**PCT** WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

**(51) International Patent Classification 5 :**
**H04N 7/087, 7/173, 7/10**
**H04N 7/20, 7/22**

**A3**

**(11) International Publication Number:** **WO 92/15175**

**(43) International Publication Date:** 3 September 1992 (03.09.92)

**(21) International Application Number:** PCT/CA92/00041

**(22) International Filing Date:** 7 February 1992 (07.02.92)

**(30) Priority data:**
661,521 26 February 1991 (26.02.91) US

**(71) Applicant:** SASKTEL [CA/CA]; 2121 Saskatchewan Drive, 3rd Floor, Regina, Saskatchewan S4Y 1G4 (CA).

**(72) Inventors:** BRADLEY, Graham, C. ; 3200 College Avenue, Regina, Saskatchewan S4T 1V9 (CA). FLORENCE, Everett, L. ; 207 Lincoln Drive, Regina, Saskatchewan S4S 6PS (CA). REED, Gordon, R. ; 7 Dickenson Cres., Regina, Saskatchewan S4R 7K6 (CA). BITTER, Darrin, W. ; 404 Dalgliesh Drive, Regina, Saskatchewan S4R 6J1 (CA).

**(74) Agent:** PROULX, Eugene, E.; Gowling, Strathy & Henderson, 160 Elgin Street, Suite 2600, Ottawa, Ontario K1N 8S3 (CA).

**(81) Designated States:** AU, CA, GB, JP.

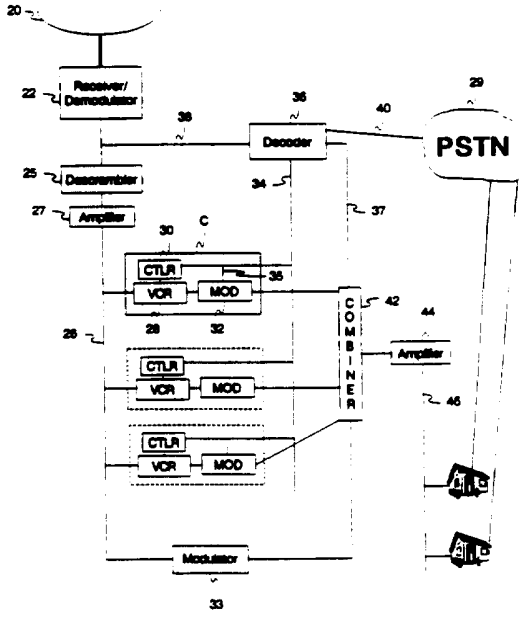
**Published**
*With international search report.*
*Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.*

**(88) Date of publication of the international search report:**
26 November 1992 (26.11.92)

**(54) Title:** VIDEO STORE AND FORWARD ON DEMAND APPARATUS AND METHOD

**(57) Abstract**

Disclosed is a two-stage television signal distribution system useful for distribution where the first stage of the television distribution occurs over satellite. The distribution system has a distribution control centre for producing a television signal including system control information in the vertical blanking interval thereof. The television signal is carried over a first transmission means to at least one receive station. Each receive station is provided with storage means for storing incoming television signals under control of the system control information contained in the television signal. The system further provides a second transmission means having multiple television channel capacity for transmitting television signals from each receive station to a plurality of terminations (i.e. the audience) where the television signals carried on said second transmission means include television signals previously stored at the receiving station and may also include the television signal carried on said first transmission means.



***FOR THE PURPOSES OF INFORMATION ONLY***

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

| | | | | | |
|---|---|---|---|---|---|
| **AT** | Austria | **FI** | Finland | **ML** | Mali |
| **AU** | Australia | **FR** | France | **MN** | Mongolia |
| **BB** | Barbados | **GA** | Gabon | **MR** | Mauritania |
| **BE** | Belgium | **GB** | United Kingdom | **MW** | Malawi |
| **BF** | Burkina Faso | **GN** | Guinea | **NL** | Netherlands |
| **BG** | Bulgaria | **GR** | Greece | **NO** | Norway |
| **BJ** | Benin | **HU** | Hungary | **PL** | Poland |
| **BR** | Brazil | **IE** | Ireland | **RO** | Romania |
| **CA** | Canada | **IT** | Italy | **RU** | Russian Federation |
| **CF** | Central African Republic | **JP** | Japan | **SD** | Sudan |
| **CG** | Congo | **KP** | Democratic People's Republic of Korea | **SE** | Sweden |
| **CH** | Switzerland | | | **SN** | Senegal |
| **CI** | Côte d'Ivoire | **KR** | Republic of Korea | **SU** | Soviet Union |
| **CM** | Cameroon | **LI** | Liechtenstein | **TD** | Chad |
| **CS** | Czechoslovakia | **LK** | Sri Lanka | **TG** | Togo |
| **DE** | Germany | **LU** | Luxembourg | **US** | United States of America |
| **DK** | Denmark | **MC** | Monaco | | |
| **ES** | Spain | **MG** | Madagascar | | |

# INTERNATIONAL SEARCH REPORT

PCT/CA 92/00041

International Application No

## I. CLASSIFICATION OF SUBJECT MATTER (if several classification symbols apply, indicate all)[6]

According to International Patent Classification (IPC) or to both National Classification and IPC

Int.Cl. 5 H04N7/087; H04N7/173; H04N7/10; H04N7/20
H04N7/22

## II. FIELDS SEARCHED

Minimum Documentation Searched[7]

| Classification System | Classification Symbols |
|---|---|
| Int.Cl. 5 | H04N |

Documentation Searched other than Minimum Documentation to the Extent that such Documents are Included in the Fields Searched[8]

## III. DOCUMENTS CONSIDERED TO BE RELEVANT[9]

| Category ° | Citation of Document,[11] with indication, where appropriate, of the relevant passages[12] | Relevant to Claim No.[13] |
|---|---|---|
| Y | FUNKSHAU<br>vol. 61, no. 17, August 1989, MUNCHEN<br>pages 58 - 60;<br>WITTMANN: 'DAS KRAFTPAKET IM DATENTRANSPORT'<br>see page 58, column 3, line 15 - page 60, column 1; figure 1<br>--- | 1-8 |
| Y | IEEE TRANSACTIONS ON CONSUMER ELECTRONICS<br>vol. 36, no. 4, November 1990, NEW-YORK<br>pages 877 - 884;<br>GARR ET AL.: 'DATA BROADCASTING IN THE USA LOW COST DELIVERY ALTERNATIVE AND MORE'<br>see page 877, column 2, line 10 - page 879, column 1, line 20; figure 1<br>--- | 1,2,6-8 |

-/--

° Special categories of cited documents :[10]

"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

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"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

"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

## IV. CERTIFICATION

| Date of the Actual Completion of the International Search | Date of Mailing of this International Search Report |
|---|---|
| 28 SEPTEMBER 1992 | 07 OCT 1992 |
| **International Searching Authority** | **Signature of Authorized Officer** |
| EUROPEAN PATENT OFFICE | MATERNE A. |

3

III. DOCUMENTS CONSIDERED TO BE RELEVANT (CONTINUED FROM THE SECOND SHEET)

| Category ° | Citation of Document, with indication, where appropriate, of the relevant passages | Relevant to Claim No. |
|---|---|---|
| Y | AT&T TECHNICAL JOURNAL<br>vol. 66, no. 3, May 1987, SHORT HILLS<br>pages 54 - 63;<br>BULFER: 'AT&T'S PAY-PER-VIEW TELEVISION TRIAL'<br>see page 59, column 2, line 26 - line 38 | 3 |
| Y | SUPERCOMM/ICC'90, IEEE INTERNATIONAL CONFERENCE ON COMMUNICATIONS<br>vol. 3, 15 April 1990, ATLANTA<br>pages 1109 - 1119;<br>MCDEVITT: 'SWITCHED VS BROADCAST VIDEO FOR FIBER-TO-THE HOME SYSTEMS'<br>see page 1112, column 1, line 11 - page 1114, column 1, line 7; figure 3 | 4,5 |
| A | WO,A,9 013 972 (ON COMMAND VIDEO CORPORATION) 15 November 1990<br>see page 5, line 24 - page 10, line 7; figures 1,2 | 1-8 |
| P,A | EP,A,0 449 552 (SONY CORPORATION) 2 October 1991<br>see page 4, column 3, line 36 - page 5, column 5, line 4; figures 1-5 | 1-8 |

# ANNEX TO THE INTERNATIONAL SEARCH REPORT ON INTERNATIONAL PATENT APPLICATION NO. CA 9200041 SA 56028

This annex lists the patent family members relating to the patent documents cited in the above-mentioned international search report. The members are as contained in the European Patent Office EDP file on 28/09/92
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

| Patent document cited in search report | Publication date | Patent family member(s) | | Publication date |
|---|---|---|---|---|
| WO-A-9013972 | 15-11-90 | US-A- | 4947244 | 07-08-90 |
| | | AU-B- | 625228 | 02-07-92 |
| | | AU-A- | 5541390 | 29-11-90 |
| | | EP-A- | 0471025 | 19-02-92 |
| EP-A-0449552 | 02-10-91 | JP-A- | 3278730 | 10-12-91 |