UNITED STATES PATENT AND TRADEMARK OFFICE
_____

BEFORE THE PATENT TRIAL AND APPEAL BOARD
_____

SAMSUNG ELECTRONICS AMERICA, INC.,
Petitioner,

v.

PRISUA ENGINEERING CORP.,
Patent Owner.
_____

Case IPR2017-01188
Patent 8,650,591 B2
_____

Before BARBARA A. PARVIS, MATTHEW R. CLEMENTS, and
TERRENCE W. McMILLIN, *Administrative Patent Judges.*

CLEMENTS, *Administrative Patent Judge.*


DECISION
Instituting *Inter Partes* Review
*35 U.S.C. § 314 and 37 C.F.R. § 42.108*

## I. INTRODUCTION

Samsung Electronics America, Inc. ("Petitioner") filed a Corrected Petition requesting *inter partes* review of claims 1–4, 8, and 11 ("the challenged claims") of U.S. Patent No. 8,650,591 B2 (Ex. 1001, "the '591 patent"). Paper 3 ("Pet."). Prisua Engineering Corp. ("Patent Owner") filed a Preliminary Response. Paper 21 ("Prelim. Resp."). We review the Petition pursuant to 35 U.S.C. § 314, which provides that an *inter partes* review may be authorized only if "the information presented in the petition . . . and any [preliminary] response . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition." 35 U.S.C. § 314(a); 37 C.F.R. § 42.4(a).

Upon consideration of the Petition and the Preliminary Response, we determine that the information presented by Petitioner establishes that there is a reasonable likelihood that Petitioner would prevail in showing the unpatentability of at least one of the challenged claims of the '591 patent. Accordingly, pursuant to 35 U.S.C. § 314, we institute an *inter partes* review of claim 11 of the '591 patent.

### A. Related Proceedings

The '591 patent is involved in *Prisua Engineering Corp. v. Samsung Electronics Co., Ltd et al.,* Case No. 1:16-cv-21761 (S.D. Fla.). Pet. 1; Paper 5, 2.

### B. The '591 patent

The '591 patent, titled "Video Enabled Digital Devices for Embedding User Data in Interactive Applications," issued February 11,

2014, from U.S. Patent Application No. 13/042,955. Ex. 1001 at [54], [45], [21]. The '591 patent generally relates to "a method for generating an edited video data stream from an original video stream wherein generation of said edited video stream comprises a step of: substituting at least one object in a plurality of objects in said original video stream by at least a different object." *Id.* at 1:40–47. Figure 3 is reproduced below.
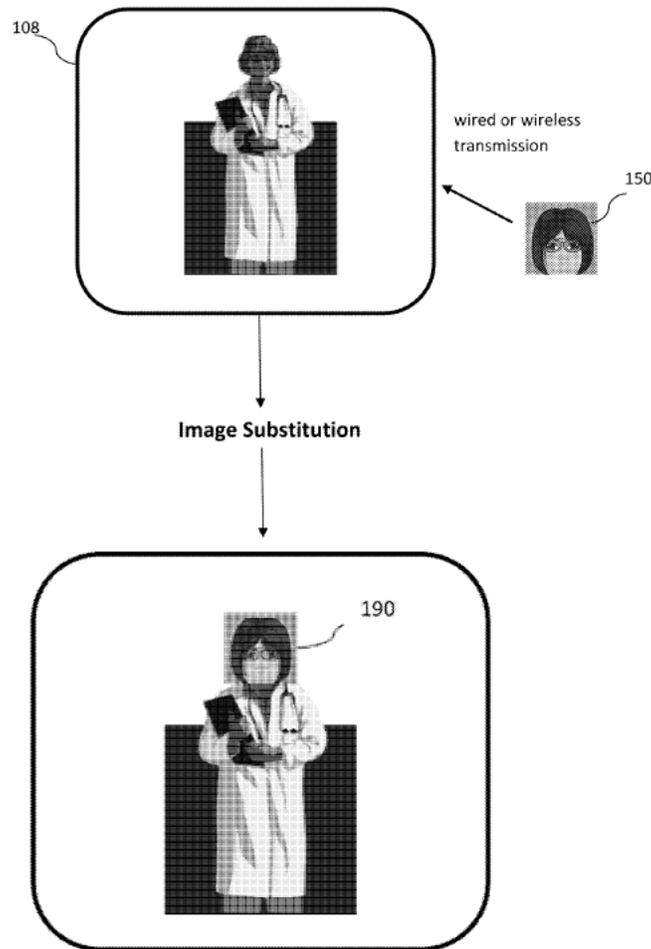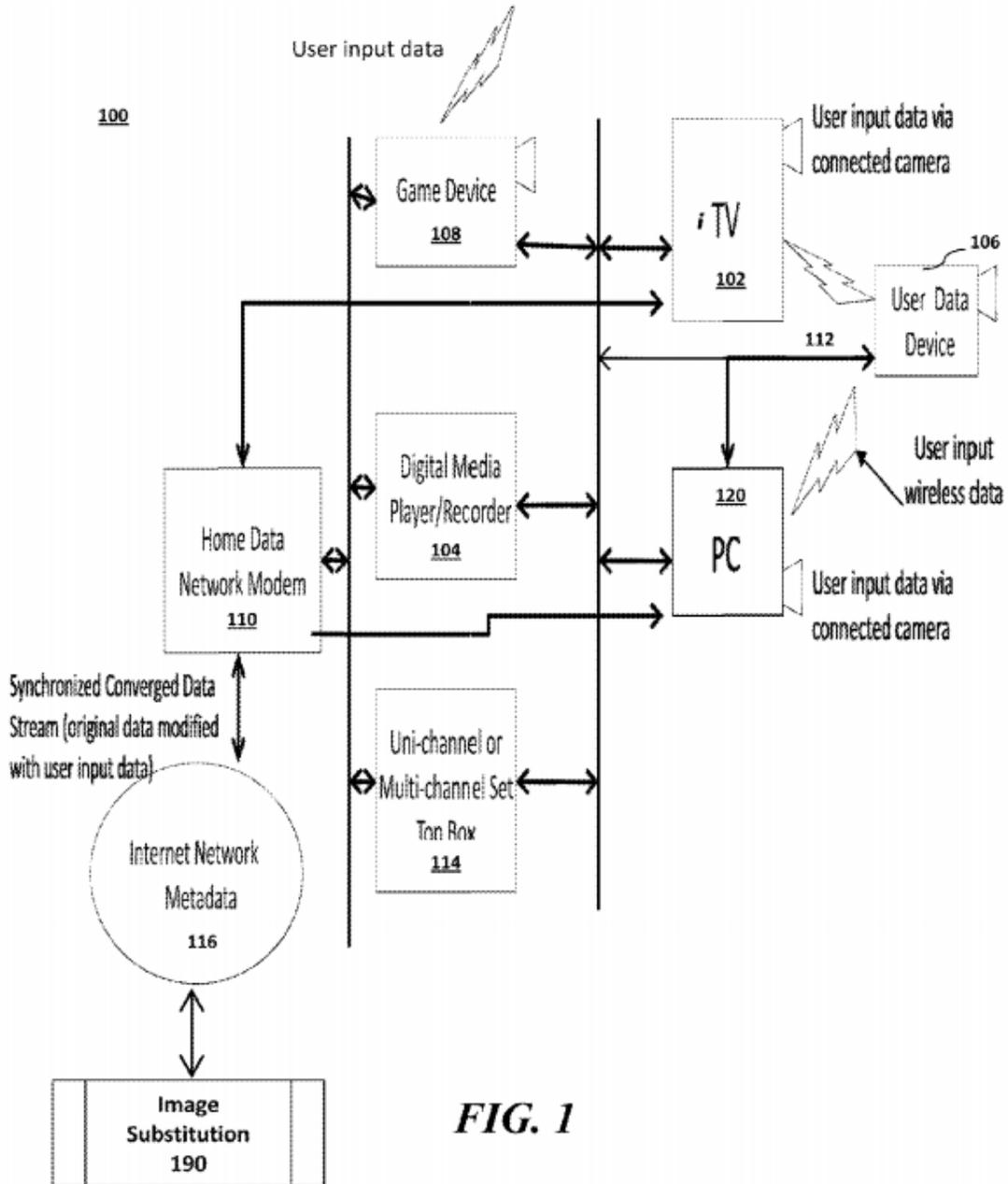


*FIG. 3*

Figure 3 shows a simplified illustration of a video image substitution according to one embodiment. *Id.* at 1:63–65. Figure 3 shows "a user input 150 of a photo image of the user used to replace the face of the image shown on the device 108." *Id.* at 2:66–3:1. "The user transmits the photo image

3

150 by wired or wireless means to the device 108." *Id.* at 3:1–3. "The image substitution is performed and the device 108 shows the substituted image 190." *Id.* at 3:3–4.

Figure 1 is reproduced below.

User input data

100

Game Device
108

*i* TV
102

User input data via connected camera

106

User Data Device

112

User input wireless data

Digital Media Player/Recorder
104

Home Data Network Modem
110

120

PC

User input data via connected camera

Synchronized Converged Data Stream (original data modified with user input data)

Uni-channel or Multi-channel Set Top Box
114

Internet Network Metadata
116

Image Substitution
190

*FIG. 1*

Figure 1 shows a block diagram of a digital system according to one embodiment. *Id.* at 1:59–60. System 100 includes interactive television

102, camcorder 104, camera-enabled personal device 106, gaming device 108, and "is operable for taking a captured video to be uploaded, or inputted by a user, for the purpose of inserting the video content into another video, graphics, image sequence selected by the user." *Id.* at 2:10–16. "This produces a new video sequence 190 which is subsequently broadcasted or played by the digital device." *Id.* at 2:16–18.

"User Data Device (UDD) 106 is an image capable digital device" whose "input can be image or video data." *Id.* at 3:41–49. The image or video data captured by UDD 106 can be transmitted to television 102 along with "instructions regarding which actor, actress, or structure item he desires to replace or substitute in the original program." *Id.* at 4:4–10. The embedding instructions and user input video data are then transmitted to internet network devices that "have the capability of processing the user image or video data and the set of instructions that indicate how said user input data is to be embedded into the metadata 116 to produce a modified broadcast bit stream." *Id.* at 4:18–27.

> To accomplish the embedding process, the internet network devices are capable of performing at least the following functions: receiving user input data and instructions, performing image and video analysis such as face recognition and detection, image and video data portioning, image and video enhancement, filtering, texture analysis, data compression and decompression, motion detection and estimation, motion correction to adapt the motion of the user input sequence with that of the original metadata to be broadcasted, error analysis, etc. Once the user input data has been correctly embedded into the data to be broadcasted, the internet network devices send the resulting modified data to the TV 102 to be broadcast.

*Id.* at 4:28–40.

*C. Illustrative Claim*

Of the challenged claims, claims 1 and 11 are independent, claims 2–4

and 8 depend, directly or indirectly, from claim 1. Independent claim 1 is

illustrative of the challenged claims and is reproduced below:

1. An interactive media apparatus for generating a displayable edited video data stream from an original video data stream, wherein at least one pixel in a frame of said original video data stream is digitally extracted to form a first image, said first image then replaced by a second image resulting from a digital extraction of at least one pixel in a frame of a user input video data stream, said apparatus comprising:

an image capture device capturing the user input video data stream;

an image display device displaying the original video stream;

a data entry device, operably coupled with the image capture device and the image display device, operated by a user to select the at least one pixel in the frame of the user input video data stream to use as the second image, and further operated by the user to select the at least one pixel to use as the first image;

wherein said data entry device is selected from a group of devices consisting of: a keyboard, a display, a wireless communication capability device, and an external memory device;

a digital processing unit operably coupled with the data entry device, said digital processing unit performing:

identifying the selected at least one pixel in the frame of the user input video data stream;

extracting the identified at least one pixel as the second image;

storing the second image in a memory device operably coupled with the interactive media apparatus;

receiving a selection of the first image from the original video data stream;

extracting the first image;

spatially matching an area of the second image to an area of the first image in the original video data stream, wherein spatially matching the areas results in equal spatial lengths and widths between said two spatially matched areas; and

performing a substitution of the spatially matched first image with the spatially matched second image to generate the displayable edited video data stream from the original video data stream.

Ex. 1001, 7:14–54.

11.   A method for generating a displayable edited video data stream from an original video data stream, wherein at least one pixel in a frame of the original video data stream is digitally extracted to form a first image, said first image then replaced by a second image resulting from a digital extraction of at least one pixel in a frame of a user input video data stream, said method comprising:

capturing a user input video data stream by using a digital video capture device;

using a data entry device operably coupled with the digital video capture device and a digital display device, selecting the at least one pixel in the frame of the input video data stream;

wherein the data entry device is selected from a group of devices consisting of: a keyboard, a display, a wireless communication capability device, and an external memory device; and

using a digital processing unit operably coupled with the data entry device, performing:

identifying the selected at least one pixel in the frame of the input video stream;

extracting the identified at least one pixel as the second image;

storing the second image in a memory device operably coupled with the digital processing unit;

receiving a selection of the first image from the user operating the data entry device;

extracting the first image from the original video data stream;

spatially matching an area of the second image to an area of the first image in the original video data stream, wherein spatially matching the areas results in equal spatial lengths and widths between said two spatially matched areas;

performing a substitution of the spatially matched first image with the spatially matched second image to generate a the displayable edited video data stream from the original video data stream;

computing motion vectors associated with the first image; and

applying the motion vectors to the second image, wherein the generated displayable edited video data stream resulting from the substitution maintains an overall motion of the original video data stream.

Ex. 1001, 8:28–9:4.

## D. Evidence Relied Upon

Petitioner relies upon the following prior art references:

| Senftner | US 7,460,731 B2 | Dec. 2, 2008 | Ex. 1006 |
| Sitrick | US 2005/0151743 A1 | July 14, 2005 | Ex. 1007 |
| Levoy | US 2009/0309990 A1 | Dec. 17, 2009 | Ex. 1008 |

Pet. 4–5. Petitioner also relies upon the Declaration of Edward Delp ("Delp Decl.") (Ex. 1003).

*E.  Asserted Grounds of Unpatentability*

Petitioner asserts that the challenged claims are unpatentable based on the following grounds (Pet. 4):

| Reference(s) | Basis | Claim(s) challenged |
|---|---|---|
| Senftner | § 102 | 1, 2, 8, and 11 |
| Senftner and Levoy | § 103 | 3 and 4 |
| Sitrick | § 103 | 1, 2, 8, and 11 |
| Sitrick and Levoy | § 103 | 3 and 4 |

## II.  ANALYSIS

*A.  Claim Construction*

In an *inter partes* review, a claim in an unexpired patent shall be given its broadest reasonable construction in light of the specification of the patent in which it appears.  37 C.F.R. § 42.100(b).  Under the broadest reasonable construction standard, claim terms 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).  Any special definition for a claim term must be set forth in the specification with reasonable clarity, deliberateness, and precision.  *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994).  We must be careful not to read a particular embodiment appearing in the written description into the claim if the claim language is broader than the embodiment.  *See In re Van Geuns*, 988 F.2d 1181, 1184 (Fed. Cir. 1993).  Only terms that are in controversy need to be construed, and then only to the extent necessary to resolve the controversy.  *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999).

Petitioner proposes that we construe "digital extraction" and "digitally extracted."  Pet. 9–11.  Patent Owner proposes construction for the terms

"user input video data stream," "original video data stream," "spatially matching," "pixel from the user entering data in the data entry display device," and "at the digital processing unit is further capable of extracting the at least one pixel from the user pointing to a spatial location in a displayed video frame." Prelim. Resp. 6–9. On this record, and for purposes of this Decision, we determine that only "digitally extracted" and "digital extraction" require express construction.

Petitioner proposes that we construe "digitally extracted" and "digital extraction" to mean "to digitally select and separate out, such as by copying." Pet. 9–11. Patent Owner agrees with this construction. Prelim. Resp. 6. The '591 patent does not use the words "extraction," "extracted," or "extract" apart from the claims. As Petitioner notes, the '591 patent instead uses the words "substitute," "substitution," and "substituting." Pet. 9; *see also* Ex. 1001. In the related litigation, Patent Owner proposed construing "extracting" to mean "select and separate out." Pet. 10; Ex. 1005, 16–17. We adopt the parties' proposed constructions. On this record, and for purposes of this Decision, we construe "digitally extracted" to mean "digitally selected and separated out, such as by copying," and we construe "digital extraction" to mean "digital selection and separation out, such as by copying."

*B. Denying Institution on Claims 1–4 and 8*

Petitioner argues that (1) claims 1, 2, and 8 are unpatentable under 35 U.S.C. § 102(b) as anticipated by Senftner; (2) claims 3 and 4 are unpatentable under 35 U.S.C. § 103(a) as obvious over the combination of Senftner and Levoy; (3) claims 1, 2, and 8 are unpatentable under 35 U.S.C. § 103(a) as obvious over Sitrick; and (4) claims 3 and 4 are

unpatentable under 35 U.S.C. § 103(a) as obvious over the combination of Sitrick and Levoy. Claims 2–4 and 8 all depend from independent claim 1, which purports to recite an apparatus claim. For the reasons described below, we cannot determine the scope of claim 1 and, therefore, cannot determine whether the prior art teaches claim 1 and the claims that depend therefrom.

## 1. Principles of Law

The definiteness requirement of 35 U.S.C. § 112, second paragraph, mandates that a claim "particularly point[s] out and distinctly claim[s] the subject matter which the applicant regards as his invention." A claim that covers more than one subject matter class—e.g., "an apparatus and method of using that apparatus"—fails to meet this requirement. *Microprocessor Enhancement Corp. v. Tex. Instruments Inc.*, 520 F.3d 1367, 1374 (Fed. Cir. 2008) ("*MEC*"). The rationale for holding such a claim indefinite is that "it is unclear whether infringement . . . occurs when one creates a[n infringing] system, or . . . when the user actually uses [the system in an infringing manner]." *UltimatePointer, L.L.C. v. Nintendo Co.*, 816 F.3d 816, 826 (Fed. Cir. 2016) ("*UltimatePointer*") (quoting *IPXL Holdings, LLC v. Amazon.com, Inc.*, 430 F.3d 1377, 1384 (Fed. Cir. 2005) ("*IPXL*")) (alterations in original).

Nonetheless, an apparatus claim may employ functional language without being indefinite for claiming both an apparatus and a method of using that apparatus. *Id.* Specifically, "[i]f an apparatus claim 'is clearly limited to a[n apparatus] possessing the recited structure and *capable* of performing the recited functions,' then the claim is not . . . indefinite." *Id.* (quoting *MEC*, 520 F.3d at 1375) (alteration in original).

    *2. Analysis*

    Claim 1 purports to recite an apparatus ("an apparatus comprising"), but each element of that apparatus is recited as performing an action. Claim 1 recites, for example, "an image capture device capturing," "an image display device displaying," "a data entry device . . . operated by a user to select the at least one pixel . . . and further operated by the user to select the at least one pixel," and "a digital processing unit . . . performing" a series of recited steps. Ex. 1001, 7:21–54.

    These limitations are analogous to the limitation at issue in *IPXL.* When analyzing a system claim that recited "and the user uses the input means to either change the predicted transaction information or accept the displayed transaction type and transaction parameters," the Federal Circuit held that

> it is unclear whether infringement of claim 25 occurs when one creates a system that allows the user to change the predicted transaction information or accept the displayed transaction, or whether infringement occurs when the user actually uses the input means to change transaction information or uses the input means to accept a displayed transaction. Because claim 25 recites both a system and the method for using that system, it does not apprise a person of ordinary skill in the art of its scope, and it is invalid under section 112, paragraph 2.

*IPXL* at 1384. Here, based on the record before us, it is similarly unclear whether claim 1 covers, for example, an apparatus that includes a data entry device *capable of* being operated by a user to select the at least one pixel, or covers only the user actually operating the data entry device to select the at least one pixel. It is similarly unclear whether claim 1 covers, for example, an apparatus that includes a data processing unit *capable of* performing the

recited steps, or only covers only using the data processing unit to perform the recited steps.

The limitations of claim 1 also are analogous to those in *In re Katz Interactive Call Processing Patent Litigation*, 639 F.3d 1303 (Fed. Cir. 2011) ("*Katz*"). In *Katz*, the Federal Circuit held that the claim recitations "wherein . . . callers digitally enter data" and "wherein . . . callers provide . . . data" were, like the claim limitation at issue in *IPXL* ("wherein . . . the user uses"), "directed to user actions, not system capabilities." *Id.* at 1318. In this proceeding, based on the record before us, at least the claim limitation "a data entry device. . . operated by a user to select the at least one pixel. . . and further operated by the user to select the at least one pixel," is similarly directed to user actions, not to system capabilities.

Based on the record before us, the limitations of claim 1 also are distinguishable from those in *MEC*, *HTC Corp. v. IPCom GmbH & Co., KG,* 667 F.3d 1270 (Fed. Cir. 2012) ("*HTC*") and *UltimatePointer*, in which the Federal Circuit held that the claims-at-issue were *not* indefinite. Unlike the apparatus claim at issue in *MEC*, the elements of claim 1 are not merely written in functional language—e.g., an element "for" performing a function—or directed to capability—e.g., an element "configured to" perform a function"—but are instead written to require performance of the function. *See MEC*, 520 F.3d at 1375. Moreover, unlike the method claim at issue in *MEC* and the claims at issue in *HTC*, claim 1 is not written in a "'preamble-within-a-preamble' format." *HTC*, 667 F.3d at 1277–78. Specifically, the functional language in claim 1 is not contained in the preamble preceding "the apparatus comprising." To the contrary, every element of the apparatus is recited either as performing a function or as

being operated by a user. Finally, unlike the claim limitations at issue in *UltimatePointer* ("an image sensor generating data"), at least the claim limitation "a data entry device . . . operated by a user to select the at least one pixel. . . and further operated by the user to select the at least one pixel," does not merely indicate that the associated structure has this capability (*Ultimate Pointer*, 816 F.3d at 827–28), but instead, based on the record before us, is like the limitations in *IPXL* and *Katz* where the structure is used by a user to enter data—i.e., "to select at least one pixel."

Because, on this record, we determine that claim 1 covers more than one subject matter class—an apparatus and a method of using that apparatus—we cannot determine the scope of claim 1 and we, therefore, cannot determine if the limitations of claim 1 are disclosed or taught by the prior art, or the combinations of prior art, identified by Petitioner. For the same reasons, we also cannot determine if claims 2–4 and 8, which depend from independent claim 1, are unpatentable.

Even if one were to contend the claim 1 limitations are merely written in functional language, the Petition lacks the analysis required by 37 C.F.R. § 42.104(b)(3). For example, at least the "digital processing unit" limitation would invoke § 112, sixth paragraph. *See Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1348 (Fed. Cir. 2015) (*en banc*) (in the absence of word "means," the presumption that means-plus-function does not apply may be overcome if "the claim fails to 'recite sufficiently definite structure' or else recites 'function without reciting sufficient structure for performing that function'"); Manual of Patent Examining Procedure § 2181 (9th ed. 2014, rev. July 2015) (identifying "device for" and "unit for" as non-structural generic placeholders); *Ex parte Lakkala*, Appeal No. 2011-001526, slip op.

at 9–13 (PTAB March 13, 2013) (determining that a "processor in communication with the memory device and configured with the program to" perform certain functions is a means-plus-function recitation under 35 U.S.C. § 112, sixth paragraph); *Ex parte Erol*, Appeal No. 2011-001143 slip op. at 14–18 (PTAB March 13, 2013) (determining that a "processor adapted to" perform several steps is a means-plus-function recitation under 35 U.S.C. § 112, sixth paragraph); *Ex parte Smith*, Appeal No. 2012-007631 slip op. at 12–16 (PTAB March 14, 2013) (determining that a "processor in communication with the memory and programmed to" perform certain functions is a means-plus-function recitation under 35 U.S.C. § 112, sixth paragraph).[1]

### 3. Conclusion

On this record, because we are unable to construe claims 1–4, and 8, we cannot conclude that Petitioner has established a reasonable likelihood of prevailing in showing that claims 1–4, and 8 are unpatentable under any of the asserted grounds.

### C. Claim 11: Anticipation by Senftner

Petitioner argues that the claim 11 is unpatentable under 35 U.S.C. § 102(b) as anticipated by Senftner. Pet. 11–37. In light of the arguments and evidence of record, we are not persuaded that Petitioner has established a reasonable likelihood that the claim 11 is unpatentable as anticipated by Senftner.

---

[1] These three Board decisions were designated "Informative" on April 1, 2014, and are accessible by link posted on the Board's website under the heading "Decisions" and subheading "Key Decisions Involving Functional Claiming."

1. *Senftner (Ex. 1006)*

Senftner is directed to "[p]rocesses and apparatus for personalizing video through partial image replacement." Ex. 1006, Abstract. "Personalization may include partial or full replacement of the image of an actor, an object, or both." *Id.* "Personalization may also include insertion or replacement of an object, and full or partial replacement of the background and/or sound track." *Id.*

2. *Analysis*

Claim 11 recites "computing motion vectors associated with the first image" and "applying the motion vectors to the second image." Petitioner relies upon Senftner's disclosure of capturing the "key motions" of a new actor and then "referenc[ing]" them when substituting the new actor for the original actor. Pet. 37 (citing *id.* at 29–31 (quoting Ex. 1006, 2:41–54, 6:8–14, 17:10–23)).

Patent Owner argues that motion vectors represent an amount by which a block is offset from a current frame to a reference frame, and Senftner does not use motion vectors because it does not use reference frames; instead, Senftner determines the position, orientation, and expression of the selected target for *each* frame. Prelim. Resp. 26–27 (citing Ex. 2010, titled "H.264 and MPEG-4 Video Compression").

Patent Owner's argument about the meaning of "motion vectors" has no basis in the claims or in the Specification. The term "motion vector" is not used in the '591 patent apart from the claims, the claims are not limited to MPEG-encoded video, and the Specification does not even mention MPEG. Moreover, Patent Owner's reliance on Exhibit 2010, which explains "motion vectors" in the context of MPEG-based video encoding (Prelim.

Resp. 26), appears to directly contradict its later argument that "[t]he computation of motion vectors for the first and second image is not the same as the computation of MPEG motion vectors in *encoded video*" (*id.* at 55). As a result, we give little weight to Patent Owner's argument that Senftner does not use motion vectors.

Nevertheless, based on our review of the cited portions of Senftner, we do not find any explicit disclosure of computation or application of motion vectors. Even assuming that "key motions are preserved," as Senftner discloses (*see, e.g.,* Ex. 1006, 6:11–12), Petitioner identifies nothing in Senftner that discloses or implies that they are computed as vectors. Moreover, Petitioner does not argue that computing and applying motion vectors is inherent in the process of preserving the key motions of a new actor and referencing them in the process of substituting the new actor for the original actor. As a result, we are not persuaded that Senftner discloses "computing motion vectors associated with the first image" and "applying the motion vectors to the second image," as recited in claim 11.

### 3. *Conclusion*

On this record, we are not persuaded that Petitioner has established a reasonable likelihood that it would prevail in showing that claim 11 is unpatentable as anticipated by Senftner.

### D. Claim 11: Obviousness over Sitrick

Petitioner argues that claim 11 is unpatentable under 35 U.S.C. § 103(a) as obvious over Sitrick. Pet. 46–66. In light of the arguments and evidence of record, we are persuaded that Petitioner has established a reasonable likelihood that claim 11 is unpatentable as obvious over Sitrick

1. *Sitrick (Ex. 1007)*

Sitrick is directed generally to "a system and method for processing a video input signal providing for tracking a selected portion in a predefined audiovisual presentation and integrating selected user images into the selected portion of the predefined audiovisual presentation." Ex. 1007, Abstract. Figure 1 of Sitrick is reproduced below.
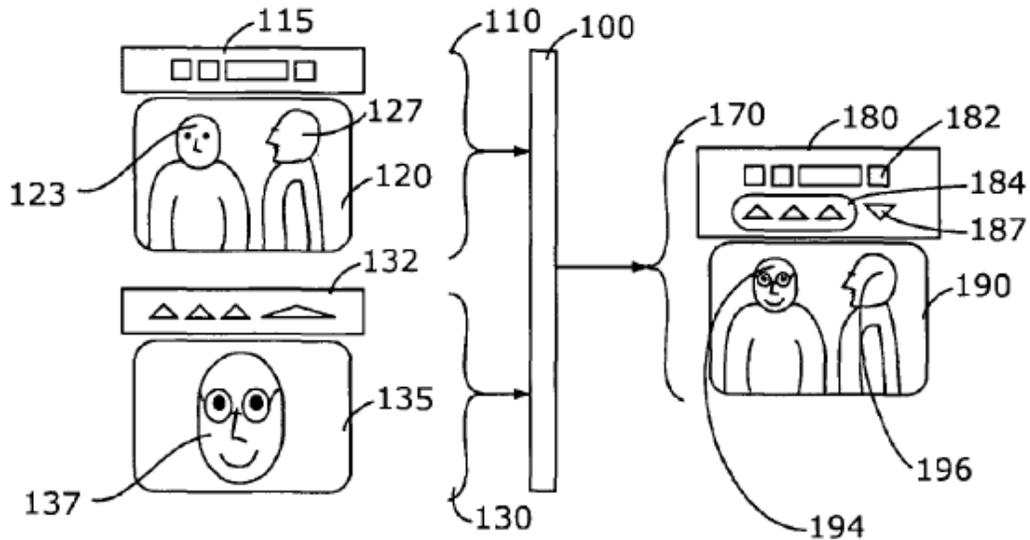


Fig. 1

Figure 1 shows a system block diagram of an embodiment of Sitrick, including user image video processing and integration subsystem 100. *Id.* ¶ 31. External source of program content 110 includes program video 120, in which first person 123 and second person 127 are visible. *Id.* External source of user image content 130 includes user image data 135, in which user specified image 137 is visible. *Id.* Subsystem 100 processes sources 110 and 130 to produce output content 170, which includes output video 190. *Id.* Output video 190 consists of a processed version of program video 120 such that first person 123 has been replaced by user specified image 137. *Id.*

Figure 13, reproduced below, is a detailed block diagram of a preferred embodiment of Sitrick in which subsystem 100 is implemented on a general purpose computer. *Id.* ¶ 121.
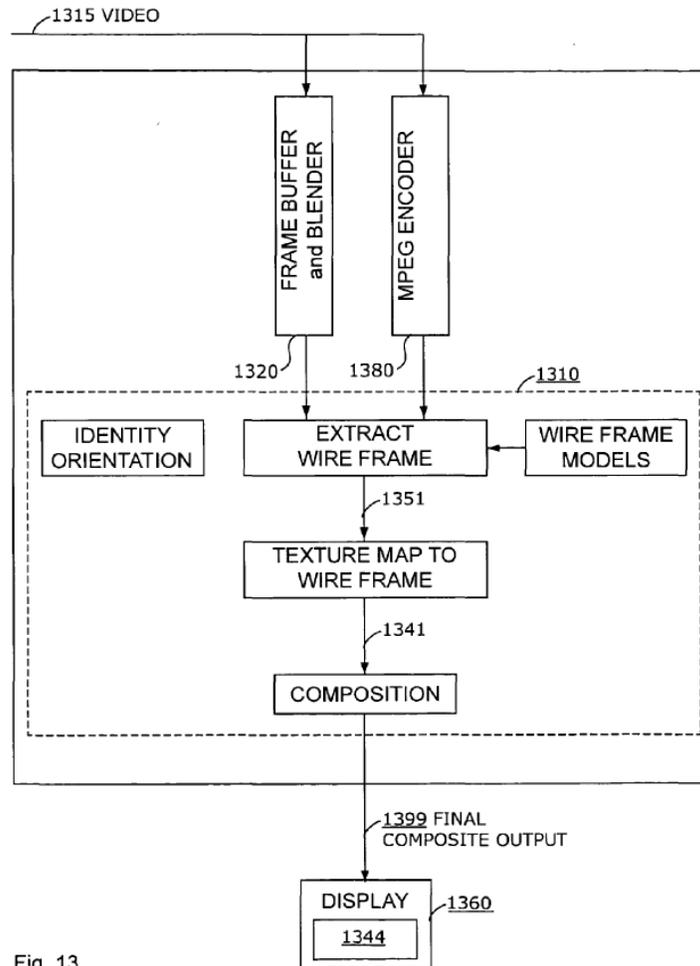


Fig. 13

As shown in Figure 13, the system comprises frame buffer 1320, MPEG encoder 1380, and general purpose computer 1310. *Id.* at 121. In operation,

> The general purpose computer 1310 comprises an extract wire-frame means, a wire-frame model database, an orientation identification means, a mapping means, and a compositing means. The wire-frame model database comprises user geometric object information. An output of wire-frame model data is supplied to the extract wire-frame means. An output of the orientation identification means is supplied to the extract wire-frame means. The extract wire-frame means transforms the wire-frame model

> data, responsive to information from at least one of the frame buffer 1320 and the MPEG encoder 1380, and supplied transformed wire-frame model data 1351 to the mapping means. In a preferred embodiment, the functions of the extract wire-frame means, the orientation identification means, the mapping means, and the compositing means may be performed by software executing on the general purpose computer 1310.
>
> The mapping means maps user replacement object images onto the transformed wire-frame model data 1351 producing a texture mapped output replacement object image 1341. The replacement object image 1341 is provided from the mapping means to the compositing means. The compositing means combines the replacement object image 1341 with data from the frame buffer 1320 producing final composited output 1399. The final composited output 1399 is representative of the first audiovisual presentation with selected portions being replaced by user object image content. In a preferred embodiment, the final composited output 1399 is provided as an input signal to display unit 1360, where it may be displayed as a display presentation 1344.

*Id.* ¶¶ 122, 123.

### 2. *Analysis*

We address the parties' contentions with respect to each limitation of claim 11 in turn.

#### a. *Preamble*

The preamble of claim 11 recites "[a] method for generating a displayable edited video data stream from an original video data stream." Petitioner relies upon Sitrick's teaching of subsystem 100 performing a "method for processing a video input signal providing for tracking a selected portion in a predefined audiovisual presentation and integrating selected user

images into the selected portion of the predefined audiovisual presentation."
Pet. 66 (citing Pet. 48–49)[2]; Ex. 1007, Abstract, ¶ 31.

The preamble of claim 11 further recites "wherein at least one pixel in a frame of the original video data stream is digitally extracted to form a first image, said first image then replaced by a second image resulting from a digital extraction of at least one pixel in a frame of a user input video data stream." Petitioner relies upon Sitrick's teaching of a "mask" as the recited first image (Pet. 49–51) and, alternatively, relies upon Sitrick's teaching to use image recognition to identify an image of a reference object (*id.* at 51–55). Specifically, Petitioner contends that "a POSITA would understand that Sitrick discloses forming the first image at least (1) when the mask is produced, or (2) when the image of the reference object is created to be used by the tracking subsystem." *Id.* at 53.

Patent Owner argues that Sitrick's mask cannot be the recited "first image" because it does not contain pixel values, it is produced *from* an image, it is "an image *representation* and not an image itself," it is "derived from an image," and "[c]reating a mask from information in an image creates a mask, not an image." Prelim. Resp. 35–37.

---

[2] On page 66 of the Petition, Petitioner argues that "Claim 11 includes the same limitation as claim 1, but is written as a method claim instead of an apparatus claim. . . . For the same reasons Sitrick makes obvious claims 1-2, Sitrick also renders obvious claim 11." With respect to other claim 11 limitations that are said to correspond to claim 1 or claim 2 limitations, Petitioner similarly relies on the discussion and evidence cited in the pages of the Petition pertaining to the claim 1 or claim 2 limitations. For convenience, going forward, we cite only to the pages of the Petition in which Petitioner's analysis for the corresponding claim 1 or claim 2 limitations appear.

Even assuming Sitrick's mask is not an image, we are persuaded by Petitioner's alternative contention that Sitrick teaches this limitation—i.e., that the image of the reference object identified by image recognition is the recited "first image" that is "digitally extracted" from an "original video data stream." Patent Owner argues that Sitrick's reference object cannot be an image because Sitrick states it "appears *in* the visual picture image" and is, therefore, merely "a *subpart* of an image." *Id.* at 37. Patent Owner does not explain persuasively, however, why a subpart of an image cannot itself be an image.

Moreover, Patent Owner's contention that Sitrick's "reference object" contains information in addition to image information (Prelim. Resp. 37) is not persuasive because Petitioner is relying on Sitrick's teaching of the *image* of the reference object. *See, e.g.,* Pet. 53 ("[A person of ordinary skill in the art] would understand that Sitrick discloses forming the first image at least. . . when *the image of* the reference object is created to be used by the tracking subsystem." (emphasis added)).

In addition, Patent Owner's argument that "the extracting performed in the '591 patent's claim [11] must be accomplished in some way different than what is taught by Sitrick" because "the '591 patent's claim [11] does not employ facial recognition technology" (Prelim. Resp. 38) is not persuasive because it attempts to read limitations into the claims that are not present—i.e., that "digitally extracted" cannot include facial recognition. The claim, however, is not so limited.

Finally, Patent Owner argues that Sitrick is unclear about the source from which pixel information is extracted and about the nature of its "audiovisual presentation." Prelim. Resp. 38–39. Those arguments also are

unpersuasive because Petitioner cites paragraph 48, 49, and 71 of Sitrick, which teach analyzing visual picture image 710 of a "first audiovisual presentation" to determine if a selected reference object appears. Pet. 51. Thus, the source is the first audiovisual presentation, which Sitrick describes as comprising a visual picture that "may vary over a period of time, as in a conventional motion picture (movie) or television program (show), such as conveyed by a conventional video signal." Ex. 1007 ¶ 63. We are, therefore, persuaded that Sitrick's first audiovisual presentation teaches the recited "original video data stream."

On this record, we are persuaded that Sitrick teaches the preamble.

   b. *"Capturing a user input video data stream . . ."*

Claim 11 recites "capturing a user input video data stream by using a digital video capture device." Petitioner relies upon Sitrick's teaching of a "video camera" and "digital camera." Pet. 55 (citing Ex. 1007 ¶¶ 12, 139).

Patent Owner argues that paragraph 12 states only that "[t]he user image can be *provided* by any one of a number of means," but "an image need not be *captured* at the time it is *provided,*" and that neither paragraph of Sitrick teaches capturing a "video"—i.e., a *sequence* of images. Prelim. Resp. 40–41. These arguments are not persuasive. Sitrick states explicitly that "[t]he user image can be provided by any one of a number of means, such as . . . by digitization scan of an external object such as of a person by video camera." Ex. 1007 ¶ 12. We are persuaded that a person of ordinary skill in the art would have understood that a "digitization scan. . . by video camera" captures a video data stream.

On this record, we are persuaded that Sitrick teaches the "capturing" step.

### c. "Using a data entry device. . ."

Claim 11 recites "using a data entry device operably coupled with the digital video capture device and a digital display device, selecting the at least one pixel in the frame of the input video data stream." Petitioner relies upon Sitrick's teaching of an embodiment implemented using a general purpose computer which, Petitioner argues, "would necessarily have a 'data entry device,' such as a keyboard." Pet 56 (citing Ex. 1003 ¶¶ 98, 105). Petitioner argues that a person of ordinary skill in the art would have recognized that Sitrick's general purpose computer, with its data entry device, would be operably coupled to a digital video capture device and to a digital display device. Pet. 57–58. With respect to "selecting the at least one pixel in the frame of the [user] input video data stream," Petitioner relies upon Sitrick's teaching of "a user selected image" (Pet. 32 (citing Ex. 1007 ¶ 11)) and argues that "a user operating the Sitrick system would necessarily have to 'select' at least one pixel in . . . the user input video data stream in order for the system to analyze . . . 'the user selected image' (the second image)." Pet. 57–58. We agree.

Patent Owner's arguments that "[r]educing Sitrick to one of its preferred embodiments is not proper" and that a general computer does not necessarily have a keyboard are not persuasive. Prelim. Resp. 41–42, 43–44. We agree with Petitioner that Sitrick's teaching that a user *selects* an image would have at least suggested to a person of ordinary skill in the art that the general purpose computer was coupled to a data entry device. Pet. 57 (citing Ex. 1003 ¶ 100; Ex. 1007 ¶¶ 11, 31).

We also are not persuaded by Patent Owner's argument that Sitrick does not teach that the general purpose computer is operably coupled to the

digital video capture device. Prelim. Resp. 42–43. Sitrick teaches that "[t]he system accepts a video input signal 1315 representative of the first audiovisual presentation and supplies that video input signal 1315 to frame buffer 1320 and MPEG encoder 1380." Ex. 1007 ¶ 121. This teaching is consistent with the system being operably coupled to the digital video capture device, and is inconsistent with Patent Owner's hypotheticals about importing the video as a file from a memory card.

We also are not persuaded by Patent Owner's argument that the "compositing" described by Sitrick as being performed by the general purpose computer in Figure 13 differs in any meaningful way from the teachings of Sitrick regarding subsystem 100 on which Petitioner relies. Prelim. Resp. 42. Although Sitrick describes Figure 13 as showing "a general purpose computer performing the compositing" (*see, e.g.,* Ex. 1007 ¶ 121), it further describes the general purpose computer as capable of more than mere compositing: "general purpose computer 1310 comprises an extract wire-frame means, a wire-frame model database, an orientation identification means, a mapping means, and a compositing means" (*id.* ¶ 122). Thus, we are persuaded that the system depicted in Figure 13 performs the same functions as subsystem 100.

Lastly, we also are not persuaded that "neither Petitioner's expert nor the petition explain how or why a 'display unit' is the same as a 'display device.'" Prelim. Resp. 44–45. Figure 13 of Sitrick depicts display device 1360, which Sitrick describes as displaying display presentation 1344. Ex. 1007, Fig. 13, ¶ 123. We are persuaded that a person of ordinary skill in the art would have understood Sitrick's "display unit" as teaching the recited "digital display device."

On this record, we are persuaded that Sitrick teaches the "using a data entry device" step.

d. *"wherein the data entry device is selected from a group. . ."*

Claim 11 recites "wherein the data entry device is selected from a group of devices consisting of: a keyboard, a display, a wireless communication capability device, and an external memory device." Petitioner relies upon Sitrick's teaching of a general purpose computer and argues that "[a] general purpose computer necessarily includes a data entry device, such as a keyboard." Pet 59. For the reasons discussed above with respect to the "using a data entry device. . ." limitation, we are persuaded that a person of ordinary skill in the art would have understood Sitrick to teach, or at least suggest, a keyboard.

We are not persuaded by Patent Owner's argument that Sitrick does not teach a keyboard because "a general purpose computer does not necessarily include a data entry device, such as a keyboard," and that one cannot be inferred from Sitrick's teaching of a "user selected image" because "[t]he user selected image of Sitrick is not the result of a user's operation or input into a computer." Prelim. Resp. 46 (citing Ex. 1007 ¶ 46). The teaching relied upon by Patent Owner applies only to the embodiment disclosed in Figure 6, which Sitrick describes as an "alternate embodiment." Ex. 1007 ¶ 20.

On this record, we are persuaded that Sitrick teaches the wherein clause.

e. *"Using a digital processing unit. . ."*

Claim 11 recites "using a digital processing unit operably coupled with the data entry device." Petitioner relies upon Sitrick's disclosure of an

implementation on a general purpose computer 1310, which would include a central processing unit (CPU).  Pet 59 (citing Ex. 1007 ¶ 115).  Although paragraph 115 describes general purpose computer 1110 in Figure 11, rather than general purpose computer 1310 in Figure 13, we are persuaded that general purpose computer 1310 would similarly comprise a CPU.

Patent Owner argues Petitioner has not shown that Sitrick teaches "using a digital processing unit operably coupled with the data entry device" because Petitioner "misreads Sitrick to require a general purpose computer." Prelim. Resp. 47.  We disagree.  Sitrick need not *require* a general purpose computer in order for it to teach this limitation for purposes of an obviousness analysis.  To the extent Patent Owner is arguing that the CPU in these embodiments performs only compositing, and not other steps relied upon by Petitioner to teach the claim limitations, that argument is not persuasive for the reasons discussed above—i.e., Sitrick describes the general purpose computer as comprising more than merely the compositing means.  Ex. 1007 ¶ 122 ("The general purpose computer 1310 comprises an extract wire-frame means, a wire-frame model database, an orientation identification means, a mapping means, and a compositing means.").

We also are not persuaded by Patent Owner's argument that a CPU is not the recited "digital processing unit" because, *inter alia*, CPUs and digital processing units "are often implemented on different hardware" and a digital processing unit is "especially adapted for graphics or graphics intensive applications."  Prelim. Resp. 47.  Tellingly, Patent Owner cites nothing, in the '591 patent or elsewhere, to support such a narrow construction of "digital processing unit."  Based on our review of the '591 patent, there is nothing in the Specification to justify such a narrow construction.

On this record, we are persuaded that Sitrick teaches the "using a digital processing unit" step.

   *f. "identifying. . ."*

Claim 11 recites "identifying the selected at least one pixel in the frame of the input video stream." According to Petitioner, "Sitrick discloses selecting a user's face (second image) from the user's image data for overlaying on the mask/reference object (first image) of the program video." Pet. 59–60 (citing Ex. 1007, Fig. 1, Fig. 5, ¶¶ 11, 31, 40, 87). Petitioner argues that "[t]o complete the overlaying, pixel(s) of the user image data must necessarily be identified and selected." *Id*. at 60 (citing Ex. 1003 ¶ 108).

 Patent Owner argues that "Sitrick's image integration subsystem is not part of the pixel domain because it uses a composite and mask subsystem." Prelim. Resp. 48 (citing Ex. 1007 ¶ 40). This argument is not persuasive because, even assuming that Sitrick's "user image video processing and image integration subsystem" uses a "transform mesh" and "polygon coordinates" in the process of producing a "rendered image output on bus 525" (Ex. 1007 ¶ 40), that is not inconsistent with Petitioner's contention that at least one pixel from the user input video data stream is necessarily identified before being applied to the transform mesh, as with, for example, selection of the "external source of user image content 570" (*id.*).

On this record, we are persuaded that Sitrick teaches the "identifying" step.

g. *"extracting the identified at least one pixel. . ."*

Claim 11 recites "extracting the identified at least one pixel as the second image." Petitioner relies upon Sitrick's teaching to extract user specified image 137 from user image data 135. Pet. 60–61.

Patent Owner's arguments (Prelim. Resp. 49) are not persuasive because they do not address user specified image 137, on which Petitioner relies.

On this record, we are persuaded that Sitrick teaches the "extracting" step.

h. *"storing. . ."*

Claim 11 recites "storing the second image in a memory device operably coupled with the digital processing unit." Petitioner relies upon Sitrick's teaching that, "[t]he data for the user replacement object image may reside in either or both of the storage subsystem 1140 or the memory subsystem 1150." Pet. 61–62 (citing Ex. 1007, Fig. 11, ¶¶ 111, 115, 116). Although this disclosure relates to Figure 11, we are persuaded that a person of ordinary skill in the art would have understood the system of Figure 13 to similarly store image data in similar storage or memory subsystems.

Patent Owner's argument that paragraphs 115 and 116, describing Figure 11, do not relate to other portions of Sitrick relied upon by Petitioner (Prelim. Resp. 50.) is not persuasive. Figure 11, like Figure 13, discloses a general purpose computer 1110 that includes a central processing unit (CPU) 1130. Ex. 1007, Fig. 11, ¶ 115. Sitrick describes general purpose computer 1110 performing essentially the same functions as general purpose computer 1130:

> Software running on the CPU 1130 performing a correlation function operates on data from the frame buffer 1120 to correlate and recognize reference objects in the first audiovisual presentation. In a preferred embodiment, the software is located in memory subsystem 1150, and may reference additional data in the storage subsystem 1140 and the memory subsystem 1150. The results of the correlation and recognition may be stored in either or both of the storage subsystem 1140 and the memory subsystem 1150.
>
> . . . [T]he CPU 1130 processes motion vector information to assist in the tasks of correlation, recognition, and association. The CPU 1130 then associates a user replacement object image with the recognized reference object. The data for the user replacement object image may reside in either or both of the storage subsystem 1140 or the memory subsystem 1150.

Ex. 1007 ¶¶ 115, 116; *see also id.* ¶¶ 121, 122 (describing general purpose computer 1310).

Similarly, Patent Owner's argument that "what is stored in memory are not images, but rather representative pixel textures" (Prelim. Resp. 50) is not persuasive because Petitioner quotes Sitrick as teaching that, "[t]he database comprises a plurality of user replacement object *images*." Pet. 61 (quoting Ex. 1007 ¶ 111 (emphasis added)).

On this record, we are persuaded that Sitrick teaches the "storing" step.

     *i.*   *"receiving. . ."*

Claim 11 recites "receiving a selection of the first image from the user operating the data entry device." Petitioner relies upon Sitrick's teaching to replace an identified reference object in an audiovisual presentation, and argues that "the Sitrick system, which may be implemented on a general purpose computer, necessarily receives the selection of the first image in

order to carry out the disclosed replacement process." Pet. 62–63 (citing Ex. 1003 ¶ 111; Ex. 1007 ¶¶ 13, 84, 115).

Patent Owner's argument that Sitrick "does not *require* a user selection because the selection process is automated" (Prelim. Resp. 51) is not persuasive because (1) Sitrick need not "require" a user selection in order to teach it for purposes of an obviousness analysis; and (2) as discussed above, the paragraph on which Patent Owner relies relates only to the embodiment depicted in Figure 6, which Sitrick describes as an "alternate embodiment."

On this record, we are persuaded that Sitrick teaches the "receiving" step.

### j. *"extracting the first image. . ."*

Claim 11 recites "extracting the first image from the original video data stream." Petitioner states

> Sitrick extracts a first image, such as a mask or reference object image. (*Id*. at, *inter alia*, Fig. 7 and ¶¶ 48-49, 54 (shows extraction of the mask image); Figs. 7-8, ¶¶ 49, 57, 71-72, 82 (shows extraction of a reference object image).) (Ex. 1003 at ¶¶ 112-114 (explaining Sitrick's extraction of the mask and reference object images).).

Pet 63. As discussed above with respect to the preamble, we are persuaded that this step is taught at least by Sitrick's teaching of using image recognition to identify a reference object from the original video data stream.

Patent Owner's argument that "a 'reference object' is not an image" (Prelim. Resp. 51–52) is not persuasive for the same reasons discussed above with respect to the preamble.

On this record, we are persuaded that Sitrick teaches the "extracting the first image" step.

*k.  "spatially matching. . ."*

Claim 11 recites "spatially matching an area of the second image to an area of the first image in the original video data stream, wherein spatially matching the areas results in equal spatial lengths and widths between said two spatially matched areas." Petitioner relies upon Sitrick's teaching of "several methods of matching an area of the second image to an area of the first image—*e.g.,* mapping, stretching, rotating, scaling, zooming, curling, shearing, distorting, and morphing of the size of a replacement image (second image) to obtain the best results." Pet. 63–64.

Patent Owner argues that Sitrick "accomplishes the overlay not by 'aligning a set of pixels in the spatial domain' (as Patent Owner has defined spatially matching) (Ex. 1009 at 14), but rather by 'keying.'" Prelim. Resp. 52. Patent Owner further argues that "there is no image *substitution*, but rather just overlaying." *Id.* We are not persuaded by these arguments. Even assuming Patent Owner's construction of "spatially matching" is correct, the paragraphs of Sitrick cited by Petitioner describe explicitly transforms that align a set of pixels in the spatial domain:

> A shrinking transform uniformly reduces the size of a replacement object image. A zooming transform uniformly enlarges the size of a replacement object image. A stretching transform may simultaneously shrink and enlarge the size of a replacement image, where the shrinking and enlarging are by necessity at different directions. A scaling transform may selectively shrink or enlarge the size of a replacement image. A rotation transform may be a two dimensional rotation of the replacement image about a point, or a three dimensional rotation of the replacement image about a plurality of axes defined in

three dimensions. A shearing transform selectively skews portions of a replacement object image along a selected direction. A curling transform creates the appearance of curling a two dimensional surface on which the replacement object image resides in three dimensions. A mapping transform is any regular relationship that can be expressed between a replacement object image and the result of the mapping. A morphing transform is any irregular relationship that can be expressed between a replacement object image and the result of the morphing.

Ex. 1007 ¶ 96.

Patent Owner also relies upon a Declaration of Shariar Negahdaripour, Ph.D., submitted in the related litigation. Prelim. Resp. 53 (citing Ex. 2003). Because this declaration was not prepared for this proceeding, however, it is an out of court statement on which Patent Owner is relying for the truth of the matter asserted, and Patent Owner does not argue that a hearsay exception applies. We, therefore, give this testimony no weight at this stage of the proceeding.

On this record, we are persuaded that Sitrick teaches the "spatially matching" step.

> *l.  "performing a substitution. . ."*

Claim 11 recites "performing a substitution of the spatially matched first image with the spatially matched second image to generate a [sic] displayable edited video data stream from the original video data stream." Petitioner relies upon Sitrick's teaching of overlaying user image data over a portion of a first audiovisual presentation to create output video 190. Pet. 64 (citing Ex. 1007, Fig. 1, ¶¶ 31, 87, 95, 96, 100).

Patent Owner argues that "the actual blending (keying) to produce the final composited video is performed at the frame buffer and blender 1120." Prelim. Resp. 53. To the extent Patent Owner is arguing that the

compositing taught in Sitrick is performed by a component other than the CPU that Petitioner contends is the "digital processing unit," that argument is not persuasive. Sitrick expressly describes general purpose computer 1310 as including a compositing means, which it describes as "combin[ing] the replacement object image 1341 with data from the frame buffer 1320 producing final composited output 1399." Ex. 1007 ¶ 123. "The final composited output 1399 is representative of the first audiovisual presentation with selected portions being replaced by user object image content" and "is provided as an input signal to display unit 1360, where it may be displayed as a display presentation 1344." *Id.* Because the output of general purpose computer 1310 is the "final composited output 1399," we are persuaded that the actual compositing is performed by the CPU of general purpose computer 1310.

Patent Owner also argues "Sitrick does not substitute but rather overlays." Prelim. Resp. 53–54 (citing Ex. 2008). According to Patent Owner, "[a] user would only see the replacement image, but one theoretically could undo the overlay operation and—after removing the replacement image—would be able to see the original (unedited) image content." *Id.* at 54. This argument is not persuasive. As noted above, the output of general purpose computer 1310 is final composited output 1399, in which selected portions of the first audiovisual presentation have been replaced with user object image content. Ex. 1007 ¶ 123. Thus, we are not persuaded that "one theoretically could undo the overlay operation" at that point, as Patent Owner contends. Moreover, Sitrick states expressly that the invention "replaces" a portion of the first audiovisual presentation. *See, e.g.,* Ex. 1007 ¶ 87 ("The invention then *replaces* a portion of the fist audiovisual

presentation with a portion of the associated replacement object image," and "[t]he overlayment will obscure *or replace* a portion of the first audiovisual presentation, and is *simila*r in nature to a video post-production effect commonly known as keying" (emphases added)).

On this record, we are persuaded that Sitrick teaches the "performing a substitution" step.

### m. *"computing motion vectors. . ."*

Claim 11 recites "computing motion vectors associated with the first image." Petitioner relies upon Sitrick's disclosure of tracking a location of a face, and of a correlation means that uses motion vector information from encoded video. Pet. 65 (citing Ex. 1007 ¶¶ 57, 65, 67); *see also* Ex. 1007 ¶¶ 66, 76). Petitioner argues that "a [person of ordinary skill in the art] understands Sitrick as disclosing that its computer computes the motion vectors in a video encoded in the MPEG standard to estimate the actual position of the reference object in each frame of the video." *Id.* (citing Ex. 1003 ¶ 119). 66

Patent Owner argues that claim 11 "concerns the *output* video data stream" whereas "Petitioner's analysis concerns the audiovisual presentation that is *input* to Sitrick[]." Prelim. Resp. 54–55. This argument is not persuasive because it is not commensurate with the limitation, which does not require that the motion vectors be computed for the generated displayable edited video data stream. To the contrary, the claim explicitly recites that the motion vectors are "associated with the first image"—i.e., that portion of the first audiovisual presentation that is selected for replacement. Thus, Petitioner's analysis concerning the audio visual presentation is relevant.

We also are not persuaded by Patent Owner's argument that

> [t]he computation of motion vectors for the first and second image is not the same as the computation of MPEG motion vectors in encoded video. ([Pet.] at 65) (discussing POSITA's understanding of motion vectors in encoded video). Claim [11] computes the motion vectors after the images have been extracted from the video data stream so that at the time the computation of the motion vectors takes place the images are not in an MPEG encoded format.

Prelim. Resp. 55. Tellingly, Patent Owner does not cite to the '591 patent, or to any other evidence, to support this argument, and in our own review of the '591 patent, we find no basis for any such distinction. Apart from the claims, the term "motion vectors" is not used in the '591 patent. Moreover, Patent Owner does not identify, and we do not find, anything else in the language of this limitation, or the other limitations, to support Patent Owner's contention that the claims exclude performance of these steps on MPEG-encoded video. As a result, we are not persuaded that the step of "computing motion vectors" must be performed only on video that is not in an MPEG-encoded format.

On this record, we are persuaded that Sitrick teaches the "computing motion vectors" step.

> *n. "applying the motion vectors. . ."*

Claim 11 recites "applying the motion vectors to the second image, wherein the generated displayable edited video data stream resulting from the substitution maintains an overall motion of the original video data stream." Petitioner relies upon Sitrick's teaching of applying the motion vectors to the user specified image by geometrical transformations. Pet. 65–66 (citing Ex. 1003 ¶ 120; Ex. 1007 ¶¶ 100, 104).

Patent Owner argues that paragraphs 100 and 104 of Sitrick are "irrelevant" to claim 11 because "[t]hose passages discuss using user object geometric information to update the transform parameters of an object so that the object may be reconstructed or updated." Prelim. Resp. 55. This argument is not persuasive because the cited portions of Sitrick teach that "[a]s the correlation means continues to recognize the reference object, the scaling, rotation, *and positioning* parameters are continually or periodically updated, resulting in updated transformed user object geometric information" (Ex. 1007 ¶ 100 (emphasis added)), and that this information, in combination with other information, "permits the *reconstruction* of the appearance of the user object in the *same placement* and orientation *as the detected reference object*" (*id.* ¶ 104 (emphases added)). As a result, we are persuaded that the motion vectors associated with the first image are "appl[ied]. . . to the second image" by using the user object geometric information to reconstruct the user object (i.e., recited "second image") in the same placement and orientation as the detected reference object (i.e., to "maintain[] an overall motion of the original video data stream.").

On this record, we are persuaded that Sitrick teaches the "applying the motion vectors" step.

3. *Conclusion*

On this record, we are persuaded that Petitioner has established a reasonable likelihood that it would prevail in showing that claim 11 is unpatentable as obvious over Sitrick.

## III. CONCLUSION

For the foregoing reasons, we are persuaded that Petitioner has demonstrated that there is a reasonable likelihood that Petitioner would

prevail in establishing the unpatentability of claim 11 of the '591 patent. At this stage of the proceeding, we have not made a final determination with respect to the patentability of this challenged claim or to the construction of any claim term.

## IV. ORDER

Accordingly, it is

ORDERED that pursuant to 35 U.S.C. § 314, an *inter partes* review is hereby instituted as to claim 11 under 35 U.S.C. § 103(a) as obvious over Sitrick;

FURTHER ORDERED that no other grounds are authorized for this *inter partes* review other than those specifically identified above; and

FURTHER ORDERED that pursuant to 35 U.S.C. § 314(d), and 37 C.F.R. § 42.4, notice is hereby given of the institution of a trial; the trial commences on the entry date of this Decision.

PETITIONER:

Heath J. Briggs
Patrick J. McCarthy
GREENBERG TRAURIG, LLP
BriggsH@gtlaw.com
McCarthyP@gtlaw.com

PATENT OWNER:

Ernesto M. Rubi
Thomas K. Landry
CAREY RODRIGUEZ MILIAN GONYA, LLP
erubi@careyrodriguez.com
tlandry@careyrodriguez.com