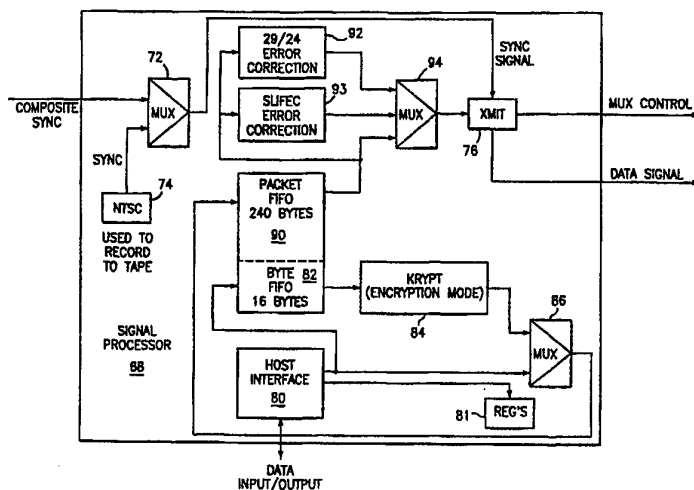




INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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(71) Applicant: HALL, David [US/US]; Route 10, Gilsum, NH 03448 (US).		(88) Date of publication of the international search report: 13 March 1997 (13.03.97)	
(72) Inventors: ARNOLDY, Peter; 48 Brookview Court, Milford, NH 03055 (US). BOCK, James, M.; 138 Town Farm Road, New Boston, NH 03070 (US). WRONSKI, Daniel, M.; 9 Old Mill Pond Road, Henniker, NH 03242 (US). HAPU, Marian; 1441 Cohasset Avenue, Lakewood, OH 44107 (US). GALLUP, Patricia; Route 10, Gilsum, NH 03448 (US).			
(74) Agents: MUIRHEAD, Donald, W. et al.; Foley, Hoag & Eliot, L.L.P., One Post Office Square, Boston, MA 02109-2170 (US).			

(54) Title: COMMUNICATION SYSTEM FOR SUPERIMPOSING DATA ONTO A VIDEO SIGNAL



(57) Abstract

A data communication system transmits a data signal that includes data that may be grouped into one or more packets. The packets may be further grouped into sessions where a session identifier for the session corresponds to the data contained in the session and a receiver can use the session identifier to decide to ignore the corresponding data. The system may include a provision for checking and correcting errors in digital data by partitioning the data into original data portions, applying an error-correction algorithm to provide error-corrected portions corresponding to the original data portions, and rearranging and concatenating the error-corrected portions to provide a string of bits. The communication protocols of the transmitter and receivers may be automatically and dynamically set by constructing a packet of data containing communication protocol parameters, transmitting the packet of data to the receivers, and adjusting communication protocol attributes according to the communication protocol parameters contained in the packet. Each of the receivers may include a board ID which, once assigned, cannot be ascertained and which allows selection of a subset of the receivers to receive the data. The data signal can be transmitted by being superimposed onto a conventional video signal, such as an NTSC video signal.

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INTERNATIONAL SEARCH REPORT

International Application No

PC/JS 96/10419

A. CLASSIFICATION OF SUBJECT MATTER
IPC 6 H04J3/14

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)

IPC 6 H04J

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)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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Y	see column 1, line 6 - line 12	40-45
Y	see column 2, line 34 - line 64	19
	see column 4, line 28 - column 5, line 3	
	see column 5, line 27 - column 6, line 27	

X	EP 0 454 364 A (AMERICAN TELEPHONE & TELEGRAPH) 30 October 1991	1-3,9,11,16
	see page 3, line 46 - line 55	
	see page 4, line 7 - line 9	
	see page 4, line 53 - page 5, line 10	
	see page 5, line 24 - line 40	
	see page 6, line 4 - line 20	

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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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* & * document member of the same patent family

Date of the actual completion of the international search

30 January 1997

Date of mailing of the international search report

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Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax (+31-70) 340-3016

Authorized officer

Van den Berg, J.G.J.

INTERNATIONAL SEARCH REPORT

International Application No

PC1/US 96/10419

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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X	WO 94 19909 A (SCIENTIFIC ATLANTA) 1 September 1994	23, 28-30, 33-35,39
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Y	see page 1, line 6 - line 16 see page 2, line 11 - line 21 see page 3, line 36 - page 4, line 16 see page 5, line 11 - line 27 see page 6, line 16 - line 24 see page 8, line 17 - line 23 ---	58,65
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INTERNATIONAL SEARCH REPORT

International Application No

PC1/US 96/10419

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	PATENT ABSTRACTS OF JAPAN vol. 016, no. 185 (E-1197), 6 May 1992 & JP 04 022240 A (TOSHIBA CORP), 27 January 1992, ---	47
A	WO 95 01020 A (XIRCOM INC) 5 January 1995 see page 3, line 28 - line 31 see page 4, line 3 - line 28 see page 5, line 24 - line 35 see page 6, line 9 - line 26 see page 7, line 11 - line 18 -----	1-22

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 96/ 10419

Box I Observations where certain claims were found unsearchable (Continuation of item 1 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 II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

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

see extra sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
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.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☒ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/

1. Claims 1-22
method of transmitting data, with packets grouped in segments, the segments being transmitted more than once
2. Claims 23-28:
data communication method, grouping data in sessions, with session identifiers, receivers are enabled after determining the session identifier
3. claims 29-39:
method of transmitting data to a plurality of receivers having a board ID for selectively receiving data
4. Claims 40-46:
device for receiving packets and storing the packet only if a calculated check value is equal to a transmitted check value
5. Claims 47-53:
method for automatically and dynamically setting communications protocols between transmitter and a plurality of receivers
6. Claims 54-65:
method of error correcting digital data

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 96/10419

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