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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte EYRAN LIDA

Appeal 2019-003029
Application 14/834,702
Technology Center 2400

Before JOSEPH L. DIXON, MAHSHID D. SAADAT, and DONNA M. PRAISS, *Administrative Patent Judges*.

SAADAT, *Administrative Patent Judge*.

DECISION ON APPEAL

Pursuant to 35 U.S.C. § 134(a), Appellant[1] appeals from the Examiner's decision to reject claims 1–24, which are all the claims pending in this application. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

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[1] We use the word "Appellant" to refer to "applicant" as defined in 37 C.F.R. § 1.42(a) (2017). Appellant identifies the real party in interest as Valens Semiconductor Ltd. Appeal Br. 3.

STATEMENT OF THE CASE

Introduction

Appellant's disclosure is directed to methods and network configurations for "smooth switching of video sources that share a common link." *See* Spec. ¶¶ 4, 6. Claim 1 is illustrative of the invention and reads as follows:

> 1. A network configured to support smooth switching of video sources, comprising:
>
> a first real-time video encoder (RT-VE) configured to receive a first incoming high-definition uncompressed video (HD-UV), compress the first incoming HD-UV into a first compressed video using a first compression ratio of up to 5:1, and send the first compressed video over a first network path to a first real-time video decoder (RT-VD) configured to extract a first outgoing HD-UV from the first compressed video;
>
> a second RT-VE configured to receive a second incoming HD-UV, compress the second incoming HD-UV into a second compressed video using a second compression ratio of up to 5:1, and send the second compressed video over a second network path to a second RT-VD configured to extract a second outgoing HD-UV from the second compressed video;
>
> wherein the first and second network paths share a common link having insufficient bandwidth to carry both the first and second compressed videos; and
>
> a video switching controller configured to synchronize a smooth switching between the first and second incoming HD-UV s by: indicating the first RT-VE and the second RT-VE to increase the first and second compression ratios to ratios that enable the common link to carry both the first and second compressed videos, indicating a video switcher to perform a smooth switching between the first and second outgoing HD-UVs, indicating the first RT-VE to stop sending the first compressed video after the smooth switching, and indicating the second RT-VE to decrease the second compression ratio.

See Appeal Br. 25–26 (Claims App.).

The Examiner's Rejection

Claims 1–24 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Schlack (US 2010/0299552 A1; pub. Nov. 25, 2010) and Ramasubramanian (US 6,172,672 B1; iss. Jan. 9, 2001). Final Act. 3–14.

ANALYSIS

In rejecting claim 1, the Examiner finds Schlack discloses the recited network configuration including the first and second encoders sending first and second compressed video over first and second paths, which share a common link with insufficient bandwidth to accommodate both compressed video streams, and the recited video switching controller. Final Act. 3–4 (citing Schlack Figs. 1–6; ¶¶ 31–40, 52, 29–62 (multiple streams)). The Examiner relies on Ramasubramanian as disclosing "compress the first incoming HD-UV into a first compressed video using a first compression ratio of up to 5:1" and "compress the second incoming HD-UV into a second compressed video using a second compression ratio of up to 5:1." Final Act. 4–5 (citing Ramasubramanian Figs. 2A, 2B, 2C; col. 7, line 28–col. 8, line 11) (emphasis omitted). Finally, the Examiner finds the combination would have been obvious to one of ordinary skill in the art because "Ramasubramanian teaches a solution to deal with the issue of network congestion, prevent delay in viewing and loss of video quality (See, for example, Ramasubramanian, paragraphs [0005]-[0006])." Final Act. 6.

Appellant contends the Examiner erred in characterizing the streaming of Schlack as high-definition uncompressed video streams because the disclosed streaming server 140 merely receives video streams at different bit

rates, but not any high-definition uncompressed video streams. Appeal Br. 9–10 (citing Schlack ¶¶ 7, 50, 60, 66, 69). Appellant argues Figure 1 of Schlack does not show a video switcher that receives the recited two uncompressed streams over a shared common link where a video switcher switches between those two uncompressed streams when the shared link has insufficient bandwidth. Appeal Br. 10, 12–16.

The Examiner responds by explaining that stream encoder 130 and client 170 in Figure 1 of Schlack are characterized as the recited first real time video-encoder that receives a high-definition uncompressed video. Ans. 14. The Examiner further refers to Schlack's Figure 5 as showing multiple streams and explains:

> Figs. 4-6 and paragraphs [0029]-[0062] (for example, paragraphs [0057]-[0058]) of Schlack teach a stream server 140 that switches video source files/streams, and that it may take several HTTP GET requests/video data responses (625) before the Streaming Server 140 can move to the next video segment (630) (which is the opportunity to seamlessly switch to the lower bit rate video source).

Ans. 16.

Schlack applies adaptive bit rate adjustment to content sessions to modify bandwidth usage within the network. *See* Schlack Abstract. Contrary to the Examiner's characterization of encoder 130 and client 170 as the recited first real time video-encoder, the description of Schlack's Figures 1 and 5 discloses that stream encoder 130 encodes video stream 132 at different bit rates, which is sent to streaming server 140 for delivering to client 170 at an adaptive bit rate 145. *See* Schlack ¶¶ 31–33. Similarly, the description of Schlack's Figure 5 discloses bandwidth reclamation which allocates bandwidth to different streams sent to different clients at different

bit rate by applying adaptive bandwidth adjustment techniques according to the required bandwidth usage. *See* Schlack ¶¶ 50–53. Therefore, as further asserted by Appellant, "Schlack's adaptive bandwidth changes the data rate according to the network constraints while transmitting video streams to different clients" rather than the recited switching between the first and second incoming high-definition uncompressed video HD-UV streams. Reply Br. 2 (emphasis omitted).

Conclusion

For the above reasons, we agree with Appellant that the Examiner's proposed combination does not teach or suggest the recited features of claim 1. Therefore, Appellant's arguments have persuaded us of error in the Examiner's position with respect to the rejections of independent claim 1, independent claim 18 which recite similar limitations, as well as the remaining claims dependent therefrom. *See* Appeal Br. 25–31 (Claims App.).

DECISION SUMMARY

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1–24	103	Schlack, Ramasubramanian		1–24
Overall Outcome				1–24

REVERSED