

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MOBOTIX CORP.,
Petitioner,

v.

e-WATCH, INC.,
Patent Owner.

Case IPR2013-00334
Patent 7,733,371

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 1–10 of U. S. Patent No. 7,733,371 (Ex. 1001, “the ’371 patent”) pursuant to 35 U.S.C. §§ 311–319. Paper 5 (“Pet.”). e-Watch, Inc. (“Patent Owner”) filed a Preliminary Response. Paper 13. On November 13, 2013, we instituted an *inter partes* review of claims 1–10 on certain grounds of unpatentability alleged in the Petition. Paper 14 (“Dec.”). After institution of trial, Patent Owner filed a Patent Owner Response (Paper 31, “PO Resp.”), to which Petitioner filed a Reply (Paper 34). 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 challenged claims, claims 1–10, are unpatentable.

B. *The ’371 Patent*

The subject matter of the ’371 patent relates to multimedia sensors for use in connection with a digital networked surveillance system. Ex. 1001, 1:13–16. Public facilities, such as schools, banks, airports, arenas, and the like, frequently employ monitoring and surveillance systems to enhance security. Ex. 1001, 1:19–28. 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 delivers video that is viewable only on the system’s control console. Ex. 1001, 1:44–51. More recently, security cameras have employed video compression technology, enabling individual cameras to be connected remotely to a centralized system via telephone circuits. Ex. 1001, 2:5–7. However, due to bandwidth constraints imposed by

public-switched telephone systems, such surveillance systems are typically limited to low-resolution images, or low frame rates, or both. Ex. 1001, 2:8–10.

To solve these and other problems, methods and systems are disclosed in the '371 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. 1001, 2:42–46. According to the '371 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. 1001, 2:50–54.

An internal data storage device, such as a small disk drive, may be embedded into the camera. Ex. 1001, 5:8–9. Stored images or video and audio may be retrieved later for analysis or archival, either by removal of the storage device or by transfer of the stored data over the network. Ex. 1001, 5:12–15.

An additional camera feature may include additional sensors to detect notable conditions, which sensors in turn may include a smoke or fire detector, an alarm pull-handle, a glass breakage detector, a motion detector, and so on. Ex. 1001, 5:16–20. An internal microphone and associated signal processing system may be equipped with suitable signal processing algorithms for the purpose of detecting suitable acoustic events. Ex. 1001, 5:20–23. The camera may be equipped with a short-range receiver that may detect the activation of a wireless “panic button” carried by facility personnel, where the “panic button” may employ infrared, radio frequency (RF), ultrasonic, or other suitable methods to activate the camera’s receiver. Ex. 1001, 5:25–30.

When the camera is powered-on, it may be triggered by various alarms to initiate transmission, triggered by commands sent by the server, or pre-

programmed to transmit at certain times or intervals. Ex. 1001, 5:35–39. An onboard archival system may be included to permit temporary storage of data prior to transmission, permitting transmission of pre-event data. Ex. 1001, 5:40–43. The onboard archival system also may permit internal storage of images or video at a different resolution than that of images or video transmitted over the network. Ex. 1001, 5:43–45. This may allow pre- and post-event analysis of video at higher resolutions than that used for transmission. Ex. 1001, 5:45–47. The on-board storage also may allow the device to store data during times when a network connection is absent or intermittent. Ex. 1001, 5:47–49.

C. Illustrative Claim

Of challenged claims 1–10, claims 1 and 6 are independent, and independent claim 1 is reproduced below.

1. Apparatus for surveillance of an area, the area, including at least one monitored zone, said apparatus being configured for communication with an internet protocol network, the internet protocol network being configured for communication with at least one monitoring station configured for displaying compressed digital image data transmitted from the apparatus over the internet protocol network to the monitoring station, said apparatus comprising:

a video camera positioned to collect image data of a monitored zone;

said video camera including an analog to digital converter operable to provide digital image data, the digital image data corresponding to collected image data;

said video camera including a compressor in communication with the analog to digital converter to receive digital image data, said compressor being operable to compress the digital image data to provide compressed digital image data;

said video camera including digital storage in communication with at least one of said analog to digital converter and said compressor to receive the compressed digital image data, said digital storage being configured for retrieval from said digital storage a

retrieved selection of the compressed digital image data, the retrieved selection of the compressed digital image data being retrieved upon occurrence of a triggering event, the retrieved selection of the compressed digital image data having a retrieved image resolution;

said video camera being configured for communication with the internet protocol network, said video camera being configured to transmit to the internet protocol network the retrieved selection of the compressed digital image data, said video camera being configured to transmit to the internet protocol network other of the compressed digital image data, the other of the compressed digital image data being transmitted to the internet protocol network without being retrieved from said digital storage, the other of the compressed digital image data being transmitted to the internet protocol network upon occurrence of the triggering event, the other of the compressed digital image data upon being transmitted to the internet protocol network on a near real-time basis, the other of the compressed digital image data having a respective other image resolution, the respective other image resolution being less than the retrieved image resolution;

whereby transmission of both the retrieved selection of the compressed digital image data and the other of the compressed digital image data provides for display at the at least one monitoring station both of the following:

for display on a near real-time basis the other of the compressed digital image data, and

for display on a time-delayed basis the retrieved selection of the compressed digital image data, the retrieved selection of the compressed digital image data originating before termination of one of the following:

transmission of the other of the compressed digital image data,
and
the triggering event.

D. Prior Art References Alleged to Support Unpatentability

The following prior art references were asserted in the instituted grounds:

Ely	WO 97/40624	Oct. 30, 1997	Ex. 1005
Fernandez	U.S. Patent 6,697,103	Feb. 24, 2004	Ex. 1006

Bonshihara	JP 11–284987	Oct. 15, 1999	Ex. 1007 ¹
Seeley	U.S. Patent 6,069,655	May 30, 2000	Ex. 1009

E. Grounds of Unpatentability Instituted for Trial

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

Claim	Grounds	Reference(s)
Claims 1–10	§ 103	Bonshihara and Seeley
Claims 1–10	§ 103	Ely, Seeley, and Fernandez

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).

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).

¹ Ex. 1007 is a Japanese language document. Accordingly, all citations to Bonshihara in this Decision will be to its English language translation, Ex. 1008, unless otherwise indicated.

1. *Compressor*

Independent claims 1 and 6 each recite “compressor.” Petitioner asserts that if an express construction is provided, “compressor” should be construed as “a device for reducing the number of bits needed to represent an item of digital data.” Pet. 4; Reply 9–10. For support, Petitioner cites a definition of “compressor” from *Computer User’s Dictionary*, as well as several portions of the ’371 patent. Pet. 4; Reply 9–10 (citing Ex. 1001, 5:65–66, 10:16–18, 38–41). In particular, Petitioner asserts that a proper construction should be limited to hardware or a combination of hardware and software, because the Specification does not refer to a disembodied software implementation of “compressor.” An exemplary use of “compressor” in the ’371 patent is as follows: “the capability for placing multiple sensors in a single enclosure or unit greatly increases the resolution and/or viewing range of the camera without duplicating the per unit cost associated with prior art cameras by permitting all of the sensors to communicate directly to *a single processor, compressor, transmitter circuit.*” Ex. 1001, 5:61–66 (emphasis added).

Patent Owner asserts that “compressor” does not require construction, or in the alternative that it should be construed as “hardware, software or a combination for performing data compression.” Specifically, Patent Owner asserts that “compressor” should not be limited to hardware because the Specification does not exclude software-based compressors. PO Resp. 8–9. For support, Patent Owner cites to a Declaration of Michael Craner, which in turn refers to a webpage http://www.techterms.com/definition/media_compression and the following citation: Miyazaki, T.; Kuroda, I., “Real-time software video encoder on a multimedia RISC processor,” *Signal Processing Systems*, 1998, SIPS 98, 1998

IEEE Workshop, vol., no., pp. 33, 42, 8–10 Oct 1998. Ex. 2001²; (“Craner Declaration”).

We determine that Petitioner’s construction constitutes the broadest reasonable interpretation in light of the Specification. Specifically, Petitioner provides an extrinsic definition of “compressor” that is consistent with the Specification, especially the portion cited above which treats “compressor” as an equivalent of hardware, such as processors and circuits. Although Patent Owner asserts that the Specification does not exclude software-based compressors, the fact that the Specification does not expressly exclude a particular implementation does not indicate that it includes it. Instead, the proper inquiry is whether the Specification would lead one of ordinary skill to determine that a broadest reasonable construction of “compressor” would include disembodied software implementations. To that inquiry, Patent Owner has not provided any analysis.

Concerning the Craner Declaration, it refers to two references, neither of which is of record. Upon reviewing the cited webpage, attached hereto as Exhibit 3001, we are not persuaded that it supports Patent Owner’s position. Moreover, the Craner Declaration recites the following:

a compressor need not be limited to a specific circuit, but would be understood to a POSITA at the time of the filing of the Monroe patent to alternatively be a function that could be implemented in firmware or software on a general purpose processor or signal processor, such as a digital signal processor, graphics processor, vector processor, or similar.

Ex. 2001 ¶ 21. This is consistent with Petitioner’s proposed construction, as even when viewed in a light most favorable to Patent Owner, the Craner Declaration

² Per our Order of February 6, 2014, all references to Exhibit EWA1001 in the Patent Owner Response will be assumed to refer to Ex. 2001. Paper 30.

asserts that “compressor” is software implemented on a processor, rather than disembodied software.

2. *Digital Image Data*

As will become evident in the analysis, Patent Owner seeks to limit the construction of “digital image data” to video data. We are unpersuaded. The ’371 patent does not define explicitly any of “data,” “image data,” and “digital image data.” The ’371 patent discloses the following concerning “digital image data”:

The subject invention is directed to a fully digital camera system having the capability of providing high resolution ***still image and/or streaming video signals*** via a network to a centralized, server supported security and surveillance system.

Ex. 1001, 2:42–46 (emphasis added).

The described camera uses video compression techniques to reduce the amount of ***image data*** that must be conveyed by the network. Over recent years, a number of ***image and video*** compression techniques have been perfected, which may be advantageously employed to significantly reduce the amount of ***visual data***, while preserving the visual quality.

Ex. 1001, 3:16–21 (emphasis added). We determine that “digital image data” is not limited to video, because it is broad enough to cover either still image or video data.

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 can be 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.* However, a precise teaching directed to the specific subject matter of a challenged claim 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.

B. Claims 1–10 — Alleged Obviousness over Bonshihara and Seeley

Petitioner asserts that claims 1–10 are unpatentable under 35 U.S.C. § 103(a) as obvious over Bonshihara and Seeley. Pet. 46–60. Patent Owner disagrees with Petitioner’s assertions. PO Resp. 9–16.

1. Bonshihara (Exhibit 1008)

Bonshihara discloses an image monitoring system that captures images for crime prevention and security, simultaneously enabling real-time monitoring of the images at a remotely located monitoring station. Ex. 1008 ¶ 1. Image capture and recording device 100 is shown below in Figure 2 of Bonshihara.

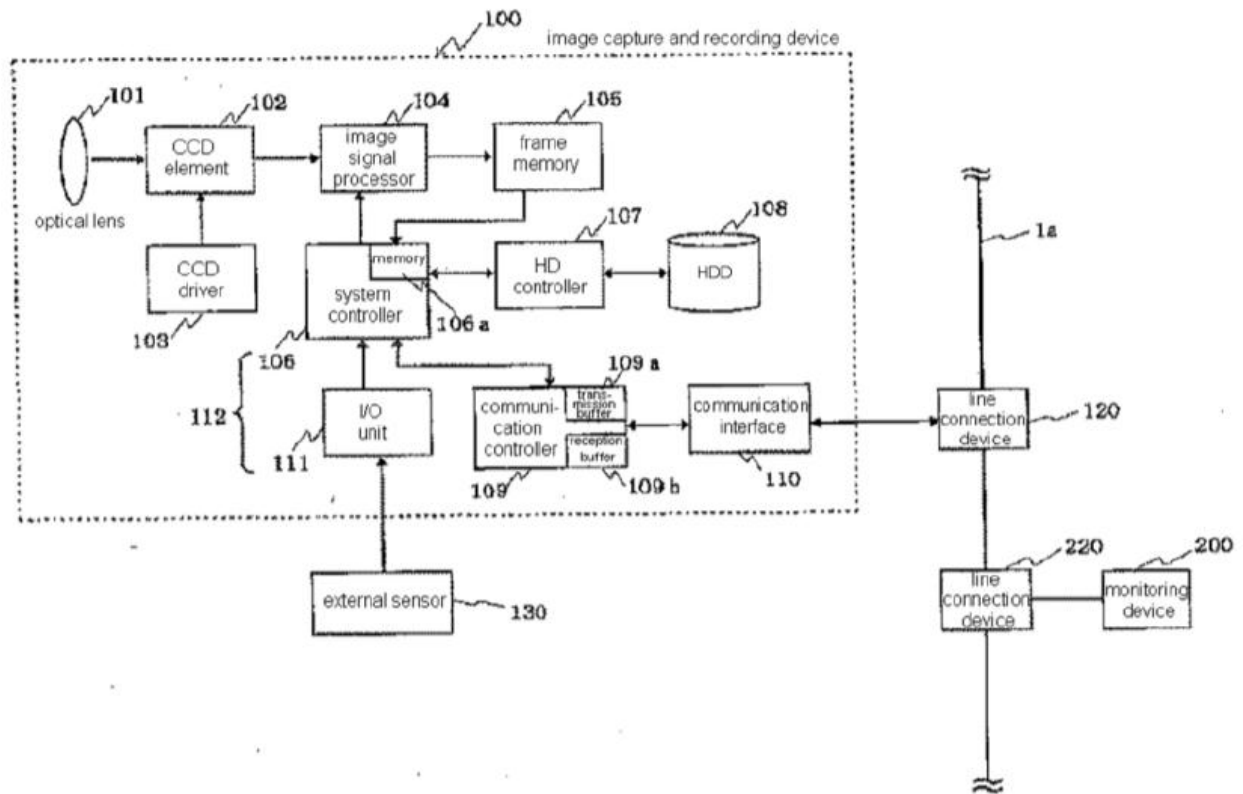


Figure 2 of Bonshihara illustrates the structure of image capture and recording device 100.

Bonshihara discloses constantly capturing image data via optical lens 101 and CCD element 102. Ex. 1008 ¶ 21. The image data is compressed and encoded by image signal processor 104, using a standardized procedure such as JPEG, MPEG, or the like, and then sent to frame memory 105 of image capture and recording device 100, with the captured image data being taken into memory 106a at set intervals by controller 106. Ex. 1008 ¶¶ 23, 38, 39. The image data in memory 106a then is supplied to hard disk drive 108. Ex. 1008 ¶ 40. Separate from the capturing of the image data in memory 106a, the image data also is transmitted to monitoring device 200. Ex. 1008 ¶ 41. Bonshihara discloses that the rate of frame transmission to monitoring device 200 is 1/10 the rate of capturing image data in memory 106a. Ex. 1008 ¶ 41. The transmission of the

image data can be realized using a socket supplied by a communications protocol, Transmission Control Protocol/Internet Protocol (“TCP/IP”), which is used widely on the Internet, local area networks (“LANs”), and the like. Ex. 1008 ¶ 42.

Monitoring device 200 is shown below in Figure 3 of Bonshihara.

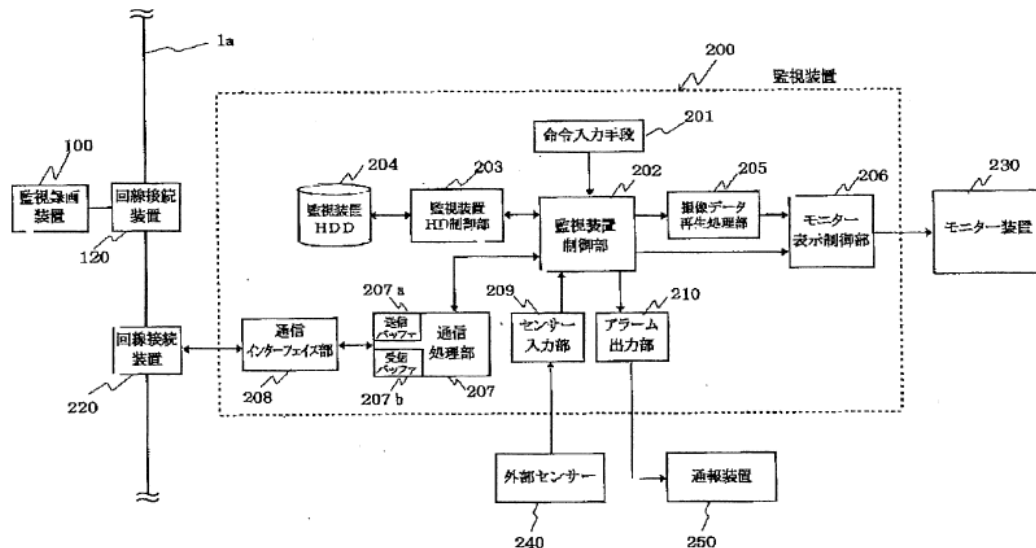


Figure 3 of Bonshihara illustrates the structure of monitoring device 200.³

If there is a need to view detailed images of an abnormal situation, a supervisor can use command input 201 of monitoring device 200 to designate image capture recording device 100 that is filming the detected abnormality. Ex. 1008 ¶ 0051. Specifically, the supervisor can input a desired time frame ranging from the present moment to twenty to thirty minutes ago, and issue a captured image data download request. Ex. 1008 ¶ 0051. The desired image data then is read out of hard drive 108 of image capture and recording device 100 via

³ Although almost all of the references to Bonshihara in this Decision are to the submitted certified English language translation of Bonshihara (Ex. 1008), here, Figure 3 of the Japanese language version of Bonshihara (Ex. 1007) is shown, because the reference numbers shown in Figure 3 of the submitted certified English language translation of Bonshihara (Ex. 1008) are illegible.

computer network 1a, so as to be played back and displayed as a continuous moving image on monitor 230. Ex. 1008 ¶ 0051.

2. Seeley (Exhibit 1009)

Seeley discloses a video security system having components physically located at a premises being protected, and components located at a central station from which a number of premises can be monitored simultaneously. Ex. 1009, 1:25-28. Figure 7, shown below, illustrates one embodiment of such a system.

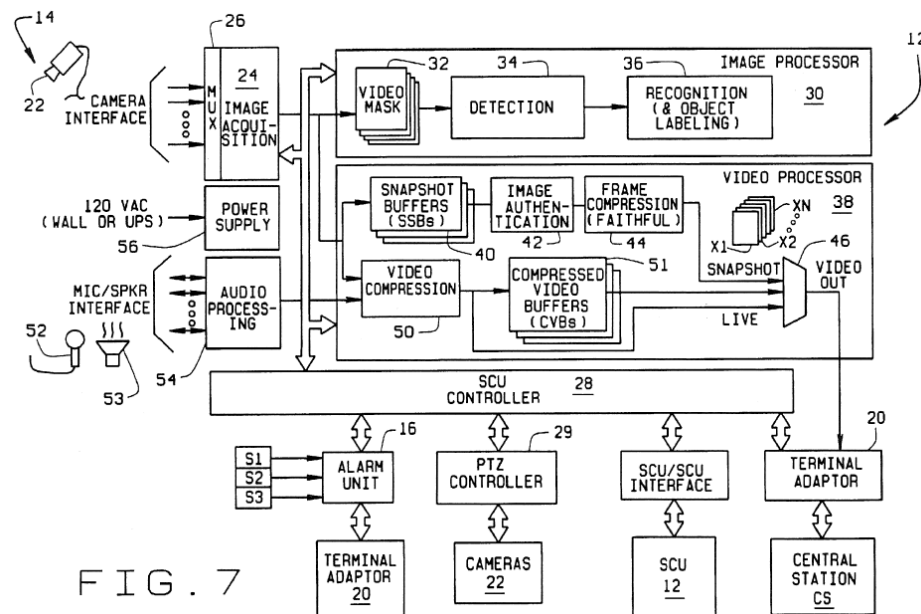


Fig. 7 is a block diagram of a site control unit (“SCU”) installed on a premises.

Figure 7 shows SCU 12, including cameras 22. Ex. 1009, 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. 1009, 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. 1009, 10:43-46.

When motion is detected, cameras 22 take full frame images of the scene. Ex. 1009, 12:66–67. Motion may be detected by sensors S1–S3 via alarm unit 16. Ex. 1009, 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. 1009, 13:27–30. Video images from cameras 22 also are supplied to video compression module 50. Ex. 1009, 18:26–28. From compression module 50, compressed video images may be sent directly (i.e., live) through video output 46 to central station CS via terminal adaptor 20. Ex. 1009, 18:34–36; Fig. 7.

SCU 12 continuously compresses and stores both video images and full frame images. Ex. 1009, 14:47–55. Once a communication path is established, both compressed video images and compressed full frame images are continuously relayed from SCU 12 to central station CS. Ex. 1009, 14:50–55. The relay is done in a manner that preserves as good a quality that is permissible given a communication channel bandwidth and requisite compression requirements. Ex. 1009, 14:55–15:10. Seeley discloses that the video images may be relayed after sending the snapshots. Ex. 1009, 6:13–15, 13:22–33.

3. Petitioner's Position

Petitioner asserts that claims 1–10 are unpatentable under 35 U.S.C. § 103(a) as obvious over Bonshihara and Seeley. Pet. 46–60. In support of this asserted ground of unpatentability, Petitioner provides detailed explanations as to how the subject matter of each claim is met by the combined teachings of Bonshihara and Seeley, and relies on a Declaration of Dr. Stephen B. Wicker (“Dr. Wicker”). Pet. 46–60 (citing to Ex. 1003 ¶¶ 30–32, 53–54, 64–68). Specifically, Petitioner cites portions of Bonshihara as disclosing every limitation of claims 1–10, except for

certain features, and then proposes modifying Bonshihara in view of Seeley so as to render obvious those features.

For example, each of independent claims 1 and 6 requires a video camera positioned to collect digital image data of a monitored zone. Bonshihara discloses constantly capturing image data via optical lens 101 and CCD element 102 of image capture and recording device 100. Ex. 1008 ¶ 21. Independent claims 1 and 6 each require compressing and storing the image data. Bonshihara discloses that the image data is compressed and encoded by image signal processor 104, using a standardized procedure such as JPEG, MPEG, and the like, and then sent to frame memory 105 of image capture and recording device 100, with the captured image data being taken into memory 106a at set intervals by controller 106. Ex. 1008 ¶¶ 23, 38, 39. Independent claims 1 and 6 each require additionally that the video camera is configured for communication with an internet protocol network. Bonshihara discloses that transmission of the image data to from image capture and recording device 100 to monitoring device 200 can be realized using a socket supplied by a communications protocol, TCP/IP, which is used widely on the Internet, LANs, and the like. Ex. 1008 ¶ 42. Independent claims 1 and 6 each require also the transmission of two sets of digital image data. Bonshihara discloses that separate from the capturing of the image data in memory 106a, the image data also is transmitted to monitoring device 200. Ex. 1008 ¶ 41.

Petitioner acknowledges that Bonshihara does not disclose expressly “the respective other image resolution being less than the retrieved image resolution,” as recited in independent claims 1 and 6. Petitioner then cites the Declaration of Dr. Wicker for the following:

It would have been obvious to a POSITA at the time of the invention to transmit both low resolution video and high resolution stored images from the same input image data stream such that the video

image data has a lower resolution than the stored image data. Wicker Decl.[1], ¶¶ 30-32, 53-54. Moreover, a POSITA would understand that resolution of “live” compressed image data as compared to resolution of stored image data was a matter of design choice, and the resolution of one can be either greater than, less than, or the same as the other depending on what is desired for a particular application in view of available system resources. In order to alleviate unwanted transmission delay in view of bandwidth constraints, the resolution of “live” video data transmitted over a network was commonly of lower resolution than stored image data transmitted over a network. See Wicker Decl., ¶¶ 30-32, 53-54.

Pet. 53. Additionally, Petitioner cites Seeley for disclosing the transmission of full resolution snapshots and compressed video, to support further Dr. Wicker’s above assertion, and Petitioner’s conclusion, that it was known to transmit both low resolution video and high resolution stored images from the same input image data stream such that the video image data has a lower resolution than the stored image data. Pet. 53 (citing Ex. 1009, 14:55–15:10).

Petitioner sets forth similar analyses for dependent claims 2–5 and 7–10.

4. *Patent Owner’s Response and Analysis*

Patent Owner asserts that Seeley does not disclose “the transmission of full resolution snapshots and compressed video,” because camera 22 of Seeley lacks both compressors 44, 50 and processor 30, both of which reside in SCU 12. Presumably, Patent Owner asserts that this is relevant because independent claims 1 and 6 each require that the transmission of full resolution snapshots and compressed video be from a video camera. Patent Owner’s assertions are misplaced for several reasons. First, independent claim 1 does not recite “full resolution snapshots and compressed video.” Independent claim 1 only recites two sets of “compressed digital image data.” Second, Patent Owner attacks Seeley individually while the ground of unpatentability is based on a combination of Bonshihara and Seeley. *In re Keller*, 642 F.2d 413, 426 (CCPA 1981) (“one

cannot show non-obviousness by attacking references individually where, as here, the rejections are based on combinations of references.”). To that end, Bonshihara discloses that image capturing and recording device 100 (i.e., camera) transmits continuously image data to monitoring device 200. Ex. 1008 ¶ 41. Separately, Bonshihara discloses transmitting, in an abnormal situation, image data from hard drive 108 of image capturing and recording device 100 (i.e., camera). Ex. 1008 ¶ 0051. Thus, Bonshihara discloses two sets of “compressed digital image data,” as required by independent claim 1.

Insofar as Patent Owner may be addressing tangentially the limitation of “the respective other image resolution being less than the retrieved image resolution,” as recited in independent claims 1 and 6, Patent Owner’s assertions are still misplaced, as the ground of unpatentability is based on a combination of Bonshihara and Seeley. *In re Keller*, 642 F.2d at 426. Specifically, where Seeley discloses it was known to transmit both low resolution video and high resolution stored images from the same input image data stream such that one set of image data has a lower resolution than another set of image data (Ex. 1009, 14:55–15:10), we are persuaded by Petitioner’s assertions and evidence that one of ordinary skill at the time of the invention would have known to modify the two transmissions from image capturing and recording device 100 (i.e., camera) of Bonshihara in the same way.

Patent Owner asserts also that Bonshihara does not disclose “. . . the retrieved selection of the compressed digital image data having a retrieved image resolution; . . . the other of the compressed digital image data having a respective other image resolution, the respective other image resolution being less than the retrieved image resolution,” as recited in independent claims 1 and 6. Specifically, Patent Owner asserts that “Bonshihara lacks essential structure, understanding and

motivation (i.e., the same goal) to produce in a camera” the two transmitted compressed digital image data streams of the aforementioned claim limitations, because of the following:

Dr. Wicker’s assertion to the contrary (Decision, Paper 14, 14:12-25) finds motivation to “alleviate unwanted transmission delay” by setting a goal of avoiding the bandwidth [constraints] that dominate Bonshihara. Dr. Wicker also reasons that determining the resolution of two transmitted compressed digital image data streams was a matter of design choice. Dr. Wicker conspicuously fails to acknowledge that a POSITA in possession of Bonshihara would possess the teaching of using only one stream of digital image data having a single resolution, and limiting transmission to 1/10th of collection speed, in order to meet Bonshihara’s bandwidth limitations. (Ex. 1007). This series of observations demonstrates that the reasoning of Dr. Wicker is distorted by impermissible hindsight reconstruction. On the contrary, a POSITA in possession of Bonshihara would continue as taught by Bonshihara to cut transmission to 1/10th or less of collected image data, and would continue to avoid altogether transmitting more than one stream of compressed digital image data.

PO Resp. 14–15. Essentially, Patent Owner asserts that one of ordinary skill would not modify Bonshihara to include two transmitted compressed digital image data streams because of bandwidth constraints. We are not persuaded by Patent Owner’s assertions for several reasons. As an initial matter, Bonshihara discloses two transmitted compressed digital image data streams. Ex. 1008 ¶¶ 41, 52. Bonshihara cannot be said to teach away from that which it discloses expressly. Moreover, Seeley discloses expressly that the relay of two compressed digital image data streams would have been done in a manner that preserves as good a quality as is permissible given a communication channel bandwidth and requisite compression requirements. Ex. 1009, 14:55–15:10. Thus, we are persuaded one of ordinary skill would have known how to implement the two compressed digital image data streams of Seeley within the bandwidth constraints of Bonshihara.

Patent Owner asserts that Seeley does not disclose “that video images may be relayed after sending snapshots,” because camera 22 of Seeley lacks both compressors 44, 50 and processor 30, both of which reside in SCU 12. Presumably, Patent Owner asserts that this is relevant because dependent claims 3 and 8 each recite “the other of the compressed digital image data being transmitted to the internet protocol network subsequent to transmission of the retrieved selection of the compressed digital image data.” Patent Owner’s assertions are misplaced, because Seeley discloses it was known to relay video images after sending snapshots (Ex. 1009, 6:13–15, 13:22–33), and we are persuaded by Petitioner’s assertions and evidence that one of ordinary skill at the time of the invention would have known to modify the two transmissions from image capturing and recording device 100 (i.e., camera) of Bonshihara in the same way.

Patent Owner asserts further that neither Seeley nor Bonshihara discloses a camera configured for communication with an internet protocol network. Patent Owner does not provide any further analysis, except to cite one paragraph of the Craner Declaration. That cited portion asserts the following: “Meanwhile, as noted previously, Seeley fails to even mention the words ‘network’ ‘Internet’ ‘IP,’ ‘TCP’ or other terminology that would suggest the cameras of his invention were ‘configured for communication with the internet protocol network.’” Ex. 2001 ¶ 41. Presumably, Patent Owner asserts that this is relevant because independent claims 1 and 6 each recite “said video camera being configured for communication with the internet protocol network.” We are not persuaded by Patent Owner’s assertion, however, as Bonshihara discloses this claim limitation. Specifically, Bonshihara recites the following:

[t]he communication message stored in the transmission buffer 109a [of image capturing and recording device 100] is then transmitted via computer network 1a to the transmission destination stored in this

message under the control of communication controller 109. It should be noted that in a working example the transmission and receipt of the message on computer network 1a can be realized using a socket supplied by a communication protocol TCP/IP which is widely used on the Internet, LAN and the like.

Ex. 1008 ¶ 42. Patent Owner asserts additionally that Seeley does not disclose an internet protocol network. Patent Owner's assertion is misplaced, however, for as set forth above, Bonshihara discloses this claim limitation.

5. *Conclusion*

After considering Petitioner's and Patent Owner'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 1–10 of the '371 patent are unpatentable over Bonshihara and Seeley.

C. Claims 1–10 – Alleged Obviousness over Ely, Seeley, and Fernandez

Petitioner contends that claims 1–10 are unpatentable under 35 U.S.C. § 103(a) as obvious over Ely, Seeley, and Fernandez. Pet. 23–46. Patent Owner disagrees with Petitioner's assertions. PO Resp. 16–17.

1. *Ely (Exhibit 1005)*

Ely discloses surveillance systems including sensors for advising the systems of alarm conditions. Ex. 1005, 1:6–9. One such system 100 is set forth below in Figure 2 of Ely:

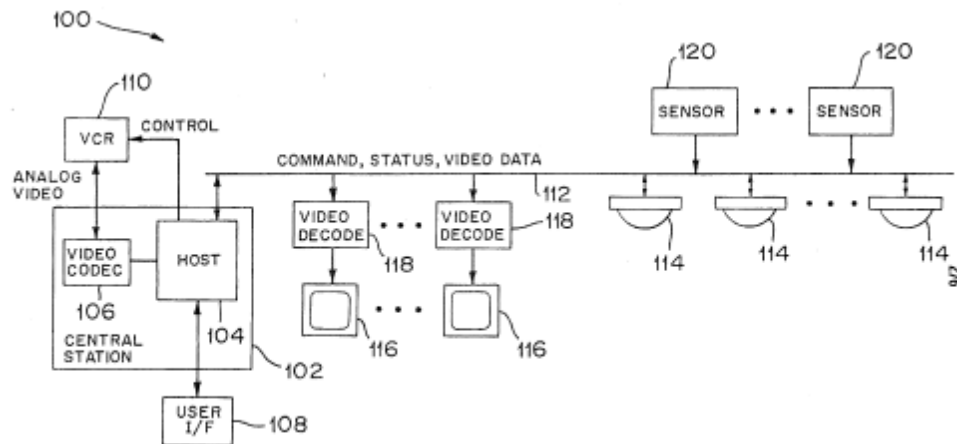


FIG. 2

Figure 2 illustrates a block diagram of a video surveillance system.

System 100 includes central station 102 at which host computer 104 is provided. Ex. 1005, 9:5-7. Host computer 104 includes user interface 108. Ex. 1005, 9:7-10. Local area network ("LAN") 112 is connected to host computer 104. Ex. 1005, 9:11-12. Data communicated between host computer 104 and other components of system 100 are carried over LAN 112. Ex. 1005, 9:12-14. Other system components connected to host computer 104 via LAN 112 include camera units 114, monitors 116 (each connected to LAN 112 through a respective video data decoding device 118), and sensor devices 120. Ex. 1005, 9:14-18. User interface 108 includes one or more monitors, as well as other input/output devices commonly provided as peripherals to personal computers. Ex. 1005, 9:28-32. Components of camera unit 114 are shown below in Figure 3 of Ely:

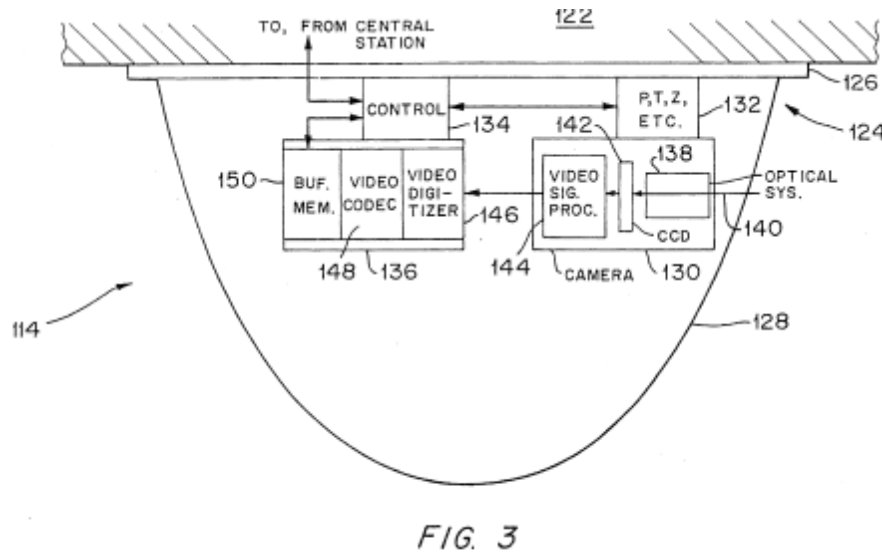


Figure 3 schematically illustrates camera unit 114 used in the system of Figure 2.

Camera unit 114 includes memory board 136, which receives an analog video signal output from camera 130, and then digitizes and compresses the video signal before storing it in memory 150 as video data. Ex. 1005, 11:8–26. Memory 150 is one or more of RAM, EEPROM, and flash memory. Ex. 1005, 11:21–23. Camera unit 114 also includes control circuit 134, which is conditioned to receive commands calling for reading out and transmission to central station 102 of previously stored compressed video data. Ex. 1005, 13:9–12. Transmission of the compressed video data that was read out from memory 150 may be virtually parallel with continued transmission of “live” compressed video data. Ex. 1005, 13:19–22.

Host computer 104 handles instructions for displaying “live” video signals generated by camera units 114. Ex. 1005, 14:19–22. For example, host computer 104 specifies particular camera unit 114, and a particular monitor on which video data from camera unit 114 is to be displayed. Ex. 1005, 14:22–26. If a user indicates that a block of video data is to be displayed, host computer 104 sends a

retrieve command (via LAN 112) to selected camera unit 114. Ex. 1005, 17:26–29. The desired video data is then read out from memory 150 in designated camera unit 114 and transmitted via LAN 112. Ex. 1005, 17:29–32. The transmitted video data then is “virtually routed” to a designated monitor. Ex. 1005, 17:32–33.

2. *Fernandez (Exhibit 1006)*

Fernandez discloses an integrated fixed and/or wireless network and associated database and software functionality for monitoring and processing remote and/or local moveable objects. Ex. 1006, 1:33–36. According to Fernandez, a preferred integrated network monitoring system includes network communications infrastructure 8. Ex. 1006, 2:22–26. Network 8 may be a functional aggregate of multiple sub-networks, including conventional or proprietary networking equipment for enabling access to and/or through the World Wide Web (WWW), or other functionally equivalent local and/or wide area network (LAN/WAN) interconnectivity. Ex. 1006, 2:26–31. Network 8 provides digital connection to or from any allocated web node address or equivalently accessible network resource, such as Uniform Resource Locator (URL), associated hypertext files, and other proper domain name and file location, according to a TCP/IP addressing scheme. Ex. 1006, 2:32–37. Network 8 further couples to one or more of the following: conventional Internet, intranet or other LAN/WAN network connection or server, and sensor or detector. Ex. 1006, 3:17–22. According to Fernandez, such arrangements preferably use a conventional TCP/IP protocol Internet website addressing scheme. Ex. 1006, 3:48–50. Fernandez discloses that an overall integrated system preferably includes a geographically or relatively fixed network of multiple detectors uniquely accessible through an

Internet browsing interface, overlaid with a mobile set of targets closely associated or attached to certain objects for remote monitoring thereof. Ex. 1006, 5:46–52.

3. *Petitioner’s Position*

Petitioner contends that claims 1–10 are unpatentable under 35 U.S.C. § 103(a) as obvious over Ely, Seeley, and Fernandez. Pet. 23–46. In support of this asserted ground of unpatentability, Petitioner provides detailed explanations as to how the subject matter of each claim is met by the combined teachings of Ely, Seeley, and Fernandez, and relies on the Declaration of Dr. Wicker. Pet. 23–46 (citing Ex. 1003 ¶¶ 20–26, 30–32, 35, 37–40, 42–47, 59–63). Specifically, Petitioner cites portions of Ely as disclosing every limitation of claims 1–10, except for certain features, and then proposes modifying Ely in view of a combination of Seeley and Fernandez so as to render obvious those features.

For example, independent claims 1 and 6 each require a video camera positioned to collect digital image data of a monitored zone. Ely discloses surveillance systems including camera units 114 for advising the systems of alarm conditions. Ex. 1005, 1:6–9, Figs. 2–3. Independent claims 1 and 6 each require compressing and storing the image data. Camera unit 114 of Ely includes memory board 136, which receives an analog video signal output from camera 130, and then digitizes and compresses the video signal before storing it in memory 150 as video data. Ex. 1005, 11:8–26. Independent claims 1 and 6 each require also the transmission of two sets of digital image data. Ely discloses transmission of the compressed video data that was read out from memory 150 may be virtually parallel with continued transmission of “live” compressed video data. Ex. 1005, 13:19–22.

Petitioner acknowledges that Ely does not disclose expressly “said video camera being configured to transmit to the internet protocol network the retrieved

selection of the compressed digital image data,” as recited in independent claims 1 and 6. Petitioner then cites the Declaration of Dr. Wicker for the following:

At the time of invention of the '371 patent, a person of ordinary skill in the art (POSITA) would have understood that Ely's teachings are not limited to implementation on a LAN. For instance, a POSITA would understand that Ely's video surveillance system could be implemented across a WAN in view of Ely's teachings that a plurality of video cameras and storage devices are located remotely from a central server and connected with connection circuitry. Ely p. 4, ll. 9-15. In addition, the invention claimed by Ely is not limited to implementation across a LAN. [] Ely p.21 Claim 1, pg.24 claims 20 and 24. Because a POSITA at the time of invention of the '371 patent would have considered Ely's disclosure in the context of implementation on a WAN, the POSITA would consider it obvious (from a technical perspective) to use internet protocol in connection with implementing Ely with a WAN, to facilitate network communication. In particular, by 1995 the Internet had become commercial and IP was ubiquitous. It would have been a natural choice for a networking protocol.

Ex. 1003 ¶ 37. Moreover, Petitioner cites Fernandez for disclosing a system including multiple sensors connected via LANs that are accessible over the Internet using a TCP/IP addressing scheme. Ex. 1006, 2:22–37, 5:46–52. Petitioner then cites the Declaration of Dr. Wicker for the following:

Accordingly, it would have been apparent to a person of ordinary skill in the art to substitute the network configuration disclosed by Fernandez (equipment networked for transmitting data via the Internet using TCP/IP) for the network disclosed by Ely (local area network) because it was well known at the time of filing of the '371 patent that networks could be configured for both internal and/or external communication capabilities. In addition, it was well known that remote monitoring of security data by a central control station could be accomplished via data transmission over the Internet using the TCP/IP protocol.

Ex. 1003 ¶ 46.

Petitioner also acknowledges that Ely does not disclose expressly “the respective other image resolution being less than the retrieved image resolution,” as recited in independent claims 1 and 6. For that limitation, Petitioner sets forth a similar analysis as that referenced above in the context of the grounds of unpatentability in view of Bonshihara, in particular, why such a modification would have been known to one of ordinary skill, particularly in view of Seeley.

Petitioner sets forth similar analyses for dependent claims 2–5 and 7–10.

5. *Patent Owner’s Response and Analysis*

Patent Owner asserts that for the same reasons that Seeley cannot be combined with Bonshihara, Seeley cannot also be combined with Ely. We are not persuaded for same reasons set forth *supra* in our analysis of the ground of unpatentability based on a combination of Bonshihara and Seeley.

Patent Owner asserts further that Ely does not disclose “the retrieved selection of the compressed digital image data having a retrieved image resolution; . . . the other of the compressed digital image data having a respective other image resolution, the respective other image resolution being less than the retrieved image resolution,” as recited in independent claims 1 and 6. We are not persuaded because the ground of unpatentability is based on a combination of Ely and Seeley, while Patent Owner’s assertions are directed to Ely alone. *In re Keller*, 642 F.2d at 426. With regards to the specific limitation set forth above, Ely discloses that transmission of the compressed video data read out from memory 150 may be virtually parallel with continued transmission of “live” compressed video data. Ex. 1005, 13:19–22. Where Seeley discloses it was known to transmit both low resolution video and high resolution stored images from the same input image data stream such that one set of image data has a lower resolution than another set of image data (Ex. 1009, 14:55–15:10), we are persuaded by

Petitioner’s assertions and evidence that one of ordinary skill at the time of the invention would have known to modify the two transmissions from camera unit 114 of Ely in the same way.

6. *Conclusion*

After considering Petitioner’s and Patent Owner’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 1–10 of the ’371 patent are unpatentable over Ely, Seeley, and Fernandez.

D. *Petitioner’s Motion to Exclude*

Petitioner’s Motion to Exclude seeks to exclude Mr. Craner’s Declaration (Ex. 2001). Paper 36. Patent Owner did not file an opposition.

The current situation does not require us to assess the merits of Petitioner’s motion to exclude. As discussed above, even without excluding the identified evidence, we have concluded that Petitioner has demonstrated by a preponderance of the evidence that the challenged claims are unpatentable. Accordingly, Petitioner’s motion to exclude is *dismissed* as moot.

III. CONCLUSION

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

(1) claims 1–10 of the ’371 patent are unpatentable under 35 U.S.C. § 103(a) over Bonshihara and Seeley; and

(2) claims 1–10 of the ’371 patent are unpatentable under 35 U.S.C. § 103(a) over Ely, Seeley, and Fernandez.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that claims 1–10 of the ’371 patent are held unpatentable;

FURTHER ORDERED that Petitioner’s Motion to Exclude is *dismissed*;
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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For PETITIONER:

P. Weston Musselman, Jr.
musselman@fr.com

Adam Shartzer
Shartzer@fr.com

For PATENT OWNER:

Michael Smith
pto@patent-counselors.com