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Guillou

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[54] **SUBSCRIPTION CARD FOR A VIDEOTEX RECEIVER**

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[22] Filed: **Jan. 23, 1980**

[30] **Foreign Application Priority Data**

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[51] Int. Cl.³ **G06K 19/06**
[52] U.S. Cl. **235/375; 235/487; 235/492**
[58] Field of Search 235/375, 379, 380, 381, 235/382, 492, 487; 358/115, 124

[56] **References Cited**

U.S. PATENT DOCUMENTS

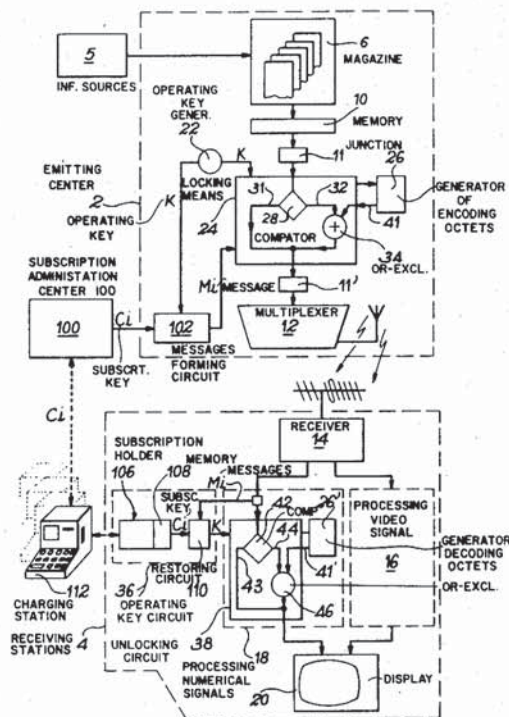|				
4,058,830	11/1977	Guinet	....	358/115
4,092,524	5/1978	Moreno	....	235/487
4,105,156	8/1978	Dethloff	....	235/487
4,115,662	9/1978	Guinet	....	358/115
4,204,113	5/1980	Giraud	....	235/380
4,211,919	7/1980	Ugon	....	235/487

FOREIGN PATENT DOCUMENTS

2184926 12/1973 France .
2311360 12/1976 France .

Primary Examiner—Harold I. Pitts

[57] **ABSTRACT**

A subscription card for videotex receivers, comprising:
(a) a support,
(b) means for processing the information, comprising in particular a control unit governing an arithmetical and logical unit and a live memory,
(c) an interface permitting exchanges between the card and the apparatus in which it is inserted (charging station or receiver), further comprising:
(d) a programmable memory comprising a plurality of locations for receiving numerical subscription blocks C_i,
(e) a dead memory containing instructions for proceeding with the recording and selection of said subscription blocks, and for carrying out a calculation,
(f) a calculation circuit receiving, from the receiver in which the card is inserted, numerical messages M_i and receiving from said programmable memory a numerical subscription block C_i, this circuit being adapted to work out an algorithm whose parameters are provided by the subscribers' keys C_i on instructions obtained from the second dead memory and delivering, after the calculation, a numerical signal representing an operating key K.
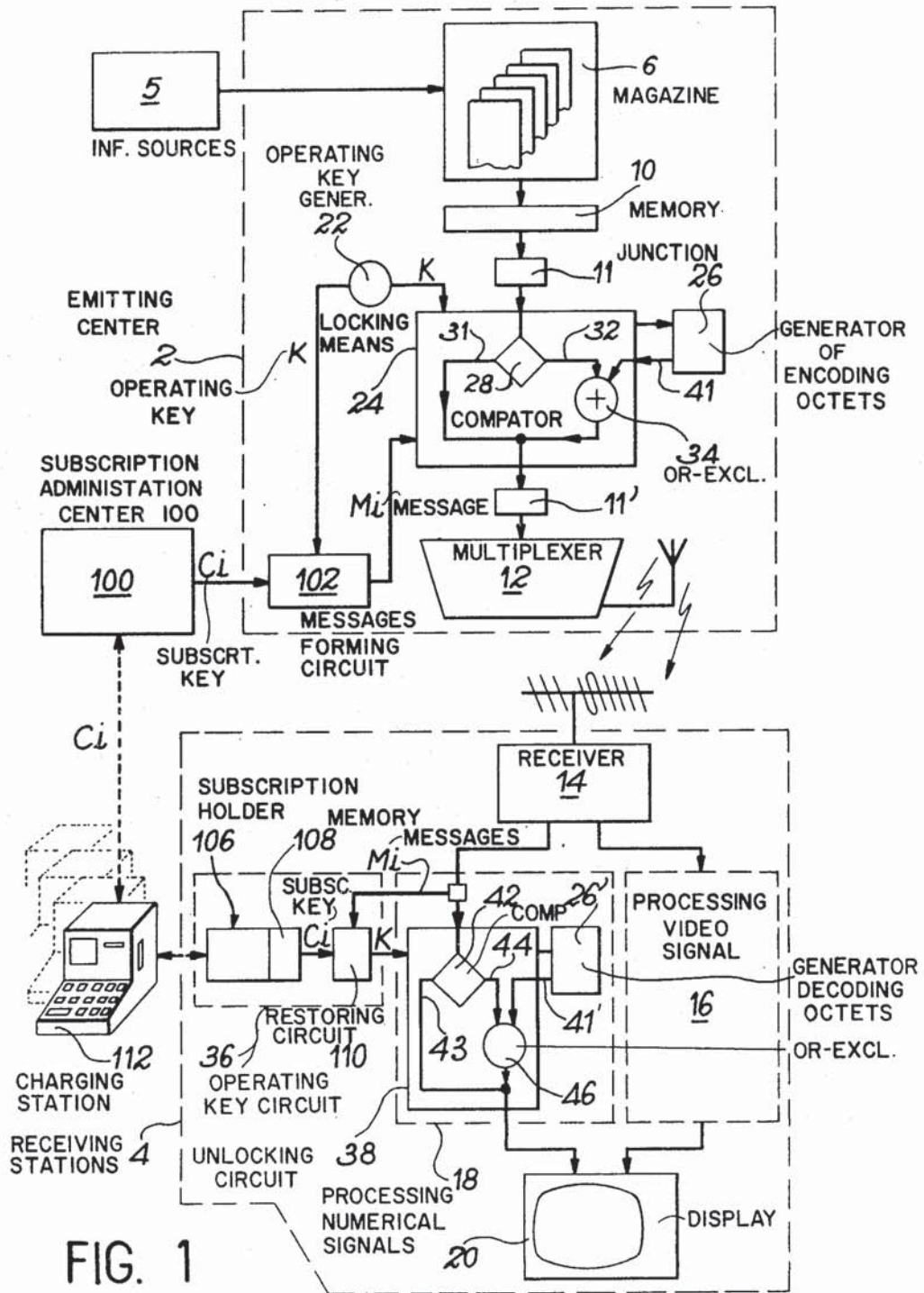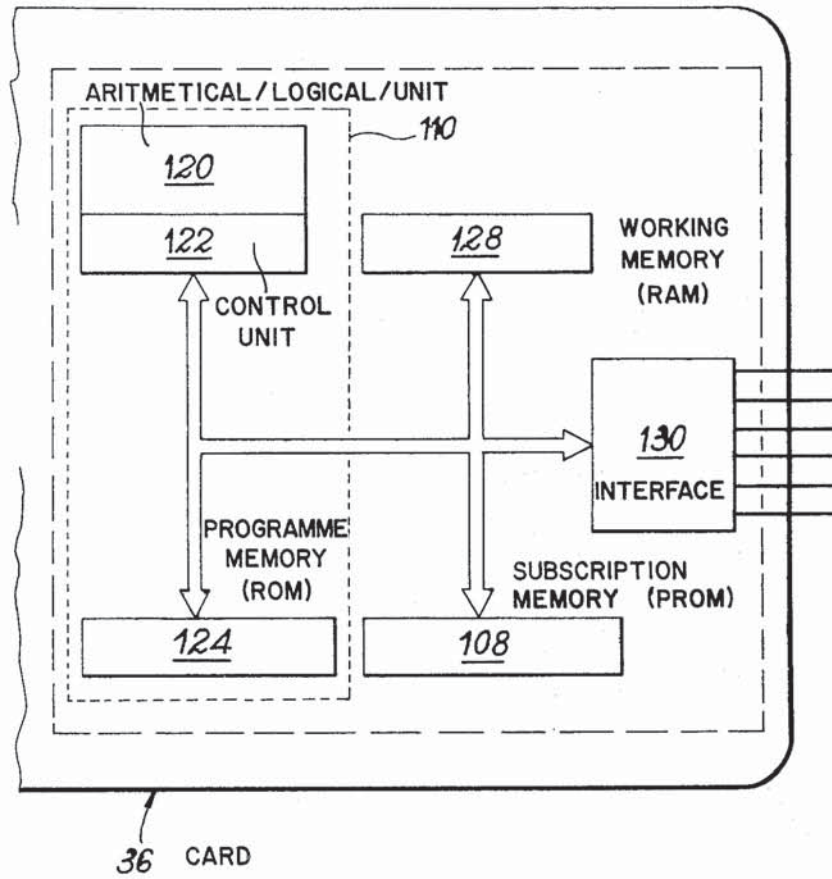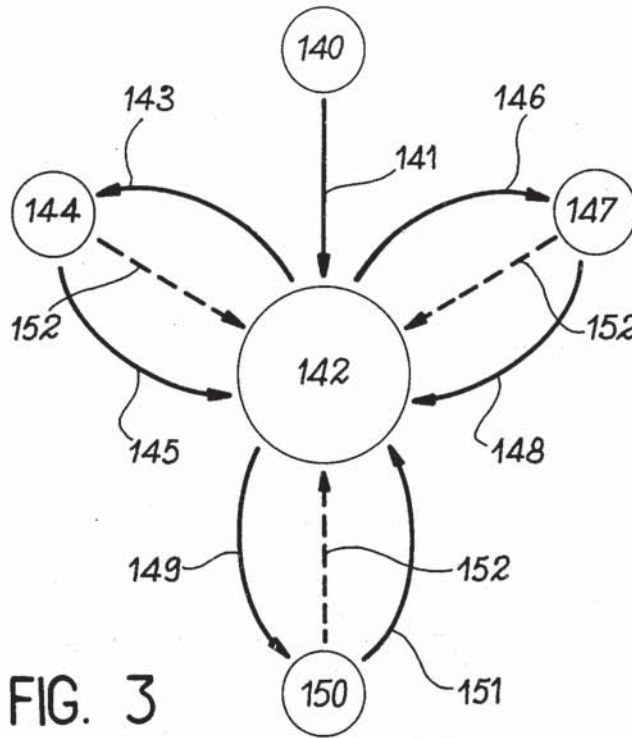
1 Claim, 4 Drawing Figures

FIG. 1

FIG. 2

FIG. 3

FIG. 4

HOUSING FOR CARDS
BOX 160   164   112
162
DISPLAY   166 SLOT
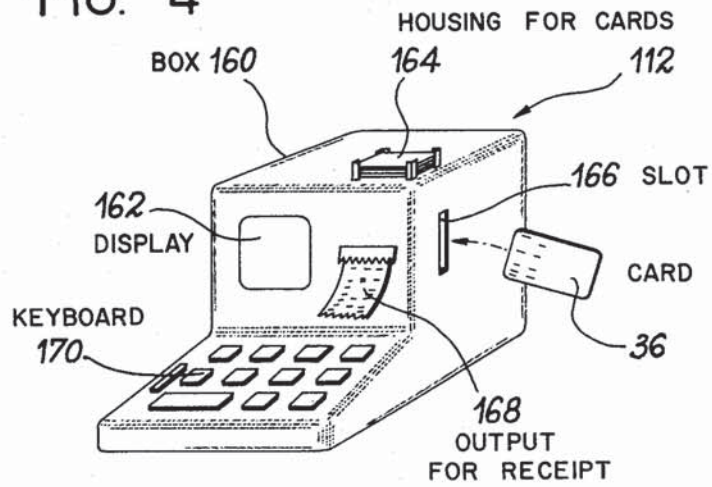KEYBOARD   CARD
170   36
168
OUTPUT
FOR RECEIPT

SUBSCRIPTION CARD FOR A VIDEOTEX RECEIVER

BACKGROUND OF THE INVENTION

This invention relates to a subscription card for a videotex receiver.

The invention can be used in the transmission and display of information on television receivers for purposes of entertainment, information or education. It can advantageously be applied to the system known as "ANTIOPE" (Numerical Acquisition and Televisualisation of Images Organised into Pages of Script) and to the so-called "TITAN" system (Interactive Teletext Terminal Called by Numbering). It is known that the former is essentially a broadcast videotex system (i.e. unidirectional) by means of which alphanumerical information organised into pages and magazines can be put into television lines and that the second is essentially an interactive videotex system (i.e. two-directional) compatible with the ANTIOPE system and affording access to data bases (general information, directories, etc.) and to interactive services (transactions, messages, education) through the telephone system.

In the ANTIOPE system, the distribution of information is effected by a method known as "DIDON" (Distribution of Numerical Data) which is a method of distribution in packets, compatible with the distribution of the television signal.

These systems have already been described in numerous articles or patent applications, notably the ANTIOPE system, a detailed description of which can be found in the following documents, which should be regarded as incorporated in this application:

the article by Y. Guinet entitled: "Etude comparative des systemes de télétexte en radiodiffusion. Quelques avantages de la diffusion des données par paquets appliquée au télétexte" which appeared in the U.E.R. Cahier Technique, no. 165, October 1977, pages 242 to 253;

the article by B. Marti and M Mauduit entitled "ANTIOPE, service de télétexte", which appeared in the journal "Radiodiffusion Télévision", 9th year, no. 40, November-December 1975, 5/5, pages 18 to 23;

the "Specification du Systeme de télétexte ANTIOPE", edited by the Centre Commun d'Etudes de Télévision et Télécommunications (CCETT);

French patent application no. 75 18319, filed on June 6, 1975 and entitled "Data distribution system";

French patent application no. 76 27212, filed on Sept. 6, 1976 and entitled "System for the numerical transmission and displaying of text on a television screen";

French patent application no. 76 29034, filed on Sept. 22, 1976 and entitled "Improvements to systems for the numerical transmission and displaying of texts on a television screen";

the French application for a certificate of addition no. 77 17625, filed on June 3, 1977 and entitled "Data distribution system".

The advent of services of the ANTIOPE and TITAN types raises the question of their taxation, i.e. the implementation of a system by means of which the audience can be identified and monitored. This question arises more generally with any broadcast service tending to make the broadcasting systems more viable by better use of the resources.

Taxation of the subscription type constitutes a both flexible and durable relationship between a service and its users. Such a method of taxation is particularly justified in broadcasting.

Taxation of the type based on consumption may also be used; this method of taxation is fundamental for "interactive" systems (where there is a dialogue between the subscriber and the information source, as in the case of the TITAN system); however, it is of secondary importance in broadcasting systems (in which information is transmitted in one direction to the subscribers, as with ANTIOPE).

There may be intermediate systems known as "quasi-interactive" systems wherein the content of the distribution source is continuously modified to meet the requirements of the users, which are transmitted via a plublic data network. The advent of new distribution means with a very large capacity, such as satellites, will develop this quasi-interactive mode considerably, thus making it necessary to implement a system for controlling access to the information provided.

The problem of access control raises above all the problems of locking up the information when it is broadcast and unlocking it when it is received. Naturally these problems must be resolved in accordance with the specificity of the teletext system to be controlled. In particular, the method of scrambling the information and restoring the intelligibility of the information should not harm the performance of the system.

The essential elements of a system provided with means for controlling access to the information can briefly be described in order to aid understanding of the present invention. This system is shown in FIG. 1.

First, this system comprises known elements characteristics of the ANTIOPE videotex system, namely an emitting centre 2 and receiving stations 4.

The emitting centre receives information from one or more sources of information 5 and comprises:

means 6 for composing a magazine consisting of pages organised into lines of characters, if such means are not already included in the source of information;

a circuit 10 for memorising the magazine in the form of numerical signals grouped into octets (8 binary elements),

a junction 11 connected to the circuit 10,

a distribution multiplexer 12 for inserting the information in the lines of a television signal, this device using the DIDON procedure referred to above.

Each receiving station comprises:

a circuit 14 for receiving and demodulating said television signal,

a line 16 for processing the video picture signals,

a line 18 for processing numerical signals, this line comprising, in particular a numerical data decoder, and finally

a display means 20.

In this type of system, the numerical signals transmitted are grouped in the form of octets which are subdivided into control octets and data octets. The control octets indicate, in particular, the tops and bottoms of pages and beginnings and ends of lines. The data octets, inserted between the control octets, correspond to characters contained in the lines. All these octets, both control octets and data octets, comprise a heavy binary element which is an odd element. The octets wherein the 6th and 7binary elements are zero are the control octets and play a special part in the system.

The system described in this application further comprises:

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