UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

UNIFIED PATENTS INC.,
Petitioner,

v.

JOHN L. BERMAN,
Patent Owner.

Case IPR2016-01571
Patent 5,523,791

Before KEN B. BARRETT, PATRICK M. BOUCHER, and MELISSA A. HAAPALA, *Administrative Patent Judges*.

HAAPALA, *Administrative Patent Judge*.

DECISION
Denying Institution of *Inter Partes* Review
37 C.F.R. § 42.108

United Patents Inc. ("Petitioner") filed a Petition pursuant to 35 U.S.C. §§ 311–319 to institute an *inter partes* review of claims 2–16 of U.S. Patent No. 5,523,791 ("the '791 patent"). Paper 1 ("Pet."). John L. Berman ("Patent Owner") filed a Preliminary Response. Paper 8 ("Prelim. Resp."). Applying the standard set forth in 35 U.S.C. § 314(a), which requires demonstration of a reasonable likelihood that Petitioner would prevail with respect to at least one challenged claim, we deny Petitioner's request and do not institute an *inter partes* review.

I. BACKGROUND

A. The '791 Patent (Ex. 1001)

The '791 patent describes techniques for superimposing images over television scenes. Ex. 1001, 1:5–6. A viewer can use an input device, such as a joystick, to select an overlay image and position the overlaid image with respect to the background video to set up humorous or otherwise expressive effects. *See id.* at 1:34–52. The '791 patent further describes warping (distorting) the background video in a manner similar to a fun-house mirror by varying the phase of the horizontal or vertical synchronization pulses to produce a variable phase shift of the horizontal lines. *See id.* at 3:5–12; 5:43–61.

Figure 1 of the '571 patent is reproduced below:

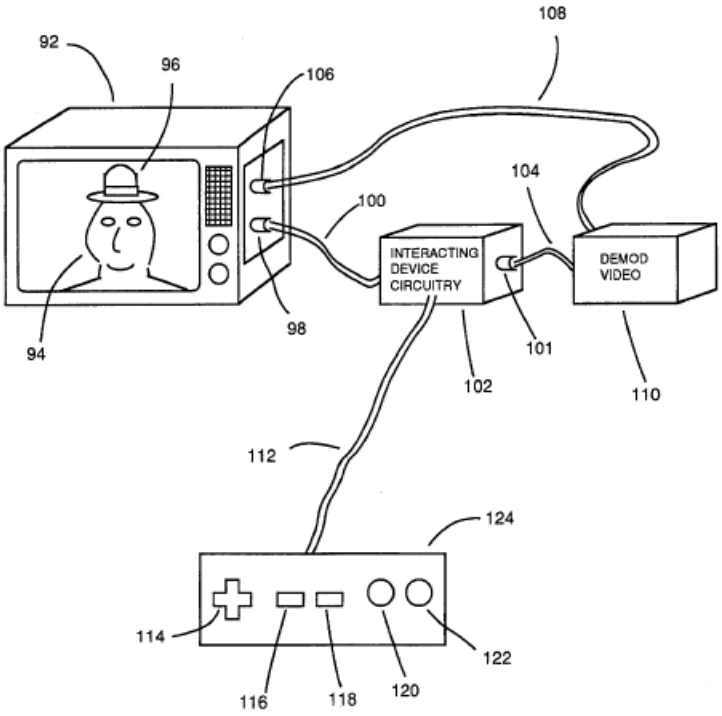

Figure 1

Figure 1 illustrates a preferred embodiment used to overlay an image on background video and to interact with the overlaid image. *See id.* at 3:27–39, 3:39–4:14. A source of demodulated video (e.g., video cassette recorder, cable converter) is connected to interacting apparatus 102, which combines demodulated video 94 (background video) with overlayed image 96, such as the hat illustrated in Figure 1. *Id.* at 3:39–42. The combination of background video 94 with overlayed image 96 is supplied to television receiver 92. *Id.* at 48–50. Interacting apparatus is controlled by joystick 124 to signal to the interacting apparatus to perform various functions, such as selecting a particular overlay image, positioning an overlay image relative to background video, and producing a distortion of the picture. *See id.* at 3:51–4:14.

B. Illustrative Claims

Claims 2 and 16 are illustrative of the subject matter of the claims at issue:

> 2. An apparatus for inserting an overlay image onto a background video image, said apparatus comprising:
>
> video input means, for receiving a video signal corresponding to said background video image;
>
> synchronization means, coupled to said video input means, for generating synchronization signals from said background video signal;
>
> viewer input means, comprising selection means for receiving an input command from a viewer to select an overlay image and position input means for receiving a position input from a viewer and generating a position signal to position an image on a display;
>
> processor means, coupled to said operator input means, for receiving said input command and generating overlay image data;
>
> first memory means, coupled to said processor means, for storing said overlay image data;
>
> address generator means, coupled to said memory means, said processor means and said synchronization means for selectively generating memory addresses for said memory means in response to said processor means and in synchronization with said synchronization means; and
>
> video output means, coupled to said memory means, for selectively reading the overlay image data from said memory means in synchronization with said synchronization means and merging said overlay image with said background video image.
>
> 16. A method of distorting a video image comprising the steps of:
>
> receiving a video signal corresponding to said video image;

separating vertical and horizontal synchronization signals from said video signal and generating horizontal and vertical synchronizing pulses;

receiving an input command from an operator for selecting a normal or distorted image;

selectively applying, in response to said input command and a predetermined pattern, said horizontal synchronizing signals and said horizontal synchronizing pulses to each horizontal line of said video signal and outputting a distorted video signal for generating a distorted video image.

C. References

Petitioner relies on the following references:

1. U.S. Patent No. 4,855,813, issued Aug. 8, 1989 ("Russell") (Ex. 1003).
2. U.S. Patent No. 5,594,467, issued Jan. 14, 1997 ("Marlton") (Ex. 1005).
3. Intel 82786 Graphics Coprocessor User's Manual (1988) ("Intel User's Manual") (Ex. 1004).

D. Grounds Asserted

Petitioner challenges the patentability of the claims of the '791 patent under 35 U.S.C. § 103(a) over the following combinations of references:

Reference(s)	Claim(s)
Russell alone or in view of Intel User's Manual	2
Russell alone or in view of Intel User's Manual	3–8, 10–15
Russel and Marlton	9, 16

E. Related Proceedings

Petitioner and Patent Owner identify the following litigation involving the '791 Patent: (1) *Berman v. Comcast Corp.*, Case No. 2-16-cv-00412

(E.D. Tex.); (2) *Berman v. DIRECTV, LLC*, Case No. 3-16-cv-00382 (N.D. Tex); and (3) *AT&T Serv., Inc. v. Berman*, Case. No. 3-16-cv-01106 (N.D. Tex). Pet. 2–3; Paper 6, 2. Petitioner also identifies the following additional proceeding as consolidated with *Berman v. AT&T*: *AT&T Services, Inc. v. Berman*, Case No. 3:16-cv-01106 (N.D. Tex.). Pet. 2–3.

II. ANALYSIS

A. Claim Construction

The '791 patent is expired. Our review of claim terms of an expired patent is similar to that of a district court's review. *In re Rambus, Inc.*, 694 F.3d 42, 46 (Fed. Cir. 2012). Specifically, we apply the principle that the words of a claim are generally given their ordinary and customary meaning, as understood by a person of ordinary skill in the art at the time of the invention. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc). In determining the meaning of a claim limitation, we look principally to the intrinsic evidence of record, examining the claim language itself, the written description, and the prosecution history, if in evidence. *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 469 F.3d 1005, 1014 (Fed. Cir. 2006) (citing *Phillips*, 415 F.3d at 1312–17).

1. Means-Plus-Function Terms Appearing in Claim 9

Petitioner proposes constructions for a number of terms that appear in claim 9 and recite the word "means." Pet. 11–12. Patent Owner asserts that construing these terms is not necessary at this time. Prelim. Resp. 13.

As Petitioner correctly notes (Pet. 7), a claim term that includes the words "means" is presumptively a means-plus-function element under 35

U.S.C. § 112 ¶ 6.[1] *See Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1349 (Fed. Cir. 2015). Such terms are construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof. 35 U.S.C. § 112 ¶ 6.

For purposes of this Decision, we agree with Petitioner that the following terms are presumptively means-plus-function limitations. The terms all include the word "means" and neither party, on the current record, presents any challenge rebutting the presumption. Therefore, we construe them in accordance with 35 U.S.C. § 112 ¶ 6.

a. "operator input means"

The function recited by this term is "receiving an input command from an operator for selecting a normal or distorted image." Petitioner asserts the corresponding structure is "a joystick control unit." Pet. 12 (citing Ex. 1001, 3:51–53, 5:36–42, Figs. 1, 2). Patent Owner does not address this construction.

For purposes of this Decision, we adopt Petitioner's proposed structure and construe "operator input means" as "a joystick control unit and equivalents thereof."

b. "video output means"

The function recited by this term is "selectively applying, in response to said input command and a predetermined pattern, said horizontal synchronizing signals and said horizontal synchronizing pulses to each

[1] Section 4(c) of the Leahy-Smith America Invents Act ("AIA") redesignated 35 U.S.C. § 112, ¶ 6, as 35 U.S.C. § 112(f). Pub. L. No. 112-29, 125 Stat. 284, 296 (2011). Because the '791 patent has a filing date before the effective date of the AIA, we refer to the pre-AIA version of 35 U.S.C. § 112.

horizontal line of said video signal and outputting a distorted video signal for generating a distorted video image." Petitioner asserts the corresponding structure is "a phase-lock unit and video serializers that supply video and overlay enable information for outputting the distorted video signal." Pet. 12 (citing Ex. 1001, 4:66–5:9, Fig. 2). Patent Owner does not address this construction.

The '791 patent describes supplying latched video data to video serializers, which supply serialized red, green, blue, and overlay data to overlay enable inputs of the phase lock unit. Ex. 1001, 66:5–6. The '791 patent further describes that variable synchronization delay (VSD) is the basis for apparent warping (distorting) of the image due to a line-to-line phase shift of the phase of the horizontal synchronization. *Id.* at 5:43–47. The phase-lock unit selects the background video or overlaid image data based on the state of its overlay enable pin, which also determines selection of either the horizontal synchronization (HS) pulse or the standard horizontal synchronization pulse (AHS). *Id.* at 5:53–59.

In view of the foregoing description, we are not convinced that the video serializers perform any part of the recited function of the "video output means." Rather, the recited functions are described as performed by the phase lock unit based on the state of its overlay enable pin. Accordingly, for purposes of this decision, we construe "video output means" as "a phase-lock unit including an overlay enable pin and equivalents thereof."

2. Other Terms

Petitioner and Patent Owner propose constructions for a number of additional terms that appear in the claims of the '791 patent. *See* Pet. 8–12; Prelim. Resp. 14. For purposes of this Decision, we do not find it necessary to construe these terms, and accord them their ordinary and customary

meaning. *See Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc*., 200 F.3d 795, 803 (Fed. Cir. 1999) (holding that "only those terms need be construed that are in controversy, and only to the extent necessary to resolve the controversy").

B. Discretion Whether to Institute Under 35 U.S.C. § 325(d)

Patent Owner contends we should exercise our discretion to deny institution on all grounds because the same or substantially the same prior art or arguments were previously presented to the Office. Prelim. Resp. 2. Specifically, Patent Owner asserts the same alleged prior art that Petitioner relies upon (Russell) was already presented to the Office with the '791 claims clearly distinguished from that prior art. *Id.*; *see also id.* at 4–6 (describing the prosecution history of the '791 patent). Patent Owner further asserts that Petitioner has deliberately avoided the complete record of the '791 patent prosecution history and proceedings and fails to address critical arguments that Applicant made during prosecution that were successful in overcoming Russell and getting the claims allowed. *Id.* at 1, 6–7.

Section 325(d) provides: "[i]n determining whether to institute . . . a proceeding . . . , the Director may take into account whether, and reject the petition or request because, the same or substantially the same prior art or arguments previously were presented to the Office." Thus, before we decide whether we should exercise our discretion to deny institution for one or more grounds, we first must determine whether any of the grounds asserted in this Petition present the "same or substantially the same prior art or arguments" as those previously presented to the Office.

The prosecution history of the '571 patent indicates that in an Office Action mailed March 31, 1994, the Examiner rejected originally filed claims 1, 2, and 4 as anticipated by Russell. Ex. 1006, 26, 28. The Examiner rejected originally filed claim 3 as anticipated by Dunbar (U.S. 5,235,423;

Aug. 10, 1993). Ex. 1006, 28, 30. On January 22, 1994, an Amendment was filed in response to the March 1994 Office Action in which Applicant made arguments distinguishing the rejected claims from Russell's "superimposing windows over one another in a composite television display." *See id.* at 49. In that Amendment, Applicant also added new claims 5–18. *Id.* at 40–48. Subsequent to the Amendment, an Examiner Interview was conducted and in the Examiner Interview Summary (Aug. 29, 1994), the Examiner indicated claims 5, 11, 12, and 18 overcame Russell. *Id.* at 52. The Examiner further indicated Dunbar was circumvented with the amendment to claim 3. *Id.* Following a subsequent Amendment (Aug. 25, 1994), in which Applicant amended a subset of the claims and added claims 19 and 20, the Examiner issued another Office Action (Nov. 25, 1994). In this Office Action, claims 1, 2, 4, 5, 12, 19, and 20 were rejected as anticipated by a new reference (Wilson), and claims 3, 6–11, and 13–18 were indicated as "allowable over the prior art of record." *Id.* at 64, 66. Applicant made further amendments distinguishing the claims over Wilson and claims 3, 5–11, and 13–20 were ultimately allowed by a Notice of Allowance mailed September 14, 1995.[2] *See id.* at 69–74, 80, 82.

Petitioner asserts that claims 2–8 and 10–15 are unpatentable as obvious over Russell alone or in combination with Intel User's Manual. Pet. 13–42. Petitioner further asserts that claims 9 and 16 are unpatentable as obvious over Russell and Marlton. *Id.* at 42–55. Claims 2–8 and 10–15 relate to inserting an overlay image onto a background video image, while

[2] Claims 3, 5–11, and 13–20 were renumbered upon issuance into issued claims 1–16. *See* Ex. 1006 41–48, 59–60, 69–72 (claim number edits indicating issued claim number). The remaining claims were canceled.

claims 9 and 16 relate to distorting a video image. For purposes of our analysis, we consider each group separately.

1. Claims 2–8 and 10–15

For the grounds challenging claims 2–8 and 10–15, we determine that Russell was substantially considered by the Examiner during the prosecution of these claims. Although these issued claims were never rejected over Russell, they were added in Amendments immediately following the Office Action (Mar. 31, 1994) rejecting original claims 1, 2, and 4 over Russell, and preceding the next Office Action (Nov. 25, 1994). The Examiner Interview Summary evidences consideration by the Examiner of Russell for the newly added claims. *See* Ex. 1006, 52 (indicating a subset of the new claims overcome Russell). Furthermore, in the November 1994 Office Action, the Examiner withdrew the anticipation rejection over Russell and explicitly indicated that another subset of the claims appeared to be allowable over the prior art of record. *See* Ex. 1006, 63–66. Accordingly, based on the record before us, we find that Russell was considered previously by the Office with regards to claims 2–8 and 10–16.

We also determine that the Petition relies on Intel User's Manual in substantially the same manner as the Examiner used Russell. The Petition cites Intel User's Manual to teach overlay image data by its description of window management features of the Intel 82786 coprocessor, specifically manipulation and display of multiple windows on a screen. *See* Pet. 17, 28–29, 32. We agree with Patent Owner's assertion (Prelim Resp. 5–8) that during prosecution, Applicant submitted arguments distinguishing the claims over Russell's superimposing windows over another image. *See* Ex. 1006, 49; *see also* Ex. 1003, 1:64–67, Fig. 13 (describing and illustrating a composite television display in which a number of windows are overlaid

with other windows). We find the manipulation and display of windows described in cited sections of Intel User's Manual is substantially the same prior art as that presented previously to the Office by Russell.

We conclude that the Petition relies on the same or substantially the same prior art and arguments presented previously to the Office for the grounds challenging claims 2–8 and 10–15 over Russell alone, or in combination with Intel User's Manual.

We further determine that it is appropriate to exercise our discretion to deny institution of these grounds. Petitioner acknowledges the Examiner specifically used Russell to reject the original claims. Pet. 5. Petitioner further acknowledges that Applicant added the new claims (ultimately resulting in the issued claims) in response to the Office Action in which the rejection over Russell was pending. *See id.* at 5–6. Nevertheless, Petitioner fails to present any argument distinguishing the Examiner's prior consideration of Russell or to provide a compelling reason why we should readjudicate substantially the same prior art and arguments as those presented during prosecution and considered by the Examiner. This would not be an efficient use of Board resources in this matter. Accordingly, we exercise our discretion and decline to institute review of claims 2–8 and 10–15 under 35 U.S.C. § 103(a) over Russell, or over Russell and Intel User's Manual.

2. Claims 9 and 16

Our analysis differs for the obviousness ground challenging claims 9 and 16 over Russell and Marlton. These claims do not recite overlay image data, but rather relate to distorting a video image. The Petition relies on Marlton, not Russell, to disclose distorting a displayed image by using different scaling factors in the horizontal and vertical directions. Pet. 43,

46–47. Marlton does not appear on the face of the patent in the list of references cited during prosecution. *See* Ex. 1001, 1. Nor does Patent Owner assert that Marlton, or prior art substantially the same as Marlton, was considered previously. Rather, Patent Owner merely argues we should reject the petition because Russell was presented previously to the Office. *See* Prelim Resp. 19. This argument is not sufficient to persuade us the obviousness ground challenging claims 9 and 16 presents the same or substantially the same prior art and arguments as that presented previously to the Office. Accordingly, we decline to deny this ground under § 325(d).

C. Obviousness Over Russell and Marlton

Petitioner contends that claims 9 and 16 are unpatentable because they would have been obvious under 35 U.S.C. § 103(a) over Russell and Marlton. Pet. 42–55. For the reasons that follow, we are not persuaded that Petitioner has demonstrated a reasonable likelihood of prevailing on this ground.

Russell describes an image processing system selectively merging graphics, text, digitized video frames, and/or full motion video into a user selectable composite television display. Ex. 1003, 1:59–65. The image processing system includes a video controller that contains circuitry for synchronizing the operations of the image processing system and controlling the mixing of motion video and captured/stored video pictures. *Id.* at 11:66–12:4. The video controller includes a phase detector that generates the synchronizing signals for the image processing system, including composite sync, horizontal sync, and vertical sync signals. *Id.* at 12:39–52.

Marlton describes a system for combining video signals and graphics signals on a common display. Ex. 1005, 1:11–12. The video signals are from a video source, such as a video disc player, and the graphics signals are

generated by a computer. *Id.* at 1:13–15. Marlton further describes the displayed image can be distorted in its aspect ratio by using different scaling factors in the horizontal and vertical directions. *Id.* at 3:35–37; *see also id.* at Figs. 37a, 37b, 24:15–27 (illustrating and describing the distortion caused by scaling an image by a factor of 50% in the vertical direction and 180% in the horizontal direction). An interpolator can perform horizontal scaling of the signal by sub-sampling at a predetermined clock rate to allow the video to be displayed in a reduced size window of the graphics screen. *Id.* at 7:31–35.

Claim 16 recites *selectively applying, in response to said input command [for selecting a normal or distorted image] and a predetermined pattern, said horizontal synchronizing signals and said horizontal synchronizing pulses to each horizontal line of said video signal and outputting a distorted video signal* ("selectively applying" limitation). Claim 9 recites similar functions performed by the video output means. For both limitations, Petitioner relies on the arguments presented for claim 9. *See* Pet. 55 (claim map for claim 16 citing to §§ 9B, 9D of Petition).

In particular, Petitioner contends that Russell's video controller generates "horizontal and vertical synchronization signals" and a person of ordinary skill would have understood a typical sync separator creates pulses for use by the video processing circuitry. Pet. 43–44. Petitioner asserts Russell and Marlton both have the structure for using synchronizing information present in the incoming video signal to produce an output video signal. *Id.* at 45. Petitioner further asserts Russell discloses applying horizontal and vertical synchronization signals generated from the synchronizing signal controller and Marlton discloses an interpolator that scales an image to create a distorted image. *Id.* at 45–46. Petitioner argues

that, therefore, the combination of Russell and Marlton teach techniques that allow distortion of video images using a processor and thus disclose the "video output means." *Id.* at 46; *see also id.* at 51–54 (claim map for "video output means"). In support of its assertions, Petitioner relies on testimony of its witness, Thomas A. Gafford. *See id.* at 43–47 (citing Ex. 1002).

Patent Owner argues that Marlton does not disclose a pattern of variable timing from pulse to selective pulse. Prelim. Resp. 20. Patent Owner asserts that, at most, Marlton discloses different horizontal and vertical scaling factors, which refers to scaling imagery on a display whose horizontal synchronization pulses are evenly displayed and independent of any image information displayed. *Id.*

We have reviewed the information provided by Petitioner and determine that Petitioner does not adequately explain or map the "selectively applying" limitation of claim 16 and the "video output means" of claim 9 to the combined teachings of Russell and Marlton. Petitioner's claim map of the "video output means" consists of block quotes without an explanation of how the cited sections disclose the specific elements of the claim limitation. *See* Pet. 51–54. Nor does Petitioner adequately explain the mapping in the discussion of this limitation. Petitioner asserts the references have the structure to use synchronizing information, Russell discloses applying horizontal and vertical synchronization signals, and Marlton discloses an interpolator that scales an image to create a distorted image. *Id.* at 45–47. But Petitioner does not explain how the combination of references discloses *selectively* applying horizontal synchronizing signals and *horizontal synchronizing pulses* to output a distorted video signal. *See id.* at 45–47.

Furthermore, with respect to claim 9, Petitioner has not met its burden of demonstrating that the combination of Russell and Marlton discloses the

elements as construed. For instance, although our Decision adopts Petitioner's proposed construction for operator input means to be "a joystick control unit and equivalents thereof," the Petition does not map any element of Russell or Marlton to "a joystick control unit" or contend that the user manipulation structures in either reference is equivalent to "a joystick control unit." *See* Pet. 44, 50–51.

For the foregoing reasons, we conclude Petitioner has not demonstrated a reasonable likelihood of prevailing in establishing that claims 9 and 16 would have been obvious over the combination of Russell and Marlton.

III. ORDER

In view of the foregoing, it is:

ORDERED that Petitioner's request for *inter partes* review of claims 2–16 of U.S. Patent 5,523,791 is denied.

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