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(54) Title: A METHOD AND SYSTEM FOR DISPLAYING INTERACTIVE INFORMATION IN INTERACTIVE MULTIMEDIA CONTENT

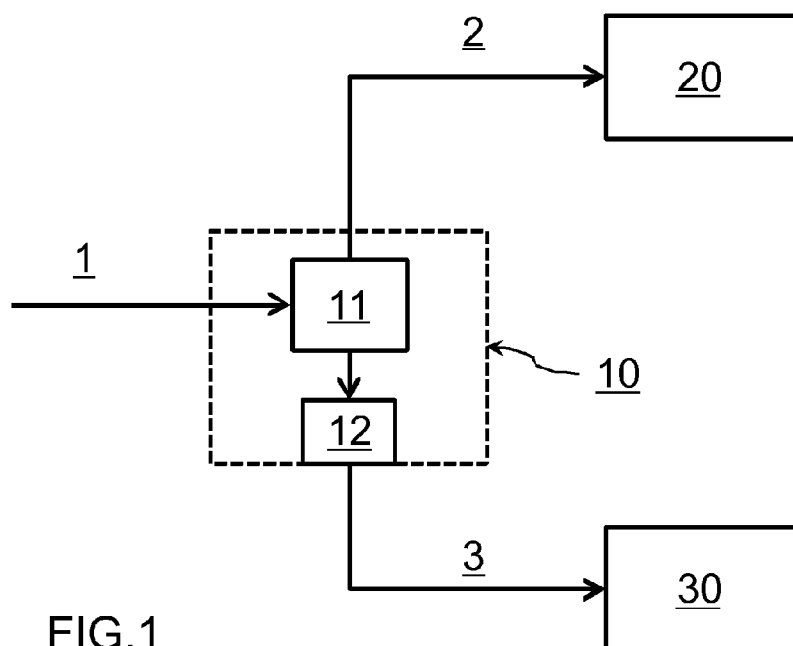


FIG.1

(57) Abstract: A method for managing interactive multimedia content (1) designed for display on the screen of a television set (20), comprising the following steps: -Separation of the interactive information comprised in the interactive multimedia content; -Communicating said interactive information (3) to a user terminal (30); -Communication, to the television set (20), of the interactive multimedia content (1), stripped of the interactive information (3).

A METHOD AND SYSTEM FOR DISPLAYING INTERACTIVE INFORMATION IN INTERACTIVE MULTIMEDIA CONTENT

This invention pertains to enhanced interactive media.

Hereinafter, "television set" means any receiver able to reproduce at
5 least the visual elements of multimedia content transmitted or broadcast by
a transmitter.

Additionally, hereinafter, "television" means any method/system
operated by a broadcast channel for multimedia content designed to be
received and displayed on a television set. In particular, interactive
10 television makes possible the broadcast of interactive multimedia content.
Interactive multimedia content comprises interactive services making it
possible for the television viewer to express a personal reaction and/or to
influence what he or she sees, hears, or receives.

In addition to audio/video content, interactive multimedia content
15 comprises interactive information. The interactive information is additional
information that enhances the audio/video content of typical television
streams for various reasons, for example economic reasons (information
about product/service offerings: Internet site or email addresses, or
telephone numbers for example), or informative reasons
20 (comments/questions/answers related to a given program being broadcast,
news, photos, results of a certain event, names of the players on a Football
team, for example).

Video content and interactive information are typically displayed
simultaneously. Images from the video content are therefore not the only
25 information on the screen of the television set.

The result is that, in some cases, part of the video content being
played is hidden by the interactive information.

However, the superimposed display of interactive information and
video images requires excessive mobilisation of the television viewer's
30 attention in order to comprehend both kinds of information (that is to say

the video images and the interactive information) while successfully and rapidly reading the screen on the television set. Tasks requiring a high cognitive load (memorising a telephone number, web address, or the terms of a commercial offer, for example) are not suitable for television usage, typically associated with relaxation.

In other cases, part of the screen of the television set may be allocated solely for displaying interactive information (that is to say, dividing the screen on the television set into two or more sections, one of which displays the interactive information related to video content playing in another part of the screen).

However, dividing the screen of the television set into more than one window leads to reducing the dimensions of these windows. The result is that the information displayed (that is to say the video images and interactive information) will be of reduced size, and therefore less visible than if they were displayed in full screen mode.

The known methods for managing interactive multimedia content broadcast on television are imperfect, especially because, being linked to the video content of a given program being broadcast, the interactive information is no longer available to the television viewer after the program has been broadcast, or after any channel change (hopping). Even if it is made available in one way or another, the television viewer is forced to remember which channel broadcast it.

One object of the present invention is to remedy the aforementioned drawbacks.

Another object of this invention is to increase the utility of interactive multimedia information for television viewers.

Another object of this invention is to facilitate the usage, and promote comfort and the ease of acquiring interactive information in enhanced media content.

Another object of this invention is to improve the return on advertising investments in television.

Another object of this invention is to make the collective consumption of the interactive information in multimedia content possible through social
5 networks.

To that end, the invention pertains, according to a first aspect, to a method for managing interactive multimedia content designed for display on the screen of a television, comprising the following steps:

- Separation of the interactive information comprised in the interactive
10 multimedia content;
- Communication of said interactive information to a user terminal comprising a software application enabling the display of interactive information and configured to use the resources proposed by the user terminal, selected from among email resources, geolocation
15 resources, Web browsing resources, and communication resources;
- Communication, to the television set, of the interactive multimedia content, stripped of the interactive information.

The invention pertains, according to a second aspect, to an adapter comprising a means of selection making it possible to identify the
20 interactive information comprised in an interactive multimedia content stream upon its input, and a communication interface making it possible to communicate said interactive information and data recovered from an electronic program guide associated with the interactive multimedia content to a user terminal.

25 According to a third aspect, the invention proposes a computer program product implemented on a memory medium, which may be implemented within an information processing unit, and comprises instructions for incrementing the method summarized above.

Other characteristics and advantages of the invention will become
30 clearer more specifically after reading the following description of preferred

embodiments, with reference to figure 1 that diagrammatically illustrates a non-limitative functional representation of one embodiment.

Figure 1 shows an adapter **10** (also called a decoder, digital receiver, or STB for Set-top Box) receiving an interactive multimedia content stream **1** designed to be displayed on the screen of a television set **20**. This stream may come in real time over an Ethernet cable (IPTV for example), a satellite or VHF/UHF antenna, a telephone line, an optical fibre, or more generally any means of local/remote transmission of digital content.

The adapter **10** is any means making it possible to transform a signal upon its input into content that can be displayed on the screen of a television set **20**.

The interactive multimedia content **1** comprises interactive information. A selection module **11** comprised in the adapter **10** makes it possible to

- Distinguish/separate the interactive information from the interactive multimedia stream **1**; in order to
- Communicate it, through a communication interface **12**, to a user terminal **30**.

A portable/desktop computer, Laptop, Smartphone, tablet PC, or personal digital assistant (or PDA) are examples of the user terminal **30**. In particular, the user terminal **30** is equipped with a screen making it possible to display the interactive information **3** transmitted from the adapter **10**.

The communication interface **12**, preferably local area (Bluetooth TM, HiperLAN, Wireless LAN, Home RF, Wi-Fi, Ethernet for example) is arranged to be detectable by the user terminal **30**, to which it can connect.

Advantageously, the communication interface **12** is configured to be able to communicate with more than one user terminal **30** (that is to say the case of the simultaneous broadcast of interactive information **3** to more than one user terminal **30**).

The result is that a dialogue is established between the adapter **10** and the user terminal **30** during which the adapter **10** transmits the interactive information - identified in the multimedia content stream **1** - to the user terminal **30**.

5 The interactive multimedia content **1**, stripped of the interactive information **3**, (that is to say the audio/video content **2** of the typical television stream) is transmitted to the television set **20**, while the interactive information is transmitted to the user terminal **30**.

10 Consequently, the interactive multimedia content **1** is divided between the television set **20** and the user terminal **30**:

- The interactive information **3** is displayed on the screen of the user terminal **30**;
 - And the rest **2** of the interactive multimedia content **1** (in particular, the video and/or audio content) is displayed on the screen of the television set **20**.
- 15

The result is that, advantageously, the television set **20** is used only to display the interactive multimedia content **1** stripped of the interactive information **3**.

20 Advantageously, the interactive information can be viewed on the user terminal **30** simultaneously with the program (that is to say, the audio/video content), without disrupting the display of the video content on the screen of the television set **20**.

25 Alternatively, the adapter **10** transmits, to the user terminal **30**, a copy of the interactive information **3** identified in the interactive multimedia content stream **1**. This interactive information **3** will be thus also displayed on the screen of the television set **20**.

30 The user terminal **30** comprises a software application making it possible to display the interactive information **3** received from the adapter **10**. This software application also makes it possible to save (on an internal/external storage device, a remote database, or a Web site for

example) the interactive information received. The user can thus view it at any later time.

Through the graphic interface in the software application, the television viewer may, for example, search, display, change, delete, or view interactive information already stored on a memory device accessible from the user terminal **30**. Advantageously, the local provision (that is to say, on a storage device on the user terminal **30**) of the interactive information makes rapid responses to user queries possible.

Alternatively or in combination, the adapter **10** transmits, in addition to the interactive information, data about the interactive multimedia content stream **1** to the user terminal **30**. These data can be retrieved from the electronic program guide (EPG) associated with the program being broadcast. In particular, these data can make it possible, to better characterise the interactive information **3**: the name of the corresponding program, category (advertisement or news for example), the time of broadcast, or key words relating to the content of the interactive information (brand, title, or duration for example).

Preferably, the software application comprised in the user terminal **30** uses/coordinates with other services/resources (electronic messaging, geolocation, Web browsing, or communication resources for example) proposed by the user terminal **30**. By way of non-limiting examples, this application makes it possible to

- Call a contact by using a telephone number comprised in the interactive information;
- Send an email using an email address comprised in the interactive information;
- Locate an address or get directions to an address comprised in the interactive information;
- Visit a Web site whose address is comprised in the interactive information.

Preferably, the software application installed on the user terminal **30** comprises an interface for communicating with social networks (Facebook,

MySpace, Twitter, and Google Buzz for example) and multimedia content sharing platforms (YouTube or DailyMotion, for example), making it possible for the television viewer to be sent interactive information that his or her friends like or to suggest such interactive information to them.

5 The method and system just described exhibit a certain number of advantages. In particular, they make it possible to:

- Review interactive information whose importance one acknowledges after the fact or for which one was busy at the time of its broadcast;
- Display interactive information on the screen of a user terminal **30**
10 that is located, generally, closer to the user than the television set **20**;
- When several users are watching the same television set, each user equipped with a user terminal may display the interactive information of his or her choice without disrupting the other television viewers;
- 15 - Improve the yield of multimedia advertising content: freedom from the program schedule (the television viewer can view the multimedia advertising content or at least its interactive information at a time convenient to him or her). The ability to make the details of a commercial offering (address of the shop, discount rate, Web site
20 address, or advantages of the offering for example) at any time promotes a better yield;
- Change (zap) from one channel to another while viewing the interactive information related to multimedia content being broadcast on another channel;
- 25 - Always guarantee the full screen display of the video content on the screen of the television set **20**.

It should be noted that the terms "module" and "interface" used here cover any means incorporating a processor programmed to provide one or more predetermined functions, or any software application (program, sub-
30 program, or plug-in) implemented on a processor, independently or in combination with other software applications.

CLAIMS

1. A method for managing interactive multimedia content (1) designed for display on the screen of a television set (20), comprising the following steps:

- 5 - Separation of the interactive information comprised in the interactive multimedia content (1);
- Communication of said interactive information (3) to a user terminal (30) comprising a software application enabling the display of interactive information (3) and configured to use the resources
10 proposed by the user terminal (30), selected from among email resources, geolocation resources, Web browsing resources, and communication resources;
- Communication, to the television set (20), of the interactive multimedia content (1), stripped of the interactive information (3).

15 2. A method according to claim 1, characterised in that it also comprises a step to communicate, to the user terminal (30), data retrieved from an electronic program guide associated with the interactive multimedia content.

20 3. A method to any of the previous claims, characterised in that it also comprises a step to save the interactive information (3) communicated to the user terminal (30).

4. An adapter (10) comprising

- 25 - A means of selection (11) making it possible to identify the interactive information (3) comprised in an interactive multimedia content stream (1) upon its input;
- A communication interface (12) making it possible to communicate said interactive information and data retrieved from an electronic program guide associated with the interactive multimedia content to a user terminal (30).

5. A computer program product implemented on a memory medium, which may be implemented within a computer processing unit, and comprises instructions to implement the method according to claims 1 to 4.

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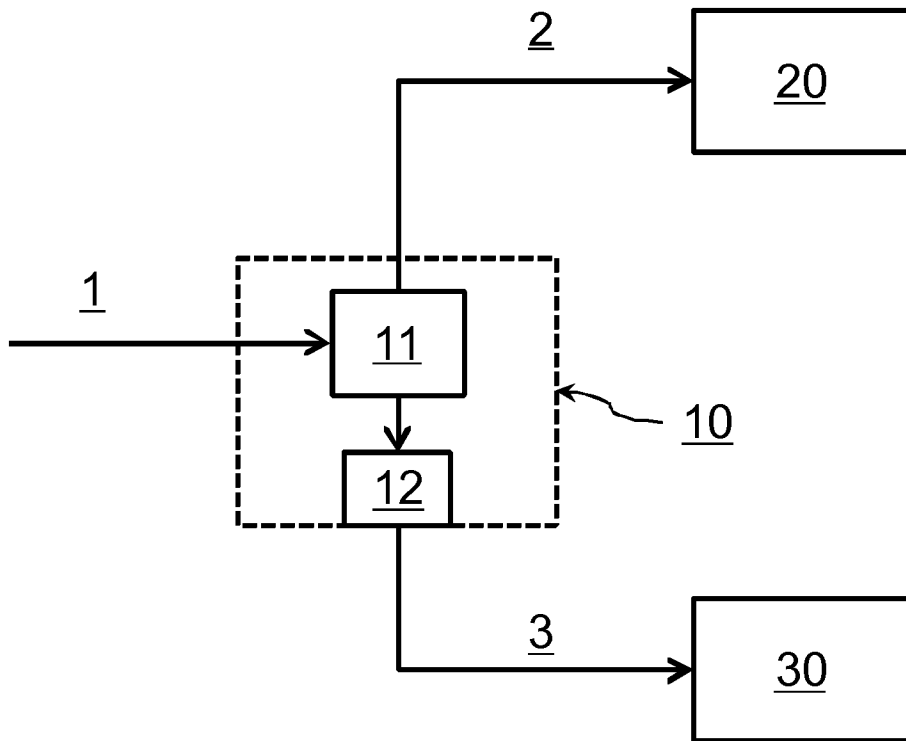


FIG.1

INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2012/057418

A. CLASSIFICATION OF SUBJECT MATTER		
INV.	H04N21/81 H04N21/422	H04N21/84 H04N21/41 H04N21/4722 H04N21/435
ADD.		
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 practicable, search terms used) EPO-Internal		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2009/216745 A1 (ALLARD JAMES F [US]) 27 August 2009 (2009-08-27) figure 1 and 2 abstract paragraph [0024] paragraph [0033] - paragraph [0035] paragraph [0047] - paragraph [0050] paragraph [0052] - paragraph [0060] paragraph [0031] -----	1-5
☐ Further documents are listed in the continuation of Box C. ☒ See patent family annex.		
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Date of the actual completion of the international search 25 May 2012		Date of mailing of the international search report 05/06/2012
Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016		Authorized officer Franchitti, Thomas

INTERNATIONAL SEARCH REPORT

Information on patent family members

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