

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MOBOTIX CORP.,
Petitioner,

v.

e-WATCH, INC.,
Patent Owner.

Case IPR2013-00498
Patent 7,023,913

Before JAMESON LEE, MICHAEL W. KIM, and MATTHEW R. CLEMENTS,
Administrative Patent Judges.

KIM, *Administrative Patent Judge.*

FINAL WRITTEN DECISION
35 U.S.C. § 318(a) and 37 C.F.R. § 42.73

I. INTRODUCTION

A. *Background*

Mobotix Corporation (“Petitioner”) filed a Petition requesting *inter partes* review of claims 12, 15, 16, 18, 20–30, and 34–37 of U.S. Patent No. 7,023,913 (Ex. 1101, “the ’913 patent”) pursuant to 35 U.S.C. §§ 311–319. Paper 5 (“Pet.”). e-Watch, Inc. (“Patent Owner”) did not file a Preliminary Response. On February 10, 2014, we instituted an *inter partes* review of claims 15, 16, 18, 20–30, and 34–37 on certain grounds of unpatentability alleged in the Petition. Paper 10 (“Dec.”). After institution of trial, Patent Owner did not file a Patent Owner Response. An oral argument was not held.

The Board has jurisdiction under 35 U.S.C. § 6(c). In this Final Written Decision, issued pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73, we determine Petitioner has shown by a preponderance of the evidence that all claims for which trial is instituted, claims 15, 16, 18, 20–30, and 34–37, are unpatentable.

B. *Related Proceedings*

The ’913 patent is the subject of another petition for *inter partes* review, IPR2013-00337, also filed by Petitioner. In that proceeding, Petitioner challenged claims 1–11, 13, 14, 17, 19, and 31–33 of the ’913 patent. We granted the petition and instituted trial in IPR2013-00337 on November 13, 2013. On October 10, 2014, we issued a Final Written Decision in IPR2013-00337 that held claims 1–11, 13, 14, 17, 19, and 31–33 of the ’913 patent unpatentable. *See Mobotix Corp. v. e-Watch, Inc.*, Case IPR2013-00337 (PTAB Oct. 10, 2014) (Paper 35).

Petitioner and Patent Owner indicate that the ’913 patent was asserted against Petitioner in a district court proceeding captioned *e-Watch, Inc. v. Mobotix Corp.*, Case No. 5:12-cv-00492 (W.D. Tex.). Pet. 1; Paper 8, 1. Petitioner and Patent Owner also indicate that the following judicial proceedings may affect, or

be affected by, a decision in this proceeding: (1) *e-Watch, Inc. v. Avigilon Corporation*, Case No. 4:13-cv-00347 (S.D. Tex.); and (2) *e-Watch, Inc. v. FLIR Systems, Inc.*, Case No. 4:13-cv-00638 (S.D. Tex.). Pet. 1; Paper 8, 1.

C. The '913 Patent

The subject matter of the '913 patent relates to multimedia sensors for use in connection with a digital networked surveillance system. Ex. 1101, 1:7–9. Public facilities, such as schools, banks, airports, arenas, and the like, frequently employ monitoring and surveillance systems to enhance security. Ex. 1101, 1:12–21. One such system employs analog cameras that deliver video via coaxial cables to a centralized monitoring facility, but this type of system is generally of low quality, does not have the ability to “share” the video, and provides video that is viewable only on the system’s control console. Ex. 1101, 1:37–43. More recently, security cameras have employed video compression technology, enabling individual cameras to be connected remotely to a centralized system via telephone circuits. Ex. 1101, 2:5–7. Due to bandwidth constraints imposed by public-switched telephone systems, however, such surveillance systems typically are limited to low-resolution images, or low frame rates, or both. Ex. 1101, 2:1–4.

To solve these and other problems, methods and systems are disclosed, according to the '913 patent, for using a fully digital camera system capable of providing high-resolution still image and/or streaming video signals via a network to a centralized, server-supported security and surveillance system. Ex. 1101, 2:36–40. According to the '913 patent, the fully digital camera system is adapted for collecting an image from one or more image transducers, compressing the image, and sending the compressed digital image signal to one or more receiving stations over a digital network. Ex. 1101, 2:45–49.

According to the '913 patent, recent advances in the art have produced commercially available area sensors, as applied to security cameras, with improved resolution that provide significant improvement in the quality of captured images. Ex. 1101, 2:50–56. Such improved quality allows greater accuracy in recognizing persons or events. Ex. 1101, 2:56–57.

Visual information captured by these sensors commonly is converted to digital form either on the sensor itself, or by an immediate, subsequent analog to digital converter device. Ex. 1101, 2:58–61. In digital form, the captured visual information largely is immune to the degradations that plague analog systems. Ex. 1101, 2:61–63.

The described camera uses video compression techniques to reduce the amount of image data that must be conveyed by the network. Ex. 1101, 3:12–14. According to the '913 patent, a number of recently perfected image and video compression techniques may be employed to reduce significantly the amount of visual data, while preserving the visual quality. Ex. 1101, 3:14–17. When used with adequate transmission bandwidth, or given adequate compression time, these compression techniques may produce low-loss results. Ex. 1101, 3:60–63. According to the '913 patent, a commonplace example is the DSS broadcast system, which produces broadcast-quality video at bit rates of 1 to 4 Mbits/sec using MPEG-2 compression. Ex. 1101, 3:60–65.

A variety of suitable audio compression methods also exist, when the captured audio is of sufficient quality that an attached monitoring server, upon analysis, may discern accurately sonic patterns indicative of various disturbances such as glass breakage, gunshots, and the like. Ex. 1101, 4:14–18

D. Illustrative Claim

The '913 patent includes 37 claims, of which a trial was instituted on claims 15, 16, 18, 20–30, and 34–37. Of those, claims 20, 21, 34, and 35 are independent claims. Independent claim 21 is reproduced as follows:

21. A digital security camera capable of generating and transmitting digital high resolution image signals in both a full motion video format and a still image frame format, the camera comprising:

a. a plurality of image transducers each adapted for collecting digital high resolution image signals;

b. a cylindrical housing for housing the plurality of image transducers, each of the image transducers mounted in the cylindrical housing such that they are angularly spaced and aimed radially outward from the cylindrical housing in a manner to collect a combined image representing a full panoramic view of an area within the normal range of the image transducers;

c. a motion video compressor associated with the image transducer for compressing full motion video images for generating a compressed full motion video image data signal;

d. a still frame compressor associated with the image transducer for compressing still frame images for generating a compressed still frame image data signal;

e. a first multiplexer associated with each image transducer for merging the compressed full motion video image data signal and the compressed still frame image data signal into a single, combined image data signal;

f. a second multiplexer for merging all of said signals into a combined data signal;

g. a processor associated with the second multiplexer for generating a conditioned output image signal suitable for transmission over a network; and

h. a network gateway.

E. Prior Art References Alleged to Support Unpatentability

Petitioner relies upon the following prior art references:

Seeley	US 6,069,655	May 30, 2000	Ex. 1105
Ohki	EP 0 920 211	June 2, 1999	Ex. 1106

Neta	US 5,200,818	Apr. 6, 1993	Ex. 1107
Brusewitz	WO 98/41022	Sept. 17, 1998	Ex. 1108
Umeda	JP 10-224696	Aug. 21, 1998	Ex. 1109
English translation of Umeda	JP 10-224696	Aug. 21, 1998	Ex. 1110 ¹

F. Grounds of Unpatentability Instituted for Trial

The following table summarizes the challenges to patentability that were instituted for *inter partes* review:

Reference(s)	Basis	Claims Challenged
Seeley	§ 103(a)	18 and 20
Seeley and Ohki	§ 103(a)	21–30
Seeley and Neta	§ 103(a)	15 and 34
Seeley, Ohki, and Neta	§ 103(a)	16 and 35–37
Brusewitz and Ohki	§ 103(a)	18 and 21–30
Brusewitz, Ohki, and Neta	§ 103(a)	15, 16, and 34–37

II. ANALYSIS

A. Claim Construction

In an *inter partes* review, claim terms in an unexpired patent are given their broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b). Claim terms also are given their ordinary and customary meaning, as would be understood by one of ordinary skill in the art in the context of the entire disclosure. *In re Translogic Tech, Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007).

¹ Umeda is a Japanese language document. Ex. 1109. Unless indicated otherwise, all specific citations to Umeda in this decision refer to its English language translation which is Exhibit 1110.

If an inventor acts as his or her own lexicographer, the definition must be set forth in the specification with reasonable clarity, deliberateness, and precision. *Renishaw PLC v. Marposs Societa' per Azioni*, 158 F.3d 1243, 1249 (Fed. Cir. 1998).

Multiplexer

Independent claims 20, 21, 34, and 35 each recite “multiplexer.” Petitioner proposes that “multiplexer” be construed as “a device for combining two or more input signals into at least one output signal.” Pet. 4 (internal quotation marks omitted). For support, Petitioner cites a definition of “multiplexer” from MCGRAW-HILL DICTIONARY OF SCIENTIFIC AND TECHNICAL TERMS, as well as several portions of the '913 patent. Pet. 4 (citing Ex. 1111). The '913 patent discloses the following: “multiplexer **15** is provided for merging the signals in advance of the processor.” Ex. 1101, 8:11–12. *See also* Ex. 1101, 10:28–30 (“The MPEG chip output **73** and the DSP output **77** are introduced into a multiplexer **78** for merging the still and video data, which is then output as a digital signal on line **74**”) Based on the above, we agree that Petitioner’s construction constitutes the broadest reasonable interpretation in light of the Specification. Accordingly, we adopt it as the proper construction of “multiplexer.”

B. Principles of Law

To prevail in its challenges to the patentability of the claims, Petitioner must prove unpatentability by a preponderance of the evidence. 35 U.S.C. § 316(e); 37 C.F.R. § 42.1(d). A claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007).

To establish obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *See CFMT, Inc. v. Yieldup Int'l Corp.*, 349 F.3d 1333, 1342 (Fed. Cir. 2003); *In re Royka*, 490 F.2d 981, 985 (CCPA 1974). A patent claim composed of several elements, however, is not proved obvious merely by demonstrating that each of its elements was known, independently, in the prior art. *KSR Int'l Co.*, 550 U.S. at 419. In that regard, for an obviousness analysis it is important to identify a reason that would have prompted one of skill in the art to combine prior art elements in the way the claimed invention does. *Id.* A precise teaching directed to the specific subject matter of a challenged claim, however, is not necessary to establish obviousness. *Id.* Rather, obviousness must be gauged in view of common sense and the creativity of an ordinarily skilled artisan. *Id.* Moreover, obviousness can be established when the prior art itself would have suggested the claimed subject matter to a person of ordinary skill in the art. *In re Rinehart*, 531 F.2d 1048, 1051 (CCPA 1976).

We analyze the instituted grounds of unpatentability in accordance with the above-stated principles.

C. Claims 18 and 20 – Alleged Obvious over Seeley

Petitioner contends that claims 18 and 20 are unpatentable under 35 U.S.C. § 103(a) as obvious over Seeley. Pet. 7–16. Claim 18 depends from independent claim 1, but claim 1 is not challenged in this Petition. Claim 20 is independent.

1. Seeley (Exhibit 1105)

Seeley discloses a video security system having components physically located at premises being protected, and components located at a central station from which a number of premises can be monitored simultaneously. Ex. 1105, 1:25–28. Figure 7, shown below, illustrates one embodiment of such a system.

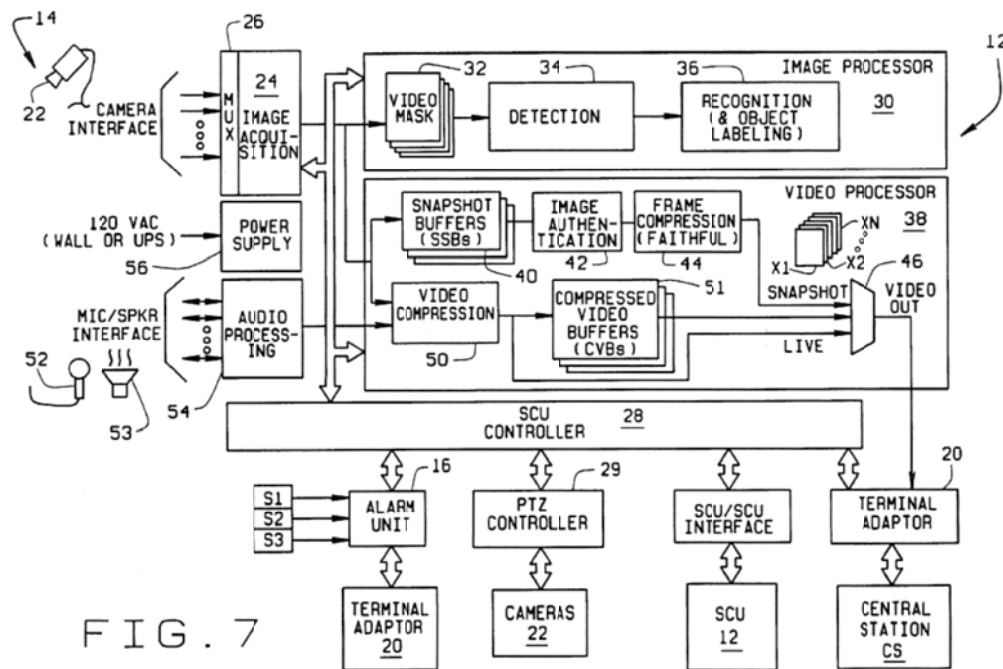


FIG. 7

Fig. 7 is a block diagram of a site control unit (“SCU”) installed on a premises.

Figure 7 shows SCU 12, including cameras 22. Ex. 1105, 10:43–46. A function of SCU 12 is to look intelligently at video acquired from each of cameras 22 to determine if an intruder is present within any of the scenes viewed by cameras 22. Ex. 1105, 9:24–27. SCU 12 includes image acquisition section 24 which receives video signals from each of cameras 22, these signals representing images of scenes observed by respective cameras 22. Ex. 1105, 10:43–46.

When motion is detected, cameras 22 take full frame images of the scene. Ex. 1105, 12:66–67. Motion may be detected by sensors S1–S3 via alarm unit 16. Ex. 1105, 12:23–24. The full frame images then are sent to and compressed at frame compression module 44, before being supplied to central station CS via video output 46 of SCU 12 and terminal adapter 20. Ex. 1105, 13:27–30. Images from cameras 22 also are supplied to video compression module 50. Ex. 1105, 18:26–28. From compression module 50, compressed images may be sent directly

(i.e., live) through video output 46 to central station CS via terminal adaptor 20.

Ex. 1105, 18:34–36; Fig. 7. An example of terminal adaptor 20 is shown below in Figure 12.

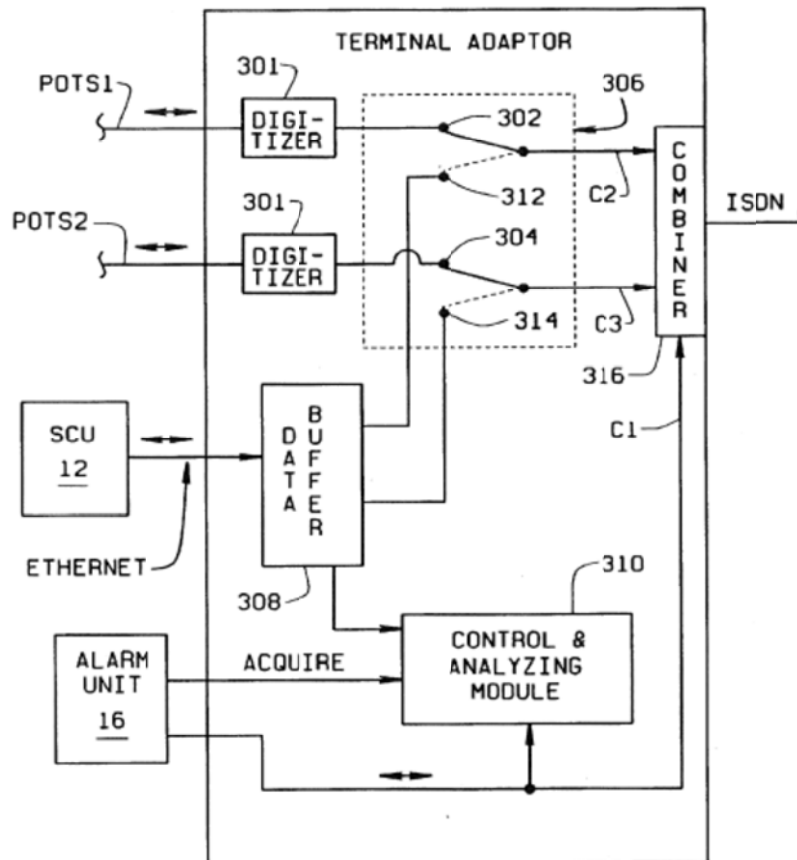


Fig. 12 is a block diagram of a terminal adaptor.

Figure 12 shows that video signals transmitted from SCU 12 now flow through data buffer 308 and switch 306 to communication lines C2, C3. Ex. 1105, 14:19–22. Communication lines C2, C3 are combined with communication line C1 at combiner module 316 to form an ISDN communication path. Ex. 1105, 14:31–33.

2. Analysis

Petitioner contends that claims 18 and 20 are unpatentable under 35 U.S.C. § 103(a) as obvious over Seeley. Pet. 7–16. In support of this asserted ground of unpatentability, Petitioner provides detailed explanations as to how each claim

limitation is disclosed or suggested by Seeley, and, as support, relies on the Declaration of Dr. Stephen B. Wicker (“Dr. Wicker”). Pet. 7–16 (citing Ex. 1103 ¶¶ 32, 38–40, 42). As claim 18 depends from independent claim 1, Petitioner’s detailed explanations as to how each limitation of claim 18 is disclosed or suggested by Seeley also address the limitations set forth in independent claim 1.

Upon review of Petitioner’s analysis and supporting evidence, we are persuaded that Petitioner has demonstrated by a preponderance of the evidence that claims 18 and 20 would have been obvious in view of Seeley.

For example, Petitioner has shown persuasively that the following limitations of claim 18, which includes all the limitations of independent claim 1, are met by the following elements of Seeley:

<i>Independent Claim 1</i>	<i>Seeley</i>
a plurality of image transducers	cameras 22
a motion video compressor	video compression module 50
a still frame compressor	frame compression module 44
a first multiplexer	video output 46
a second multiplexer	combiner 316

Independent claim 1 also recites “a processor associated with the multiplexer for generating a conditioned output image signal suitable for transmission over a network.” Seeley discloses that SCU 12 transmits video signals to central station CS via terminal adaptor 20. Ex. 1105, 9:31–35. The communications among SCU 12, terminal adaptor 20, and central station CS is along the Ethernet and the ISDN communication path. Ex. 1105, Figs. 7, 12. While Petitioner does not identify explicitly a processor in Seeley, Petitioner contends that communication among SCU 12, terminal adaptor 20, and central station CS along the Ethernet and the ISDN communication path suggests that: “there is a processor [in Seeley]

associated with the multiplexer that controls the function of generating a conditioned output image signal suitable for transmission over a network.” Pet. 11. We are persuaded by Petitioner’s reasoning.

Independent claim 1 further recites “a motion compressor and a still frame compressor associated with each image transducer and positioned between the image transducer and the second multiplexer.” Seeley discloses that frame compression module 44 and video compression module 50 receive data from, and, thus, are associated with each of cameras 22, and are positioned between cameras 22 and combiner 316. Ex. 1105, Fig. 7.

Independent claim 1 additionally recites “wherein said camera may capture both full motion video and still frame video, alternately or simultaneously, and transmit both compressed full motion video and compressed still frame video, alternately or simultaneously.” Seeley discloses that snapshots, compressed video, live video, and audio are sent back and forth among SCU 12, terminal adaptor 20, and central station CS along the Ethernet and the ISDN communication path. Ex. 1105, 14:35–37; Figs. 7, 12.

Furthermore, claim 18 recites “wherein the full motion video compressor is a JPEG chip.” While Petitioner acknowledges that video compression module 50 of Seeley is not a JPEG chip, Petitioner contends that M-JPEG was a well-known video compression technique, and provides the following rationale for modifying video compression module 50 of Seeley to include a JPEG chip:

It would have been obvious to a person having ordinary skill in the art (“POSITA”) at the time of the invention that the video compression module 50 could use M-JPEG compression, which uses a JPEG chip, as M-JPEG was one of a limited number of well known, commonly used video compression techniques at that time. Wicker Decl., ¶ 38.

Pet. 13. We are persuaded by Petitioner’s reasoning.

Petitioner also has shown by a preponderance of the evidence that Seeley discloses or suggests every limitation of claim 20.

3. Conclusion

After considering Petitioner's positions, as well as their supporting evidence, we determine that, by a preponderance of the evidence, Petitioner has met its burden for showing that claims 18 and 20 of the '913 patent are unpatentable over Seeley.

D. Claims 21–30 – Obvious over Seeley and Ohki

Petitioner contends that claims 21–30 are unpatentable under 35 U.S.C. § 103(a) as obvious over Seeley and Ohki. Pet. 16–22. Claim 21 is independent and claims 22–30 ultimately depend from independent claim 21.

1. Ohki (*Exhibit 1106*)

Figure 12 of Ohki is shown below.

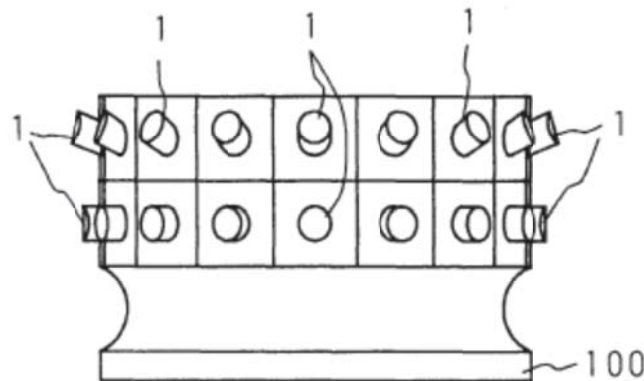


Figure 12 is a front view that shows a layout of cameras on an image forming apparatus.

Ohki discloses a plurality of cameras 1 placed on an upper side face of camera mounting base 100 in a circumferential direction. Ex. 1106, col. 4, ¶ 15. Such a configuration allows images to be collected simultaneously and joined or

synthesized to form an image stretching over at least a portion of a region in a circumferential direction. Ex. 1106, col. 2, ¶ 8.

2. Analysis

Petitioner contends that claims 21–30 are unpatentable under 35 U.S.C. § 103(a) as obvious over Seeley and Ohki. Pet. 16–22. In support of this asserted ground of unpatentability, Petitioner provides detailed explanations as to how each claim limitation is disclosed or suggested by Seeley, and, as support, relies on the Declaration of Dr. Wicker. Pet. 16–22 (citing Ex. 1103 ¶¶ 39, 43–46, 48, 49).

Upon review of Petitioner’s analysis and supporting evidence, we are persuaded that Petitioner has demonstrated by a preponderance of the evidence that claims 21–30 would have been obvious over Seeley and Ohki.

For example, Petitioner has shown persuasively that the following limitations of independent claim 21 are met by the following elements of Seeley:

<i>Independent Claim 21</i>	<i>Seeley</i>
a plurality of image transducers	cameras 22
a motion video compressor	video compression module 50
a still frame compressor	frame compression module 44
a first multiplexer	video output 46
a second multiplexer	combiner 316

Independent claim 21 also recites “a processor associated with the second multiplexer for generating a conditioned output image signal suitable for transmission over a network.” Seeley discloses that SCU 12 transmits video signals to central station CS via combiner 316 of terminal adaptor 20. Ex. 1105, 9:31–35. The communications among SCU 12, terminal adaptor 20, and central station CS is along the Ethernet and the ISDN communication path. Ex. 1105, Figs. 7, 12. While Petitioner does not identify explicitly a processor in Seeley,

Petitioner contends that communication among SCU 12, terminal adaptor 20, and central station CS along the Ethernet and the ISDN communication path suggests that: “there is a processor [in Seeley] associated with the second multiplexer [combiner 316 in terminal adaptor 20] that controls the function of generating a conditioned output image signal suitable for transmission over a network.” Pet. 19–20. We are persuaded by Petitioner’s reasoning.

Independent claim 21 further recites:

a cylindrical housing for housing the plurality of image transducers, each of the image transducers mounted in the cylindrical housing such that they are angularly spaced and aimed radially outward from the cylindrical housing in a manner to collect a combined image representing a full panoramic view of an area within the normal range of the image transducers.

Petitioner cites figures in Ohki for disclosing these limitations, and contends the following:

A POSITA at the time of the invention of the ’913 patent would have been motivated to mount multiple camera sensors of the type taught by Seeley in one of the cylindrical housings taught by Ohki in order to provide a complete or panoramic view of an area. This combination would be a routine substitution of multiple camera sensors for a single camera sensor in a specific housing in order to achieve a predictable result. Wicker Decl., ¶¶ 43–46.

Pet. 17. We are persuaded by Petitioner’s reasoning.

Petitioner also has shown by a preponderance of the evidence that a combination of Seeley and Ohki discloses or suggests every limitation of claims 22–30.

3. *Conclusion*

After considering Petitioner’s positions and supporting evidence, we determine that, by a preponderance of the evidence, Petitioner has met its burden

for showing that claims 21–30 of the '913 patent are unpatentable over Seeley and Ohki.

E. Claims 15 and 34 – Obvious over Seeley and Neta

Petitioner contends that claims 15 and 34 are unpatentable under 35 U.S.C. § 103(a) as obvious over Seeley and Neta. Pet. 23–24. Claim 15 depends from independent claim 1, but claim 1 is not challenged in this petition, and claim 34 is independent.

1. Neta (Exhibit 1107)

Figure 2 of Neta is shown below.

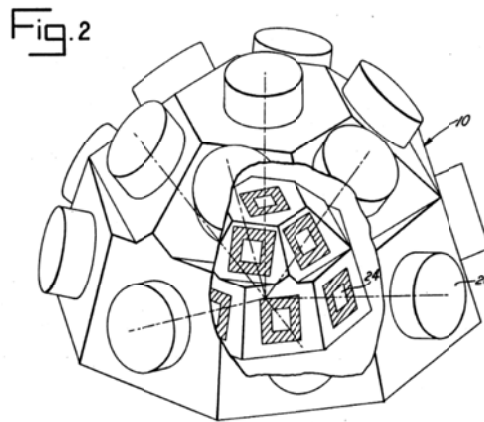


Figure 2 of Neta is an illustrative arrangement having 15 sensors and lenses, giving a 180 degree aperture angle field of view.

Neta discloses optical module 10 having fifteen sensors for a hemispheric field of view. Ex. 1107, 3:60–61. Each lens system disposed on a hemispheric-like surface of optical modular 10 comprises a light sensitive array formed of sensor element 14 and lens 26. Ex. 1107, 3:61–64.

2. Analysis

Petitioner contends that claims 15 and 34 are unpatentable under 35 U.S.C. § 103(a) as obvious over Seeley and Neta. Pet. 23–24. In support of this asserted ground of unpatentability, Petitioner provides detailed explanations as to how each

claim limitation is disclosed or suggested by Seeley, and, as support, relies on the Declaration of Dr. Wicker. Pet. 23–24 (citing Ex. 1103, ¶¶ 55–58).

Upon review of Petitioner’s analysis and supporting evidence, we are persuaded that Petitioner has demonstrated by a preponderance of the evidence that claims 15 and 34 would have been obvious over Seeley and Neta.

For example, our analysis concerning how Seeley discloses or suggests every limitation of independent claim 1, from which claim 15 depends, is set forth above, and need not be repeated here. Claim 15 further recites “a spherical housing for supporting the plurality of image transducers mounted in the housing in angularly spaced, radially projecting relationship to provide full image collection coverage for a predetermined three dimensional space.” Petitioner cites columns 2 and 3 of Neta for disclosing these limitations, and contends the following:

A POSITA at the time of the invention would have been motivated to mount the plurality of camera sensors taught by Seeley in a spherical housing as taught by Neta to capture a wide (e.g., spherical) field of view, because each of these references teach using known components (cameras, other forms of sensors/detectors) in the same way (for use with surveillance systems), yielding predictable results. Such a substitution is well known, based on common sense, and/or the result of routine experimentation. Wicker Decl., ¶¶ 55–58.

Pet. 23–24. We are persuaded by Petitioner’s reasoning.

Petitioner also has shown by a preponderance of the evidence that a combination of Seeley and Neta discloses or suggests every limitation of claim 34.

3. *Conclusion*

After considering Petitioner’s positions, as well as their supporting evidence, we determine that, by a preponderance of the evidence, Petitioner has met its burden for showing that claims 15 and 34 of the ’913 patent are unpatentable over Seeley and Neta.

F. Claims 16 and 35–37 – Obvious over Seeley, Ohki, and Neta

Petitioner contends that claims 16 and 35–37 are unpatentable under 35 U.S.C. § 103(a) as obvious over Seeley, Ohki, and Neta. Pet. 24–27. Claim 16 depends from independent claim 1, which is not challenged in this Petition; claim 35 is independent; and claims 36 and 37 depend from independent claim 35.

1. Analysis

Petitioner contends that claims 16 and 35–37 are unpatentable under 35 U.S.C. § 103(a) as obvious over Seeley, Ohki, and Neta. Pet. 24–27. In support of this asserted ground of unpatentability, Petitioner provides detailed explanations as to how each claim limitation is disclosed or suggested by Seeley, and, as support, relies on the Declaration of Dr. Wicker. Pet. 24–27 (citing Ex. 1103 ¶¶ 47–49, 55–58).

Upon review of Petitioner’s analysis and supporting evidence, we are persuaded that Petitioner has demonstrated by a preponderance of the evidence that claims 16 and 35–37 would have been obvious over Seeley, Ohki, and Neta.

For example, our analysis concerning how Seeley discloses or suggests every limitation of independent claim 1, from which claim 16 depends, is set forth above, and need not be repeated here. Claim 16 further recites:

a housing comprising an axial sliced cylinder having a planar wall and a partially cylindrical wall, the planar wall adapted for mounting the housing on a relatively flat surface, the plurality of image transducers mounted in the cylindrical portion of the housing such that they are angularly spaced and aimed radially outward from the housing in a manner to collect a combined image representing a full panoramic view of an area within the normal range of the image transducers.

Petitioner cites a combination of Figure 12 of Ohki and Figures 1 and 2 of Neta for disclosing these limitations, and contends the following:

It was well known to a POSITA at the time of the invention that one could select from multi-camera housings in a variety of shapes

(e.g. planar array, cylindrical, sliced sphere, etc.) to cover a viewable area to be surveilled. Ohki teaches a cylindrical housing. Neta teaches a hemispherical housing which includes a planar surface used for mounting the housing on a wall, ceiling or post. Modifying a cylindrical housing such that it has one planar side (which would result in an axial sliced cylindrical housing) would have been an obvious alternative option for a housing to a POSITA at the time of the invention in order to provide a housing suitable for coverage of a large viewing area while being easily mounted to a flat surface, such as a wall or ceiling. Wicker Decl., ¶¶ 47–49; 55–58.

Pet. 25–26. We are persuaded by Petitioner’s reasoning.

Petitioner also has shown by a preponderance of the evidence that a combination of Seeley, Ohki, and Neta discloses or suggests every limitation of claims 35–37.

2. Conclusion

After considering Petitioner’s positions, as well as its supporting evidence, we determine that, by a preponderance of the evidence, Petitioner has met its burden for showing that claims 16 and 35–37 of the ’913 patent are unpatentable over Seeley, Ohki, and Neta.

G. Claims 18 and 21–30 – Obvious over Brusewitz and Ohki

Petitioner contends that claims 18 and 21–30 are unpatentable under 35 U.S.C. § 103(a) as obvious over Brusewitz and Ohki. Pet. 27–33, 35–40. Claim 18 depends from independent claim 1, but claim 1 is not challenged in this Petition. Claim 21 is independent.

1. Brusewitz (Exhibit 1108)

Brusewitz discloses systems and methods for improving display of high resolution still images through integration with a corresponding lower resolution video image. Ex. 1108, 1:9–11. An example of a system of Brusewitz is shown below in Figure 1:

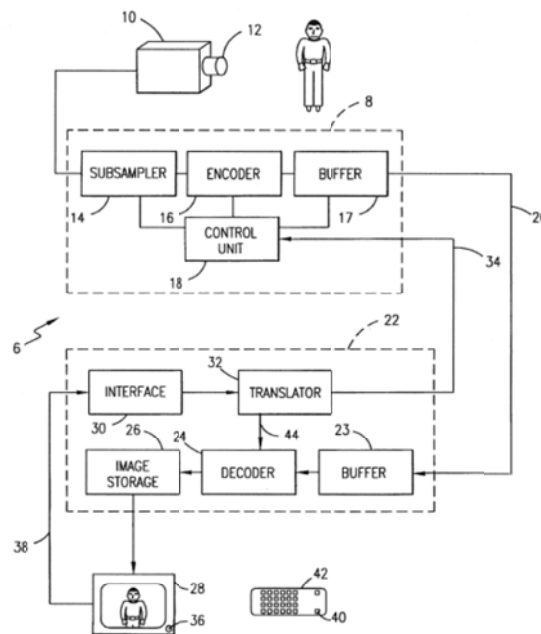


FIG. 1

Figure 1 is a block diagram of an electronic imaging system.

Figure 1 shows camera 10 forwarding digital image data to subsampler device 14 of imaging system 6. Ex. 1108, 4:3–15. Encoder 16 then encodes and compresses the digital image data into a video signal stream. Ex. 1108, 4:22–23. The video signal stream then may be transmitted wirelessly over Global System for Mobile communications (“GSM”) channels. Ex. 1108, 12:24–31.

Brusewitz discloses that conventional video imaging capabilities may be combined with still image management. Ex. 1108, 7:24–26. For example, imaging system 6 may operate in normal video mode, displaying a conventional 30 frames per second sequence of images at a conventional video resolution. Ex. 1108, 7:26–29. When a user, however, observes something of interest, the user may request a higher resolution still image. Ex. 1108, 7:29–31. Since high resolution images require a much greater number of bits than conventional video image frames, transmission of such a high resolution image usually takes much longer than transmission of video image frames. Ex. 1108, 8:9–13. While the high

resolution image is being processed, production of video image frames either is suspended or continues at a lower bit rate, e.g., through interleaving with the high resolution image. Ex. 1108, 8:14–16. Conventional video systems employing still picture capabilities handle the two images differently and independently. Ex. 1108, 8:16–18.

2. *Analysis*

Petitioner contends that claims 18 and 21–30 are unpatentable under 35 U.S.C. § 103(a) as obvious over Brusewitz and Ohki. Pet. 27–33, 35–40. In support of this asserted ground of unpatentability, Petitioner provides detailed explanations as to how each claim limitation is disclosed or suggested by Brusewitz and Ohki, and, as support, relies on the Declaration of Dr. Wicker. Pet. 27–33, 35–40 (citing Ex. 1103 ¶¶ 59, 60–63, 67). As claim 18 depends from independent claim 1, Petitioner’s detailed explanations as to how each limitation of claim 18 is disclosed or suggested by Brusewitz and Ohki also address the limitations set forth in independent claim 1.

Upon review of Petitioner’s analysis and supporting evidence, we are persuaded that Petitioner has demonstrated by a preponderance of the evidence that claims 18 and 21–30 would have been obvious over Brusewitz and Ohki.

For example, Petitioner has shown persuasively that the following limitations of claim 18, which include all the limitations of independent claim 1, are met by Brusewitz and Ohki.

Specifically, independent claim 1 recites “a plurality of image transducers each adapted for collecting digital high resolution image signals.” Brusewitz discloses camera 10, which collects high resolution images. Ex. 1108, 2:26–28, 6:2–8, Fig. 1. Petitioner then cites Ohki for disclosing a plurality of image transducers, and contends the following:

It would have been obvious to a POSITA at the time of the invention to mount multiple cameras of the type taught by Brusewitz in an arrangement as taught by Ohki in order to provide a larger viewing area such as a complete or panoramic view of an area. This combination would be a simple well-known substitution of multiple cameras for a single camera in order to obtain predictable results. Wicker Decl., ¶¶ 62–63.

Pet. 30. We are persuaded by Petitioner’s reasoning.

Independent claim 1 recites the following:

- b. a motion video compressor associated with the image transducer for compressing full motion video images for generating a compressed full motion video image data signal;
- c. a still frame compressor associated with the image transducer for compressing still frame images for generating a compressed still frame image data signal.

Brusewitz discloses encoder 16, which handles video image capabilities and still image capabilities differently and independently. Ex. 1108, 4:25–31, 9:16–17, Fig.

1. Concerning encoder 16, Petitioner cites the Declaration of Dr. Wicker for the following:

Brusewitz further teaches a compressor that compresses both still frame and video images. The compression, however, can occur separately—such that still frame image compression and video image compression occur as separate steps. Indeed, Brusewitz indicates that “encoder 16 encodes the captured high resolution image.” See Brusewitz, 9:16–17. Yet, Brusewitz also teaches in Figure 2 that compression (or encoding) of the video images—step 58—is a separate step from compression of the still images—step 62. Because these encoding steps are disclosed by Brusewitz as occurring separately, a POSITA at the time of invention of the ’913 patent would understand that the encoder can use separate compression algorithms or separate compression chips for still image compression and motion video compression, respectively. For instance, Brusewitz associates compression algorithms such as MPEG with the video signal stream. Brusewitz, 4:22–5:12. And Brusewitz does not otherwise exclude separate algorithms for still image compression,

such as JPEG, which was a well-known still image compression standard and one of a limited number of options for still image compression.

Ex. 1103, ¶ 60. We are persuaded by the reasoning in the above-quoted analysis of Dr. Wicker.

Independent claim 1 further recites “a first multiplexer for merging the compressed full motion video image data signal and the compressed still frame image data signal into a single, combined image data signal.” Brusewitz discloses that production of video image frames may continue at a lower bit rate, e.g., through interleaving with the high resolution image. Ex. 1108, 8:14–16.

Independent claim 1 additionally recites “a second multiplexer for merging all of said signals into a combined data signal.” Concerning this limitation, Petitioner contends the following:

Brusewitz does not expressly disclose a second multiplexer. However, Brusewitz discloses that the cameras may be networked where beneficial, giving exemplary applications as videoconferencing and surveillance systems. *See e.g.*, Brusewitz, 12:24–13:3. It would have been known to a POSITA at the time of the invention of the ’913 Patent that surveillance systems using multiple cameras, such as the multiple cameras used with the housing of Ohki, were commonly connected to a network. Wicker Decl., ¶ 67. Thus, it would have been obvious to a POSITA at the time of the invention to include a second multiplexer to combine data signals from the multiple cameras mounted in the Ohki housing into a single signal for network transmission, as was well-known in the art at the time of the invention of the ’913 Patent. Wicker Decl., ¶ 67.

Pet. 31–32. We are persuaded by Petitioner’s reasoning.

Independent claim 1 also recites “a processor associated with the multiplexer for generating a conditioned output image signal suitable for transmission over a network.” Brusewitz discloses that digital image data may be transmitted wirelessly over GSM channels via the video signal stream. Ex. 1108, 12:24–31.

Independent claim 1 further recites “a motion compressor and a still frame compressor associated with each image transducer and positioned between the image transducer and the second multiplexer.” As discussed above, Brusewitz discloses encoder 26 associated with camera 10.

Independent claim 1 additionally recites “wherein said camera may capture both full motion video and still frame video, alternately or simultaneously, and transmit both compressed full motion video and compressed still frame video, alternately or simultaneously.” Brusewitz discloses that digital image data may be transmitted wirelessly over GSM channels via the video signal stream. Ex. 1108, 12:24–31. Brusewitz also discloses that the video signal stream may include video image frames interleaved with high resolution images. Ex. 1108, 8:14–16.

Dependent claim 18 recites “wherein the full motion video compressor is a JPEG chip.” While Petitioner acknowledges Brusewitz does not identify explicitly an M-JPEG compressor, Petitioner contends that M-JPEG was a well-known video compression technique, and provides the following rationale for modifying encoder 16 of Brusewitz to include a JPEG chip: “It would have been obvious to a POSITA at the time of the invention that [encoder 16] could use M-JPEG compression, which uses a JPEG chip, as M-JPEG was one of a limited number of well known, commonly used video compression techniques at that time. Wicker Decl., ¶ 60.” Pet. 35. We are persuaded by Petitioner’s reasoning.

Petitioner also has shown by a preponderance of the evidence that a combination of Brusewitz and Ohki discloses or suggests every limitation of claims 21–30.

3. *Conclusion*

After considering Petitioner’s positions, as well as their supporting evidence, we determine that, by a preponderance of the evidence, Petitioner has met its

burden for showing that claims 18 and 21–30 of the '913 patent are unpatentable over Brusewitz and Ohki.

H. Claims 15, 16, and 34–37 – Obvious over Brusewitz, Ohki, and Neta

Petitioner contends that claims 15, 16, and 34–37 are unpatentable under 35 U.S.C. § 103(a) as obvious over Brusewitz, Ohki, and Neta. Pet. 40–45.

Upon review of Petitioner's analysis and supporting evidence, for reasons similar to those set forth above with respect to the combinations of Seeley and Ohki or Neta, we are persuaded that Petitioner has demonstrated by a preponderance of the evidence that claims 15, 16, and 34–37 of the '913 patent are unpatentable over Brusewitz, Ohki, and Neta.

III. CONCLUSION

We conclude Petitioner has shown by a preponderance of the evidence that:

(1) claims 18 and 20 are unpatentable under 35 U.S.C. § 103(a) as obvious over Seeley;

(2) claims 21–30 are unpatentable under 35 U.S.C. § 103(a) as obvious over Seeley and Ohki;

(3) claims 15 and 34 are unpatentable under 35 U.S.C. § 103(a) as obvious over Seeley and Neta;

(4) claims 16 and 35–37 are unpatentable under 35 U.S.C. § 103(a) as obvious over Seeley, Ohki, and Neta;

(5) claims 18 and 21–30 are unpatentable under 35 U.S.C. § 103(a) as obvious over Brusewitz and Ohki; and

(6) claims 15, 16, and 34–37 are unpatentable under 35 U.S.C. § 103(a) as obvious over Brusewitz, Ohki, and Neta.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that claims 15, 16, 18, 20–30, and 34–37 of the '913 patent are held unpatentable; and

FURTHER ORDERED that because this is a final written decision, parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

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Patent 7,023,913

For Petitioner:

P. Weston Musselman, Jr.
Adam Shartzer
musselman@fr.com
shartzer@fr.com

For Patent Owner:

Michael Smith
Robert C. Curfiss
pto@patent-counselors.com
bob@curfiss.com