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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte VASANTH R. GADDAM and DAGNACHEW BIRRU

Appeal 2010-006385
Application 10/526,873¹
Technology Center 2400

Before DENISE M. POTHIER, JEFFREY S. SMITH, and JOHN A.
EVANS, *Administrative Patent Judges*.

EVANS, *Administrative Patent Judge*

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134(a) involving claims to packet insertion mechanisms for time-synchronized digital television transmission systems. The Examiner has rejected the claims as obvious. We have jurisdiction under 35 U.S.C. § 6(b).

We reverse.

Rather than reiterate the arguments of Appellants and the Examiner, we refer to the Appeal Brief (filed Aug. 4, 2009), the Examiner's Answer

¹ The real party in interest is Koninklijke Philips Electronics N.V.

(mailed Nov. 12, 2009), and the Reply Brief (filed Jan. 12, 2010).²

STATEMENT OF THE CASE

The claims relate to a packet insertion mechanism at the front end of a time-synchronized digital television transmission system that multiplexes, along with standard packets, packets whose payload is to be transmitted with redundancy for added robustness. The multiplexer also inputs placeholder packets to accommodate duplicated content of the robust packets. (Abstract).

Claims 1-20 are on appeal. Claims 1 and 11 are independent. An understanding of the invention can be derived from a reading of exemplary claim 1, which is reproduced below with disputed limitations italicized:

1. A digital signal transmission apparatus comprising:
a multiplexer having an output port, an input port for inputting an information bit-stream and an input port for inputting a placeholder bit-stream, for multiplexing the bit-streams inputted from the input ports to form a multiplexed bit-stream for output on the output port;
a data formatter for receiving the multiplexed bit-stream and for replacing bits of said placeholder bit-stream within the received multiplexed bit-stream with bits derived from said information bit-stream within said received multiplexed bit-stream to form a modified bitstream;
an encoder for encoding the modified bit-stream to produce an encoded bit-stream; and
a transmitter for transmitting the encoded bit-stream.

² We have considered in this decision only those arguments Appellants actually raised in the Briefs. Any other arguments which Appellants could have made but chose not to make in the Briefs are deemed to be waived. *See* 37 C.F.R. § 41.37(c)(1)(iv).

The claims stand rejected as follows:

1. Claims 1, 2, 5-8, 10-12, 15-18, and 20 stand rejected under 35 U.S.C. § 103(a) as obvious over Breti (US 2005/0152411 A1, Jul. 14, 2005, effectively filed Mar. 13, 2001) and Bellier (US 2002/0194566 A1, Dec. 19, 2002, filed Apr. 30, 2001). (Ans. 3-12).

2. Claims 3 and 13 are rejected under 35 U.S.C. § 103(a) as obvious over Breti, Bellier, and Abbott (US 6,438,569 B1, Aug. 20, 2002). (Ans. 12-14).

3. Claims 4 and 14 are rejected under 35 U.S.C. § 103(a) as obvious over Breti, Bellier, and Choi (US 2002/0041608 A1, Apr. 11, 2002). (Ans. 14-17).

4. Claims 9 and 19 are rejected under 35 U.S.C. § 103(a) as obvious over Breti, Bellier, and Knutson (US 6,788,710 B1, Sep. 7, 2004, filed Nov. 6, 1998). (Ans. 17-20).

REJECTIONS OVER BRETI AND BELLIER

CONTENTIONS AND ISSUE

The Examiner has rejected claims 1, 2, 5-8, 10-12, 15-18, and 20 rejected under 35 U.S.C. § 103(a) as obvious over Breti and Bellier. (Ans. 3-12). The Examiner finds that Breti teaches each claimed element, except that Breti does not teach “replacing bits of the placeholder bit-stream of a given data stream with information bits derived from the same data stream.” (Ans. 5). The Examiner finds that Bellier discloses replacing dummy bits, (bits of a placeholder bit-stream) of a given data stream, with

information bits derived from the same data stream. (Ans. 5 (citing abstract, elements 130 and 150; ¶¶ 0009, 0011, and 0037; and claims 1 and 2)). The Examiner finds that, taken together, the first (element 186) and second (element 190) multiplexers of Breti's Figure 11 comprise the claimed multiplexer. The Examiner further finds that Breti elements 192 and 194 together comprise the claimed data formatter. (Ans. 4).

Appellants contend that Breti's multiplexers 186 and 190 when combined do not equate to the claimed multiplexer. Appellants further contend that Breti's elements 192 and 194 do not equate to the claimed data formatter. (App. Br. 8). Appellants allege that the combination of elements 192 and 194 in Figure 11 receives two distinct multiplexed bit-streams; (1) the output of mux 2 (element 186) and (2) the output of mux 1 (element 190). Appellants contend that this is in complete contrast with Appellants' claimed invention, which requires the data formatter to receive a multiplexed bit-stream and to replace bits from a placeholder bit-stream from within the multiplexed bit-stream with bits from the same information bit-stream. (App. Br. 8).

The issue with respect to this rejection is whether Breti teaches the claimed multiplexer and the claimed data formatter.

ANALYSIS

Claim 1 recites "a multiplexer having . . . an input port for inputting an information bit-stream and an input port for inputting a placeholder bit-stream" and a multiplexer "for multiplexing the bit-streams inputted from

the input ports to form a multiplexed bit-stream for output on the output port.” Appellants are persuasive that the combination of BreTI 186 and 190 does not teach or suggest the claimed multiplexer when considering the claim as a whole. In contrast, the multiplexer formed by the combination of BreTI 186 and 190 outputs two bit-streams, a multiplexed “information bit-stream” (e.g., output from 186) and a multiplexed “placeholder bit-stream” (e.g., output from 190) (*See BreTI, Fig. 11*). The Examiner finds that Bellier teaches replacing bits of the placeholder bit-stream of a given data stream with information bits derived from the same data stream. However, this teaching fails to teach to the claimed multiplexer and data formatter. .

That is, claim 1 further recites “a data formatter for receiving the multiplexed bit-stream and for replacing bits of said placeholder bit-stream within the received multiplexed bit-stream with bits derived from said information bit-stream within said received multiplexed bit-stream to form a modified bitstream.” In contrast, the combination of BreTI elements 192 and 194 (mapped to the data formatter by the Examiner (Ans. 4)) replaces *dummy robust VSC data* (i.e., Rdata(r.o.)) – not the recited multiplexed bit-stream – outputted from the multiplexer 190 with normally ordered robust VSB data (i.e., Rdata(n.o.)) outputted from multiplexer 186, reformatting the dummy data with a single output. (*See BreTI, ¶ 0067; Fig. 11.*) Therefore, Appellants are persuasive that the combination of BreTI 192 and 194 does not teach or suggest the claimed data formatter that receives the multiplexed bit-stream, which formed from an information bit-stream and a placeholder bit-stream by the recited multiplexer element of claim 1. Appellants also

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persuasively contend that whereas Bellier teaches replacing dummy bits with information bits, Bellier does not teach or suggest that the replaced bits are obtained from the multiplexed input stream as recited. (*See* App. Br. 10).

The recitations of independent claim 11 are commensurate in scope with the limitations of claim 1 argued by Appellants. In view thereof, we also do not sustain the rejection of claim 11.

We similarly will not sustain dependent claims 2, 5-8, 10, 12, 15-18, and 20 for the above-noted reasons.

THE REMAINING OBVIOUSNESS REJECTIONS

ANALYSIS

Claims 3 and 13 are rejected under 35 U.S.C. § 103(a) as obvious over Breti, Bellier, and Abbott. (Ans. 12-14). Claims 4 and 14 are rejected under 35 U.S.C. § 103(a) as obvious over Breti, Bellier, and Choi. (Ans. 14-17). Claims 9 and 19 are rejected under 35 U.S.C. § 103(a) as obvious over Breti, Bellier, and Knutson. (Ans. 17-20). Claims 3, 4, 9, 13, 14, and 19 depend from one of independent claims 1 or 11.

As discussed above, Appellants have argued persuasively that neither Breti, nor Bellier, teach or fairly suggest the claimed multiplexer and data formatter. The Examiner has not found that any of Abbott, Choi, or Knutson teaches or fairly suggests the claimed multiplexer or data formatter. In view thereof, we do not sustain the rejection of claims 3, 4, 9, 13, 14, and 19.

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SUMMARY

We reverse the rejection of claims 1-20 under 35 U.S.C. § 103(a).

REVERSED

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