 (transmitter being “[a]pparatus for converting electrical energy received from a source into radio-frequency electromagnetic energy capable of being radiated”).

248. To the extent Patent Owner asserts that Chen does not disclose one of its cartridges has a transmitter, a POSITA would have been motivated to include Chen's disclosed Bluetooth component in a cartridge as I explained for limitation

11[c] in this section. *Supra* §XI.B.4. The Bluetooth component includes a transmitter as I explained in the preceding paragraph.

249. To the extent Patent Owner asserts that Chen does not suggest a cartridge including a transmitter, Rosenblatt suggests including a transmitter in a device such as Chen's cartridge. Ex. 1007 (Rosenblatt), [0007], [0058]. For example, Rosenblatt provides "[t]he key may include a communications circuitry for transmitting data." Ex. 1007 (Rosenblatt), Abstract; *see also* Ex. 1007 (Rosenblatt), [0037]. The communications circuitry has a transmitter for facilitating the data transmission. Ex. 1014 (Modern Dictionary of Electronics), 3 (definition of transmitter). For the reasons I explained for the combination of Chen and Rosenblatt, a POSITA would have been motivated to include Rosenblatt's key with its transmitter or a transmitter similar to Rosenblatt's in one of Chen's cartridges and reasonably expected success in that combination. *Supra* §XI.A.

250. Therefore, Chen and Rosenblatt render obvious that the application module includes a transmitter and a wireless chip.

3. Limitation 22[d]

251. Rosenblatt discloses this limitation for the reasons discussed for limitation 22[d] in Ground 4. *Supra* §IX.M.5. A POSITA would have been motivated to incorporate Rosenblatt's key or its components or functionality in one

of Chen’s cartridges and reasonably expected success in doing so for the reasons discussed above for the combination of Chen and Rosenblatt. *Supra* §XII.B.

252. Therefore, Chen and Rosenblatt render obvious claim 22.

G. Claims 23, 24, and 26

253. For the reasons I explained for claims 23, 24, and 26 in Section VIII, Rosenblatt discloses the dependent claim limitations of claims 23, 24, and 26. *Supra* §§VIII.M-O. Therefore, Chen and Rosenblatt render obvious claims 23, 24, and 26.

**XII. CHEN, ROSENBLATT, AND GUNARATNE RENDER OBVIOUS
CLAIM 19**

254. Claim 19 depends from claim 16 and recites: “wherein the wireless enabled device is configured to control a functionality of the automobile to awake the wearer should the wearer fall asleep.” Chen, Rosenblatt, and Gunaratne render obvious this claim.

255. A POSITA would have been motivated to incorporate Gunaratne’s drowsiness-alert functionality in the automobile in the combination of Chen and Rosenblatt since, as discussed Section IX, Gunaratne suggests doing so and the combination represents the use of a known technique (alerting drivers that have been identified as drowsy) to improve a known device and method (Chen-Rosenblatt’s automobile with electronic systems) that is ready for improvement and yields predictable results (alerting drowsy automobile drivers to increase safety). *Supra*

§IX. Incorporating the functionality would have been trivial in view of Gunaratne's disclosure. *Supra* §IX.

256. Therefore, Chen, Rosenblatt, and Gunaratne render obvious claim 19.

XIII. CHEN, ROSENBLATT, AND NIELSEN RENDER OBVIOUS CLAIM 25

257. Claim 25 depends from claim 22 and recites: "wherein the wireless enabled device is configured to adjust a font size of an application in the computer." As with claim 24, the phrase "a wireless enabled device" appears nowhere in claims 22 and 25, so "wireless enabled device" lacks an antecedent basis. As a result, the meaning of claim 25 is unclear. As best as I understand this claim language, Patent Owner intended to recite "computer" in place of "wireless enabled device." I apply this interpretation in my analysis of claim 25.

258. A POSITA would have been motivated to incorporate Nielsen's adaptive font functionality in the computer in the combination of Chen and Rosenblatt since, as discussed Section X, Nielsen suggests doing so and the combination represents the use of a known technique (adapting browser font size) to improve a known device and method (Chen-Rosenblatt's computer for executing applications like browsers) that is ready for improvement and yields predictable results (adapting browser font size in computer to beneficially respond to user preferences). *Supra* §X. Incorporating the functionality would have been trivial in

view of Nielsen's disclosure. *Supra* §X. Therefore, Chen, Rosenblatt, and Nielsen render obvious this claim.

XIV. SECONDARY CONSIDERATIONS

259. I am not aware of any secondary considerations of non-obviousness that would support non-obviousness of the '960 patent. I am not aware of any products sold by Patent Owner in the United States that would be covered by the '960 patent.

260. Given that the eyewear claimed in the '960 patent are not new, and were invented long before January 2012, I am not aware of any longfelt need in the industry, unexpected results, skepticism of the claimed inventions, or teaching away from the claimed inventions. I am also not aware of any praise for the alleged inventions or copying of the alleged inventions by other companies. If Patent Owner identifies any alleged evidence of secondary considerations in the future, I reserve the right to respond to that information.

XV. CONCLUSION

For the foregoing reasons, it is my opinion that the claims of the '960 patent would have been obvious in view of the prior art discussed above and the knowledge of one of ordinary skill in the art at the time of the alleged invention.

I reserve the right to supplement my opinions in the future to respond to any arguments or positions that the patent owner may raise, taking account of new information as it becomes available to me.

I 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.

Dated: 20 Jun 2024

By: John M Feland III
John Feland, Ph.D.