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**D E C I S I O N**  
**of 7 March 2006**

**Case Number:** T 1174/02 - 3.5.01

**Application Number:** 97915592.6

**Publication Number:** 0893030

**IPC:** H04N 7/32

**Language of the proceedings:** EN

**Title of invention:**

Method and apparatus for looping of compressed video  
bitstreams

**Patentee:**

Snell & Wilcox Limited

**Opponent:**

Interessengemeinschaft für Rundfunkschutzrechte GmbH  
Schutzrechtsverwertung & Co. KG

**Headword:**

Compressed video bitstreams/SNELL & WILCOX

**Relevant legal provisions:**

EPC Art. 56

**Keyword:**

"Inventive step (yes, after amendment)"

**Decisions cited:**

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**Catchword:**

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## Summary of Facts and Submissions

- I. This is an appeal against the decision of the opposition division to reject the opposition against European Patent No. 0 893 030.
- II. The following documents will be referred to in the present decision:
- D1: EP-A-0 624 982
- D2: EP-A-0 577 329.
- III. According to the decision appealed (cf point 3), document D1, regarded as describing the closest prior art, did not render the invention obvious. It did not mention the problem of looping a data sequence but merely required that, averaged over time, the "play time" and the "decode time" must be approximately equal generally. It did not require that this condition should hold over any particular chosen sequence.
- IV. In the grounds of appeal, the appellants (opponents) requested that the decision be set aside and the patent be revoked. It was pointed out that claim 1 of the granted patent was not limited to "looping". Moreover, even if the claims were amended to make explicit reference to looping, the invention would be obvious.
- V. In a communication accompanying an invitation to oral proceedings, the Board stated that the subject-matter of claim 1 might not be new over D1. The same applied to independent claim 6. It was added that this

objection could be the consequence of the generality of the claims rather than the closeness of the prior art.

VI. By letter of 11 January 2006, the respondents (patent proprietors) filed a set of amended claims 1 to 7 as main request. Independent claims 1 and 6 read (amendments in italics):

"1. A method of *looping* a sequence of compressed video bitstream having chosen start and end points, the sequence having a decode time determined by the number of frames in the sequence and the video frame rate, wherein the bit rate at which the sequence is played is modified such that the time taken to play the sequence is made equal to the decode time for the sequence *to enable looping of the compressed video bitstream sequence.*"

"6. A compressed video bitstream player (10), comprising a bitstream input for receiving a sequence of a compressed video bitstream *to be looped*, the sequence *having chosen start and end points* and having a decode time determined by the number of frames in the sequence *and the video frame rate* and means (10,12) for playing the sequence continuously with a modified play bit-rate such that the time taken to play the sequence is made equal to the decode time."

In addition, there were two auxiliary requests.

VII. By letter dated 27 January 2006, the appellants noted the amendments made to claims 1 and 6 and repeated their request for revocation of the patent-in-suit. The

Board was informed that the appellants would not participate at the oral proceedings.

VIII. By letter dated 22 February 2006, the respondents requested that a decision be taken on the current state of the file and informed the Board that they would not participate at the oral proceedings.

IX. Oral proceedings, which neither party attended, were held on 7 March 2006. The Board verified that the following requests were on file:

The appellants requested that the decision under appeal be set aside and the patent be revoked.

The respondents requested that the patent be maintained on the basis of amended claims 1 to 7 filed with the letter dated 11 January 2006 (main request), or, should any amendment made be held to contravene Article 123 EPC, that such amendment be undone (first auxiliary request), or, should a decision be reached that any claim in the main request were unpatentable, that claim be deleted with a corresponding amendment to introduce subject-matter of that deleted claim into each claim of the main request which depended from that deleted claim (second auxiliary request). Subsequently, the respondents had requested that a decision be taken on the current state of the file.

X. At the end of the oral proceedings the Board announced its decision.

## Reasons for the Decision

### 1. *Amendments*

In claim 1 the word "looping" has been substituted for "playing", and the expression "to enable looping of the compressed video bitstream sequence" has been added to the end of the claim. These amendments are not objectionable, and indeed the appellants have greeted them as clarifications. Also the modifications to claim 6 are allowable (Article 123(2), (3) EPC).

### 2. *Construction of claim 1*

The invention is a method for "looping", ie reproducing repeatedly, a sequence of a compressed video bitstream. The time it takes to display the sequence is in the patent referred to as "decode time", and the time it takes to read out the corresponding data from memory (the decoder buffer) is referred to as the "time taken to play the sequence" or "bitstream replay time" (cf paragraph [0050] of the description). Claim 1 thus effectively states that the time it takes to read out the encoded data corresponding to the sequence from the buffer should be equal to the time it takes to display the sequence on the screen. This is achieved by adjusting the bit rate (ie the buffer data rate). As long as this condition is fulfilled the decoder buffer occupancy is the same at the beginning and the end of the sequence, and there is no risk for the buffer ever over- or underflowing as the sequence is looped.

3. *The prior art*

The closest prior art on file is D1. D1 describes an apparatus for synchronising transmitter and receiver circuitry intended for digital video transmission (see col.1, l.26-47; col.3, l.56 to col.4, l.6). It mentions that the synchronization is important for ensuring that the decoder data buffer does not over- or underflow (paragraph bridging columns 1 and 2). It is clear to the skilled person that the system clock frequency, as determined by a voltage-controlled oscillator (37 in fig.3), will vary slightly in the course of the synchronization process. There is no mention of looping data.

4. *Novelty*

Already the difference that in D1 there is no looping of video sequences renders the subject-matter of claims 1 and 6 new (Article 54 EPC).

5. *Inventive step*

- 5.1 In the decision under appeal, the opposition division points out that the cited prior art, including D1 and D2, does not mention the looping concept underlying the contested patent. Indeed the available prior art merely refers to the decoder buffer over- or underflowing in the course of normal transmissions. Nevertheless, it is acknowledged in the patent-in-suit that "techniques have already been developed that make it possible to loop specially prepared sequences" (paragraph [0004]). Thus, the aim to loop a video sequence and the easily

recognisable technical problem of the decoder buffer over- or underflowing may be assumed to be known.

- 5.2 However, the only solution D1 offers to this problem is to achieve synchronization between the transmitter and receiver clocks. It may be true that in D1 the bit rate is "modified" in some sense (because of the inevitable variations in the receiver clock frequency), and also that the replay time and the decode time will be equal on average. This is sufficient in the context of D1, which only concerns random data. Also D2 relies on such synchronisation ("... to maintain synchronism and to avoid overflow and underflow of data buffers in demultiplexer unit 200...", see top of col.4).

The present invention, however, suggests to modify the bit rate such that the time taken to play *the sequence to be looped* is made equal to the decode time for the same sequence. This has clearly nothing to do with any synchronisation between the transmitter and the receiver since the transmitter is not involved.

- 5.3 The appellant has argued that it was self-evident to require of a particular, looped video sequence the same thing as was required of random video data on average, namely that decode and replay time be equal (grounds of appeal, point 7). However, since the prior art does not mention looping data and even less what particular circuit problems looping might give rise to, it is not possible to conclude with any certainty that the skilled person would have recognized this particular analogy between repeated sequences and random data. This was also the view of the opposition division (cf point III above).



5.4 Thus, the subject-matter of claims 1 and 6 of the main request must be regarded as involving an inventive step (Article 56 EPC).

6. *Dependent claims and remaining patent documents*

Dependent claims 2 to 5 and 7 correspond in substance to the dependent claims as granted. The remaining patent documents comply with the amendments requested.

**Order**

**For these reasons it is decided that:**

1. The decision under appeal is set aside.
2. The case is remitted to the department of the first instance with the order to maintain the patent in the following version:

Claims 1-7 according to the main request filed with  
letter dated 11 January 2006

Description and drawings as granted.

The Registrar:

The Chairman:

P. Guidi

S. Steinbrener