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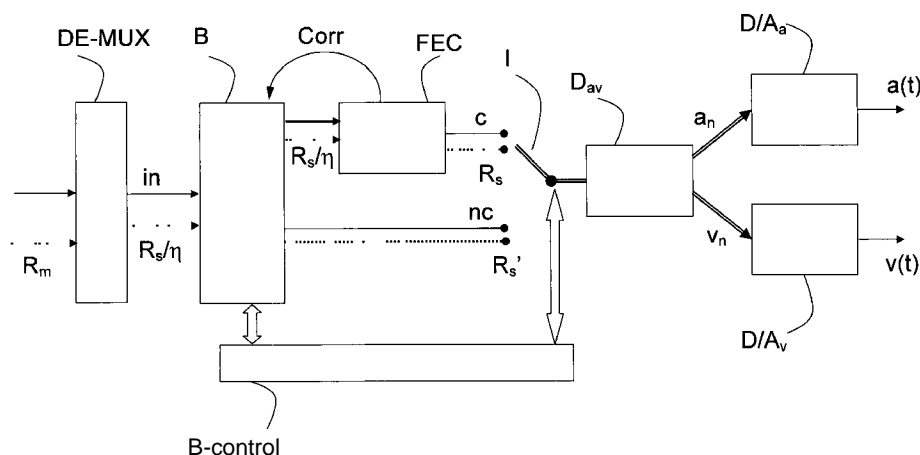
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[Continued on next page]

(54) Title: METHOD AND APPARATUS FOR REPRODUCING AN AUDIO VIDEO SEQUENCE



(57) Abstract: The present invention refers to a method for reproducing an audio and/or video sequence, as well as a reproducing device and reproducing apparatus that make use of the method; the method reproduces an audio and/or video sequence by means of a decoder ( $D_{av}$ ) apt to decode said sequence and a buffer (B) connected upstream to said decoder ( $D_{av}$ ) and able to store at least a part of said sequence; the sequence is transmitted by means of a number of data blocks; each of said blocks comprises an audio and/or video information data section and a corresponding error correction data section; such sections are transmitted in different time intervals; the method comprises a transitory operation mode and a steady state operation mode; in the steady state operation mode the correction data of the block (FEC) are applied to the corresponding information data before said information data are supplied to said decoder ( $D_{av}$ ), while in the transitory operation mode the information data of a block are directly supplied to said decoder ( $D_{av}$ ) ignoring the corresponding correction data of said block; the transitory operation mode is used after the audio and/or video sequence has been selected for the reproduction and for a determined time interval; the result is that the reproduction of the sequence takes place immediately after the selection and without waiting for the application of the correction data.

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# INTERNATIONAL SEARCH REPORT

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**A. CLASSIFICATION OF SUBJECT MATTER**

INV. H04N5/00 H04N7/24 H04N7/66

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

H04N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

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**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

| Category* | Citation of document, with indication, where appropriate, of the relevant passages   | Relevant to claim No.                           |
|-----------|--|---|
| <b>X</b>  | US 2005/213668 A1 (IWABUCHI KAZUNORI [JP] ET AL) 29 September 2005 (2005-09-29)  | 1-3,<br>8-14,21 ,<br>22,27,<br>28,31 ,<br>38-44 |
| <b>A</b>  | the whole document   | 15-17   |
| <b>A</b>  | NIKOLAOS LAOUTARIS ET AL: "Intrastream Synchronization for Continuous Media Streams: A Survey of Playout Schedulers" IEEE NETWORK, IEEE SERVICE CENTER, NEW YORK, NY, US, vol. 16, no. 3, May 2002 (2002-05), pages 30-40, XP011093506 ISSN: 0890-8044 pages 38-39, paragraph "FEC and Playout Adaptation" | 1-3,<br>8-17,21 ,<br>22,27,<br>28, 31,<br>38-44 |
|           | -----<br>-/--<br>-----   |   |

Further documents are listed in the continuation of Box C.

See patent family annex.

\* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
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- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the International filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with Indication, where appropriate, of the relevant passages   | Relevant to claim No.                                      |
|-----------|--|--|
| A         | <p>EP 1 533 974 A (YAMAHA CORP [JP])<br/>25 May 2005 (2005-05-25)</p> <p>paragraphs [0039] - [0057]</p> <p>-----</p>   | <p>1-3,<br/>8-17,21 ,<br/>22,27,<br/>28,31 ,<br/>38-44</p> |
| A         | <p>WO 03/048900 A (CATENA NETWORKS INC [US];<br/>VERREAULT ERIC [CA])<br/>12 June 2003 (2003-06-12)</p> <p>the whole document</p> <p>-----</p>                         | <p>1-3,<br/>8-17,21 ,<br/>22,27,<br/>28,31 ,<br/>38-44</p> |
| A         | <p>WO 95/22233 A (NEWBRIDGE NETWORKS CORP<br/>[CA]; BESSETTE FRANCOIS [CA])<br/>17 August 1995 (1995-08-17)</p> <p>page 4 , line 29 - page 7 , line 9</p> <p>-----</p> | <p>1-3,<br/>8-17,21 ,<br/>22,27,<br/>28,31 ,<br/>38-44</p> |

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/IB2007/002689

## Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1.  Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
  
2.  Claims Nos.:  
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
  
3.  Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

**see additional sheet**

1.  As all required additional search fees were timely paid by the applicant, this international search report covers allsearchable claimQ.
  
2.  As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.
  
3.  As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
  
4.  No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

**see annex**

### Remark on Protest

- The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- No protest accompanied the payment of additional search fees.

## FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-3,8-17,21,22,27,28,31,38-44

Method for reproducing an audio video sequence comprising a transitory operation mode without error correction and a steady state operation mode with error correction, wherein decoding of the information data in the transitory operation mode is performed with a lower speed than the nominal speed of the decoder.

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2. claims: 1,4

Method for reproducing an audio video sequence comprising a transitory operation mode without error correction and a steady state operation mode with error correction, wherein decoding of the information data in the transitory operation mode is performed first with the nominal speed and then, depending on detected errors, with a lower speed than the nominal speed of the decoder.

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3. claims: 1,5-7

Method for reproducing an audio video sequence comprising a transitory operation mode without error correction and a steady state operation mode with error correction, wherein decoding of the information data in the transitory operation mode first is stopped in presence of errors.

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4. claims: 1,18-20

Method for reproducing an audio video sequence comprising a transitory operation mode without error correction and a steady state operation mode with error correction, wherein the switching time between the two operation modes is made depending on a user command.

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5. claims: 1,23-26

Method for reproducing an audio video sequence comprising a transitory operation mode without error correction and a steady state operation mode with error correction, wherein the audio signal is processed to alter its frequency content.

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6. claims: 1,29,30

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Method for reproducing an audio video sequence comprising a transitory operation mode without error correction and a steady state operation mode with error correction, wherein an intermediate operating mode is further included.

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7. claims: 1,31-37

Method for reproducing an audio video sequence comprising a transitory operation mode without error correction and a steady state operation mode with error correction, wherein Time Slicing is used for transmission and in the data slice transmitted by Time Slicing a portion of data contained in an interleaving matrix is included.

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# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

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| Patent document cited in search report | Publication date | Patent family members) | Publication date   |  |
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