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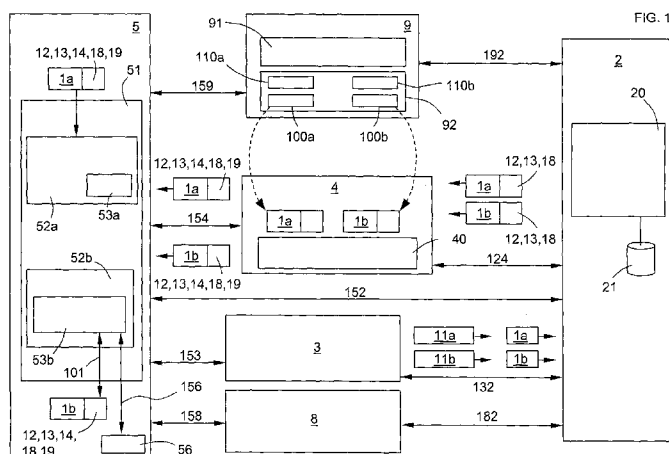
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(54) Title: PROCESS FOR THE ON-LINE DISTRIBUTION, THROUGH A DATA NETWORK, OF DIGITAL FILES PROTECTED BY INTELLECTUAL PROPERTY RIGHTS AND COMPUTER READABLE MEDIUM CONTAINING A PROGRAM FOR CARRYING OUT SAID PROCESS



(57) Abstract: The invention relates to a process for the on-line distribution, through a data network, of digital files protected by intellectual property rights and computer readable medium containing a program for carrying out said process. An intermediary site (2) receives digital files (1a, 1b) protected by intellectual property rights and delivers them to referring sites (9) offering them on-line in the form of links (100a, 100b). A user activates a link (100a, 100b) and downloads a file (1a, 1b). Identifying data (19) of the referring site (9) have been incorporated to the file (1a, 1b). When downloaded file (1a, 1b) is used in equipment (5), a user purchases a use license for the file (1a, 1b) and a control application (53a, 53b) transmits the identifying data (19) to the intermediary site (2) so that the intermediary site (2) can remunerate the referring site (9).

WO 2008/122308 A1

PROCESS FOR THE ON-LINE DISTRIBUTION, THROUGH A DATA NETWORK, OF  
DIGITAL FILES PROTECTED BY INTELLECTUAL PROPERTY RIGHTS AND  
COMPUTER READABLE MEDIUM CONTAINING A PROGRAM FOR CARRYING OUT  
SAID PROCESS

5

DESCRIPTION

Field of the Invention

10 The invention relates to a process for the on-line distribution, through a data network, of digital files protected by intellectual property rights.

The invention also relates to computer readable medium containing programs for carrying out said process .

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In the sense of the present invention, a digital file protected by intellectual property rights must be understood as any file with a digital content (such as for example a self-executable file or a file that can be executed in a computer program, a video or image file, a music file, etc.) that can be used in an application (such as a computer, an image or  
20 video player, a music player, etc.) and the use of which is protected by intellectual or industrial property rights (such as for example a copyright or an invention patent).

State of the Art

25 Vendor companies that sell products through the Internet network try to make it possible so that their webpage can be found as easily as possible by a user browsing the network who is interested in said products. A known method for reaching this objective consists of advertising the products on content webpages that attract users who are interested in a specific subject. These content webpages can be thematic pages about video games,  
30 cinema, music, computer programs, etc. The advertisements are provided in the form of a link pointing to the vendor company's webpage, such that when a user clicks on one of said links he is redirected to said vendor company's webpage and the latter pays a fee to the content webpages which is a function of the number of clicks made on the links.

For this method to be effective, it is necessary to put into contact the vendor companies with the content webpages and technically organize the manner in which the latter include the advertisement-links and the manner in which the fee per clicks is paid.

5 A known system which solves this requirement is Google's "AdSense" system described in patent applications US2004/0093327 and US2004/0059708. This system allows any webpage to include advertisers' advertisements and to receive a fee for it. Advertisers using this system can place advertisements in webpages of Google's "search network" or the "content network". The "search network" is formed by webpages that include the  
10 Google's search box, in which a search can be conducted in the same way as on Google's webpage. When a search is conducted, normal or "organic" results appear as well as advertisements in the form of "sponsored links". The "content network" is formed by webpages in which advertisements of certain advertisers whose products are content-related appear. The "AdSense" system analyzes the content of the webpages that want to  
15 host advertisements and decides which are the most appropriate for each advertisement. The advertisements contain a link to the advertiser's webpage. Each time a user clicks on one of these advertisements with a link, the owner of the webpage hosting the advertisement obtains a fee from the advertiser.

20 The described method has the huge advantage of allowing companies to advertise on webpages the content of which is related to their products and which will therefore be those pages that are visited the most by users who are potentially interested in said products. However, it has the drawback of not allowing effectively preventing fraudulent clicks that occur when the owners of the webpages hosting the advertisements click on the  
25 advertisements of its own page for the sole purpose of increasing the fee that the advertiser will pay. Another type of fraudulent clicks consist of a company dedicating itself to repeatedly clicking on another company's advertisement for the sole purpose of quickly reaching the maximum budget established for said advertisement and thus causing the automatic deactivation thereof. The problem with fraudulent clicks seriously jeopardizes  
30 both the advertisers paying for useless clicks and the owners of the webpages hosting the advertisements. In fact, many advertisers refuse to use this system or are willing to pay very little for the advertisements. To solve this problem in the "AdSense" system, it would be necessary to detect the situations in which a click is repeated several times from the

same IP address and to provide a process to decide whether or not they are fraudulent clicks. For reasons that are obvious to a person skilled in the art, such a solution complicates system operation.

5 Another drawback of the "AdSense" system is that it does not respond to the specific problems involved with the sale of digital files protected by intellectual property rights. In the case of the computer programs sold on-line through Internet, a user interested in acquiring a program will normally first download a free demo version of the program that he can use at will during a trial period and then acquires a use license if the product  
10 interests him or her. The vendor company only obtains earnings if the user acquires a license. If its webpage receives many user visits re-sent from other webpages in which the vendor company has an advertisement and the users download the digital files protected by intellectual property rights but then do not acquire a license, the company must pay the advertisers despite not having made a sale. An advertising system that is well adapted to  
15 this type of products must take this particularity into consideration.

US patent 6,363,356 describes a system applied to the sale of digital files protected by intellectual property rights distributed in the form of demo versions and offering a solution to the problem of fraudulent clicks. This system is also based on a plurality of webpages  
20 containing an advertisement link to the advertiser's webpage, but it allows the advertiser to pay only for the clicks that have effectively resulted in a sale. To that end, when a user clicks on an advertisement link and is redirected to the advertiser's webpage, the URL address of the webpage hosting the advertisement-link is included in the redirection. This information is received and stored by the advertiser's webpage server and is added to the  
25 digital file when the user downloads it. So when the user gets in contact again with the advertiser's webpage to purchase a use license for said file, it is possible to know what webpage the advertisement-link that brought about the purchase of the license was on.

This system is not widely used because it presents several drawbacks. A first drawback  
30 consists of the fact that it is not designed to be globally applied: each advertising company must implement its own method to be related with content webpages and to include advertisement-links therein. A second drawback of this system is that in order to add the URL address of the referrer webpage to the downloaded file, said file is encapsulated in a

wrapper and said information is added in the latter. The user does not directly download the digital file he had selected, but rather the wrapper containing it. This requires carrying out a recompilation process before the download and therefore a waiting time is introduced that is too long for the normal Internet download time scale. This is the main reason that  
5 this system was never carried out to practice. A third drawback of this system is that it does not provide for the case in which the download is direct, i.e. directly from a content webpage offering downloads, such as for example the webpage [www.tucows.com](http://www.tucows.com).

#### Summary of the Invention

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The main object of the invention is to provide a system of distributing files protected by intellectual property rights which has the advantages of the known systems set forth above but which prevents their drawbacks.

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An object of the invention is to provide a specific system for distributing digital files protected by intellectual property rights in which an advertiser pays only for the sales of licenses actually made and not only for the redirecting clicks.

20

Another object of the invention is to provide a system that can generally be applied to any company that wants to sell its digital files through content webpages, which can be any webpages, and without said vendor company having to worry about being related with said content webpages.

25

Another object of the invention is to provide a system which allows effectively selecting the content webpages which are most likely to facilitate downloads finally resulting in the purchase of a use license for the downloaded digital file, without said selection requiring active involvement of the vendor company.

30

Another object of the invention is to provide a system which technically allows different webpages to be involved in the process going from the first click to the final purchase of a use license for a digital file and to make it possible to suitably and individually remunerate each of the webpages that has been involved.

Another object of the invention is to provide a system that does not negatively affect the download rate for downloading the digital files and that does not complicate the use of said digital files by a user.

5 Another object of the invention is to provide a system that is compatible with different P2P (peer-to-peer) type download technologies, such as for example the BitTorrent file transfer protocol.

10 For this purpose a process for the on-line distribution, through a data network, of digital files protected by intellectual property rights has been developed, characterized in that it comprises the following steps:

- [i] an intermediary site receives digital files protected by intellectual property rights and selects referring sites suitable for offering said digital files on-line;
- 15 [ii] said referring sites selected by said intermediary site offer said digital files on-line in the form of links associated with the download of said digital files;
- [iii] a user, from equipment connected to the data network, accesses one of said referring sites on-line, activates one of said links and downloads said associated digital file on-line;
- 20 [iv] download identifying data are incorporated to said digital file which is downloaded on-line, such download identifying data including at least identifying data of said referring site;
- [v] said digital file downloaded on-line is used in an equipment and when a user carries out from said equipment an on-line purchase of a use license for said digital file, a control application which is executed in said equipment transmits at least said
- 25 identifying data of the referring site to said intermediary site;
- [vi] from said identifying data of the referring site, said intermediary site carries out an action to remunerate said referring site.

30 The main features of advantageous embodiments of the invention are set forth below and are later described in detail with the description of the drawings.

The incorporation of the download identifying data in each digital file preferably consists of

introducing said download identifying data as file properties metadata of said digital file.

The digital files protected by intellectual property rights referred to in the invention can be computer programs, as well as music, video or text files, or another type of files. When the  
5 digital file which is downloaded on-line is a computer program, the control application is preferably formed by a component which is included in said computer program. In contrast, when said digital file is a music, video or text file or another type of file, the control application is preferably an independent application which is not included in said digital file downloaded on-line.

10 The download identifying data incorporated in the digital file which is downloaded on-line also preferably comprise identifying data of a vendor site. The control application which is executed in the user's equipment manages, from said identifying data of a vendor site, an on-line purchase in said vendor site of a use license for the digital file.

15 Furthermore, said download identifying data also preferably comprise identifying data of a licensing site. The control application which is executed in the user's equipment manages, from said identifying data of a licensing site, the on-line activation, in said licensing site, of the use license purchased on the vendor site.

20 The intermediary site preferably selects download sites, provides said download sites with access to said digital files and provides the referring sites with links which are installed in said referring sites, such that when a user activates one of said links in one of said referring sites the user is redirected to one of said download sites to download, from said  
25 download site, the digital file associated to said link.

In a preferred embodiment, a download management application is executed in the download site and receives the identifying data of the referring site and, when the user is redirected to said download site to download the digital file, said download management  
30 application incorporates the identifying data of the referring site to the digital file downloaded by said user. Furthermore, the download management application also preferably incorporates identifying data of the download site to said digital file. The identifying data of the referring site and the identifying data of the download site are

preferably incorporated by the download management application to the digital file which is downloaded on-line as file properties metadata of said digital file

5 In another embodiment, it is the intermediary site which incorporates to each digital file the identifying data of one of the download sites from which the download of said digital file will be carried out. The intermediary site preferably incorporates the identifying data of the download site to the digital file as file properties metadata of said digital file.

10 An embodiment is also provided in which the download site is the intermediary site: when a user activates one of the links in one of the referring sites and downloads the digital file associated to said link on-line, the download is carried out from the intermediary site and the incorporation of the download identifying data to said digital file is carried out in said intermediary site. Said intermediary site preferably incorporates said download identifying data to said digital file as file properties metadata of said digital file.

15 In one embodiment, in order to select the referring sites the intermediary site carries out the following actions: it receives together with the digital files key words referring to the characteristics of each of said digital files; it analyzes the content of a candidate site on-line; it determines the degree of coincidence of said content with said key words of each digital file; and, on the basis of said degree of coincidence, it decides if said candidate site is suitable for being one of the referring sites for said digital file.

20 In another embodiment, in order to select the referring sites the intermediary site carries out the following actions: it carries out a statistical control of the number of sales of use licenses for digital files the download of which has been brought about by a link in each existing referring site; it analyzes the content of a candidate site on-line; it determines the degree of coincidence of said content with the content of one of said existing referring sites; and, on the basis of said degree of coincidence and said number of sales of use licenses, it decides if said candidate site is suitable for being one of said referring sites for said digital file.

30

The intermediary site preferably updates the selection of each existing referring site according to the percentage of downloads brought about from said referring site which



have led to a purchase of a use license for a digital file.

5 In a preferred embodiment, a process according to the invention is used to add metadata to a digital file which is going to be downloaded on-line by a user from a download site, characterized in that said metadata include information of the origin of said download, and in that said download site has one or several copies of said digital file prepared so that said metadata are added to them and, after a user has requested the download of said digital file and just before said download starts, said download site adds said metadata to said copy of the digital file, after which time the download of said copy of the digital file starts.

10 In an embodiment in which P2P ("peer-to-peer") type download technology is applied, a process according to the invention is used to identify the download origin of a digital file protected by intellectual property rights, when a user downloads a locator file containing information which allows locating download nodes of said digital file and, from said locator file, said user downloads said digital file from said nodes, characterized in that prior to downloading said locator file, download origin information of said locator file is incorporated to the metadata of said locator file. In a particularly advantageous solution, a download application, which is executed in the equipment in which said locator file and said digital file are downloaded, reads said download origin information in the metadata of said locator file and incorporates said download origin information in the metadata of said digital file.

20 The invention also relates to a program forming the control application which is executed in the equipment of a user and transmits to the intermediary site at least the identifying data of the referring site.

25 The invention also relates to a program forming the download management application which is executed in the download site and receives the identifying data of the referring site and incorporates them to the digital file downloaded by the user.

30 Brief Description of the Drawings

Other features and advantages of the invention will be observed from the following description in which, without any limiting character, preferred embodiments of the invention

are described mentioning the attached drawings.

Figure 1 shows a block diagram illustrating the process according to the invention.

5 Figure 2 shows a block diagram illustrating, at a high level, the algorithm executed by a download application in a download site from which a file is downloaded, after a link to said file in a referring site has been activated.

#### Detailed Description of Embodiments of the Invention

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The block diagram of Figure 1 schematically illustrates a system for applying the process according to the invention. In this example, the data network is the Internet network. The system is formed by an equipment 5 of a user, an intermediary site 2, a plurality of referring sites 9 associated to the intermediary site 2, a plurality of vendor sites 3 and, optionally, licensing sites 8 and one or several download sites 4, all of these sites 2, 3, 4, 8 and 9 being Internet network websites. For the sake of greater clarity in the explanation, a single referring site 9, a single vendor site 3, a single licensing site 8 and a single download site 4 have been shown. However, the system and the process according to the invention are especially advantageous when a large number of referring sites 9 are involved, because the greater the number of said referring sites 9, the greater the number of Internet users attracted by them and therefore the greater the number of downloads of files and the number of sales carried out.

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The different processes involved in the process according to the invention, the different sites 2, 3, 4, 8, 9 and the equipment 5 of the user can set up on-line communications between one another, which are shown in Figure 1: 152, 153, 154, 158, 159, 192, 132, 182, 124.

30

In the example shown in Figure 1, two type of digital files protected by intellectual property rights, which can be distributed on-line by means of the process of the invention, have been considered: an audiovisual content file 1a and a file 1b containing a software product.

The audiovisual content file 1a is a file with a music, video, image or text content in digital

format, which is protected by copyright and can be played in equipment 5 of a user. In the example, the equipment 5 is a computer with Internet connection. However, the invention can also be applied to other equipment which can be connected to a data network, such as for example mobile telephones or digital players with the capability of connecting to a data network. Returning to the example, the computer 5 has an operative system 51 in which a digital player 52a provided with a DRM (Digital Rights Management) system is installed. The DRM system forms a control application 53a which is capable of detecting that the content of the file 1a is protected by intellectual property rights, checking that the user has the suitable license for accessing said content and using said license to allow playing said content. In known DRM systems, the content of the file is normally encrypted and the player decrypts it at the time it is played. Specific functionalities of said control application 53a according to the invention will be explained below.

File 1b is a file containing a software product. A software product must be understood as a set of instructions which can be loaded into the memory of a computer and can be executed individually or in combination with another software product. For example, a computer program, an installation program installing a program in a computer, a computer program update package, an installing file downloading a computer program on-line or an update thereof, a computer program library, etc., are software products according to this definition. In the example, file 1b is an executable file for installing a computer program 52b. The file 1b is executed in the operative system 51 of the computer 5 of a user and installs said program 52b. According to the invention, file 1b includes a component, i.e. a component of the program 52b, forming a control application 53b which is capable of detecting that the use of the program 52b is protected by intellectual property rights, checking that the user has the suitable license for using said program 52b and using said license to allow the use of said program. Specific functionalities of said control application 53a according to the invention will be explained below.

A component must be understood as an encapsulated set of classes and processes, with their corresponding properties, allowing, by means of its integration in the application of a third party and within the execution environment of said application, the execution of certain functionalities that are pre-defined in the component. It is presented in the form of an executable file or a dynamic library which is included or called from the application of

third party, in the design time of said application. The ways of including a component within an application can vary according to the programmer or environment within which the application is programmed. A usual way of including the component consists of doing so from a graphical menu. The programmer drags the component (or its graphical representation) from the toolbox of the programming environment and inserts it in the form of the application. From this time onwards, the programmer can access its properties and modify them and/or call the methods which have been described in the component. Another usual way of including the component consists of inserting a source code. The programmer includes the necessary code lines for calling the component (either in the form of a library or executable) within the source code block belonging to a form of the application. From this time onwards, the programmer can access its properties and modify them and/or call the methods which have been described in the component. The process for both including and using a component described herein are easily recognizable and are generally known by any programmer, therefore it is not considered necessary to describe them in further detail.

Having described the types of digital files which can be distributed on-line by means of the process according to the invention exemplified in Figure 1, the different steps of said process as well as the different logical elements and materials which allow applying said process are described below.

A vendor site 3 which is interested in marketing digital files 1a, 1b registers on-line 132 in the intermediary site 2. During this registration process 132, the vendor site 3 introduces its identifying data such as for example name, address, e-mail, etc and sends the files 1a, 1b to be marketed to the intermediary site 2 so that the latter can distribute them. The intermediary site 2 has an intermediation application 20, for example a web interface, which allows carrying out the registration process and storing the registration information of the vendor site 3 in a database 21. During the registration process, the vendor site 3 also provides the intermediary site 2 with commercial information 11a, 11b related to the files 1a and 1b respectively. Said commercial information includes the sale price of each file 1a, 1b and the percentages or commissions that the vendor site 3 will pay for each sale. It also introduces the category that each file 1a, 1b belongs to (software, music, movies, etc) and a series of keywords associated to each file 1a, 1b indicating the content of said file and

which will be useful to the intermediary site 2 for selecting suitable referring sites 9 for each file 1a, 1b, as will be seen below. The intermediary site 2 also stores this information 11a, 11b in the database 21.

5 The intermediary site 2 has reached agreements with a series of referring sites 9 and download sites 4 which are interested in participating in the on-line distribution of files protected by intellectual property rights in return for receiving a commission or percentage of the sale price of each file. As previously mentioned, Figure 1 shows a single referring site 9 and a single download site 4 to facilitate the description. The function of the referring site 9 is to attract a certain group of users browsing through the Internet and who are interested in the content 91 offered by said referring site 9. The users visiting a webpage of the referring site 9 can see advertisements 110a, 110b and download the trial versions of files 1a and 1b by clicking on the respective links 100a and 100b.

15 The intermediary site 2 carries out a selection of the referring sites 9 which can advertise the different files 1a, 1b to be marketed. To that end, candidate sites that can be referring sites 9 communicate on-line 192 with the intermediary site 2 and carry out an on-line registration process consisting of identifying itself (name, address, telephone, e-mail,...) and of identifying the URL (Uniform Resource Location) address of the referring site which allows locating it in the Internet network. During the registration process of the referring site 9, the intermediary site 2 can optionally request the introduction of a series of words or descriptions that are useful for describing the content 91 of said referring site 9.

25 When the referring site 9 ends the registration process in the intermediary site 2, said intermediary site 2 supplies it with the code of an advertisement and link management application 92 that the referring site 9 adds to its own webpage, for example by copying (Control+C in the Microsoft® Windows environment) the code text from the webpage of the intermediary site 2 and pasting it (Control+V in the Microsoft® Windows environment) in the HTML content of a webpage of the referring site 9. Said advertisement and link management application 92 can be, for example, a code in Javascript, PHP or ASP.NET language communicating with the intermediary site 2 by means of web services (collection of protocols and standards that are useful for exchanging data between websites through Internet). Said advertisement and link management application 92 also allows the

intermediary site 2 to modify advertisements 110a, 110b and links 100a, 100b for the purpose of updating them. As will be seen later, this allows optimizing the efficiency of the referring sites 9 in terms of the number of downloads of files and of the number of sales.

5 The programming of said advertisement and link management application 92 is within the reach of a person skilled in the art, since it is a part of the basic knowledge of any programmer who knows the operation of said languages and of web services. It is therefore not considered necessary to describe it in further detail.

10 When said advertisement and link management application 92 is executed in a webpage of the referring site 9, it displays said advertisements 110a, 110b together with said links 100a, 100b. When a visitor of the webpage of the referring site 9 activates one of said links 100a, 100b, a download of files 1a, 1b, respectively, to the computer 5 of said visitor connected to Internet occurs.

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Once the referring site 9 is registered, the intermediary site 2 analyzes said referring site 9 to check that the advertisement and link management application 92 operates correctly and also to analyze the content 91 of said referring site 9. The intermediary site 2 counts the number of times that each word appears in the content 91 of the referring site 9, it  
20 selects those words representing in the referring site 9 a number exceeding a certain percentage and stores this content information of the referring site 9 in its database 21. The intermediary site 2 then chooses the most suitable files 1a, 1b according to the content 91 of the referring site 9. For example, a referring site related to videogames will be especially suitable for providing downloads of files containing videogames, whereas  
25 another referring site the content of which is related to accounting can be suitable for providing downloads of accounting programs and a referring site related to music will be suitable for providing music downloads. To chose which are the most suitable files 1a, 1b for each referring site 9, the intermediary site 2 compares the content information of the referring site 9 which it has stored in its database 21 with the commercial information 11a,  
30 11b of the files 1a, 1b provided by the vendor site 3, and chooses, for each referring site 9, the files having a greater degree of coincidence with said content information of the referring site 9.

To optimize the number of downloads of files 1a, 1b and their possible sales, the intermediary site 2 can vary the links 100a, 100b of each referring site 9 and carry out a statistical tracking of which are those which generate more downloads and more sales. The intermediary site 2 carries out a control of the downloads of files 1a, 1b in each referring site 9 and of the purchases of use licenses for each file. This statistical information is stored in the database 21 of the intermediary site 2. The intermediary site 2 can thus establish for which files 1a, 1b a use license thereof is more likely to be purchased by relating the historic sales with the selected key words of each referring site 9. For example, by multiplying the sale price of the use licenses for file 1a, 1b by the percentage of commission that the referring site 9 will charge and taking into account the percentage of users who download a file and subsequently decide to purchase a use license for said file, the intermediary site 2 obtains a statistical estimation of the profit involved for the referring site 9 with each click on a link or each viewing of an advertisement of a file. The intermediary site 2 can thus update the links of a referring site 9 so that they advertise and point to the files which will generate the highest earnings. Another method that the intermediary site 2 can use to select the suitable files for each referring site 9 consists of choosing files similar to those which are the most successful in another referring site 9 having a similar content 91. Evidently, manual selection of the most suitable files, understanding as manual selection a selection made by a person, is always possible but at a high cost. This cost is preferably eliminated by using a computer program which automatically executes the described selection algorithms.

When a user accesses a webpage of the referring site 9 containing the advertisement and link management program 92 and activates one of said links 100a, 100b, the download of the associated file 1a, 1b, respectively, starts from a download site 4, respectively. To that end, each of said links 100a, 100b contains a URL address pointing to the corresponding file 1a, 1b in said download site 4.

The files 1a, 1b have previously been delivered to said download sites 4 by the intermediary site 2. In order to receive said files 1a, 1b provided by the intermediary site 2 on-line 124, the download sites 4 can use, for example, the FTP protocol. To that end, each download site 4 receives from the intermediary site 2 a user name and a password or access key authorizing it to receive files from said intermediary site 2.

The download sites 4 are preferably different from the referring sites 9. This allows a user to download the files 1a, 1b from a download site 4 without the bandwidth or communication transmission rate of the referring sites 9 with Internet being affected by the downloads of the files and without the access speed of the users who want to see the content 91 of the referring sites 9 decreasing. However, other configurations of download sites 4 are possible without departing from the scope of the present invention. Therefore, for example, the download site 4 can be the referring site 9 if the latter has sufficient bandwidth for allowing Internet users to consult its content 91 and at the same time download the files 1a, 1b.

An important feature of the process according to the invention consists of incorporating download identifying data to the files 1a, 1b before they are downloaded by a user from a computer 5 or at the time in which said download starts. The incorporation of these download identifying data to the files 1a, 1b can be carried out in different ways. An especially advantageous way of adding said data to the files 1a and 1b consists of including them as metadata of the files 1a, 1b. This operation is carried out prior to the download or at the time of the download, and can be carried out in the intermediary site 2 or partially in said intermediary site 2 and in each download site 4, as will be seen below.

The metadata of a file are data containing formal file information, such as for example the name, the size, the type of file, modification date, proprietor, etc. In the Microsoft® Windows environment, these metadata can be viewed from the File > Document Properties menu in the Windows application graphical interface. The location containing these metadata in the file has several fields which are currently free. The process according to the invention advantageously uses these metadata-free fields to house therein the download identifying data. Another solution according to the invention consists of defining new metadata fields or properties for a file, for example using the Microsoft DSOFfile.dll library and housing therein said download identifying data.

The download identifying data incorporated to the files 1a, 1b which are downloaded comprise at least identifying data 19 of the referring site 9 in which the user has activated the link 100a, 100b which led to the download. These identifying data 19, which include the



URL address of said referring site 9, will allow locating said referring site 9 in order to remunerate it for its participation in the case that a sale of a use license for the downloaded file 1a, 1b is made.

5 Furthermore, said download identifying data also preferably comprise:

- identifying data 12 of the intermediary site 2;
- identifying data 13 of the vendor site 3 in which the user can purchase on-line use licenses for the content of said files 1a, 1b;
- identifying data 14 of the download site 4 from which the file 1a, 1b has been  
10 downloaded;
- identifying data 18 of a licensing site 8 in which the user can activate the use licenses he has purchased on-line.

Said identifying data 12, 13, 14 and 18 include URL addresses of the intermediary site 2,  
15 of the vendor site 3, of the download site 4 and of the licensing site 8, respectively.

In a basic embodiment, before providing the files 1a, 1b to the download site 4, the intermediary site 2 incorporates to said files 1a, 1b all the download identifying data in the form of metadata of said files 1a, 1b. The intermediary site 2 then delivers these files 1a,  
20 1b to the download site 4 and also sends to the referring site 9 advertisements 110a, 110b in the form of text or images relating to the files 1a, 1b which have been sent to the download site 4, as well as the links 100a, 100b that the referring site 9 must publish in its webpage. When the advertisement and link management program 92 of the referring site 9 receives said advertisements and links, it displays them on the webpage in which it is  
25 installed. Any user accessing the referring site 9 through Internet will see the advertisements 110a, 110b of files 1a and 1b. When the user activates one of these links 100a, 100b in the referring site 9, the download of the corresponding file 1a, 1b from the download site 4 starts, which file 1a, 1b will incorporate said download identifying data in the form of metadata. This embodiment requires the intermediary site 2 to deliver each of  
30 the files 1a, 1b with all the incorporated download identifying data, i.e. with all the identifying data 12, 13, 14, 18 and 19 to the download site 4. If, for example there are 10,000 referring sites advertising a file 1a having a size of 50 megabytes, the intermediary site must incorporate said download identifying data to 10,000 files and send each of these

files to the download site 4, which must store all of them occupying a space of 500 gigabytes.

5 In a preferred embodiment, the identifying data 19 of the referring site are not incorporated to the files 1a, 1b by the intermediary site 2 but by the download site 4. To that end, when a user activates one of the links 100a, 100b in the referring site 9, said link includes a URL address redirecting to the download site 4 and also includes the URL address itself of the referring site 9 so that it can be transmitted to said download site 4. This can be done for example by passing the information of the URL address of the referring site 9 as a  
10 parameter in the URL address which carries from the webpage of the referring site 9 to the webpage of the download site 4. In the download site 4 a download management application 40 receiving said identifying data 19 of the referring site 9 and incorporating them as metadata to the file 1a, 1b to be downloaded by the user is executed. An embodiment of this process is shown below.

15 A user accesses referring site 9 number 5,000 and activates the link 100a to download file 1a. The link 100a, which has been prepared by intermediary site 2 and installed in the referring site 9 by the advertisement and link management program 92, contains the following URL address:

20 <http://www.download-site.com/referring-site-5000/f1a.mp4>

The first part "www.download-site.com" identifies the URL address of the download site 4, the second part "referring-site-5000" is a parameter identifying the URL address of the  
25 referring site number 5,000, and the last part "f1a.mp4" identifies the file 1a to be downloaded.

30 When the download site 4 receives the download request for downloading the file 1a, the download management program 40 executed in the download site 4 examines this URL address, detects that it comes from referring site 9 number 5,000 and adds the following information to the metadata of the file 1a as identifying data 19 of said referring site 9:

URL9 = <http://www.referring-site-5000.com>

where URL9 is a label included in the metadata of the file 1a so that other applications can obtain the URL address of the referring site 9 by reading it in the metadata of said file 1a. The URL9 label has been created in the metadata of file 1a by the intermediary site 2 and  
5 the download management application 40 copies the URL address of the referring site 9 "http://www.referring-site-5000.com" in said URL9 label.

Thanks to this preferred embodiment, the intermediary site 2 must only deliver a single copy of each file 1a, 1b to the download site 4, without needing to send a plurality of files  
10 1a, 1b or include the identifying data 19 of the referring site 9 in the download identifying data. Returning to the numerical example set forth above, it will be observed that by applying this preferred embodiment, the intermediary site 2 sends a single file with a size of 50 megabytes (instead of 10,000 files with total size of 500 gigabytes) to the download site 4.

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When the download site 4 receives a redirection from a link 100a, 100b of a referring site 9, the download management application 40 of said referring site 9 has prepared different copies of the corresponding file 1a, 1b which was delivered by the intermediary site 2, and copies the identifying data 19 of said referring site 9 in the URL9 label of the metadata of  
20 one of said copies of the file 1a, 1b. Once said data 19 have been introduced in the metadata of said copy of file 1a, 1b, the latter is downloaded to the computer 5 of the user.

The reason that the download management application 40 has several copies of the downloaded files 1a, 1b prepared is that while one of the files is being downloaded, a  
25 process which may last a few seconds or a few minutes, the properties of said file cannot be modified to deal with a second download request arriving before the sending of the file to the first user who is downloading it has ended. If the download management application 40 modifies the metadata of a file which is being downloaded to include the referring site for a second download before the first download has ended, it is very likely that the first  
30 download fails and a file with erroneous data is downloaded.

If the size of the file is small, the download management application 40 can make a copy at the same time as the download request, modify the metadata of the copy and send the file

with the updated metadata. If the size of the file is large, the download management application 40 would take several seconds or minutes to make a copy of the file to modify the metadata. This could involve a drawback similar to that described at the beginning for the system of US patent 6,363,356 consisting of recompiling the program to generate a wrapper (although in this case the drawback would be smaller, since making a copy of a file is a much faster process than recompiling a program in a new file).

In any modern operative system, for example Microsoft® Windows Server 2003, moving a file from one directory to another within the same disc is an almost instantaneous process which simply requires slightly modifying the directory structure. This process of moving a file is even much faster than creating a copy of the file at the time of the download.

It is therefore convenient for the download management application 40 to have several copies of the files 1a, 1b prepared beforehand and to be able to adapt the number of copies of each particular file 1a, 1b according to the download statistics of said file. Making copies can optionally be optimized using RAM memory-based discs, in addition to having the mentioned already prepared copies ready to be sent.

The process executed by the download management application 40 is shown in greater detail in Figure 2. Following the example set forth above, a user has accessed referring site 9 number 5,000 and has activated the link 100a to download file 1a. As a result, the download management application 40 in the download sites 4 receives 401 a download request for downloading file 1a, as explained previously, and checks 402 if there is a directory attributed to referring site 9 number 5,000 in a hard disk of the download site 4. If not, it creates 403 said directory which is called "RS-5000" for example and is associated to the URL address "http://www.download-site.com/referring-site-5000". If so, it checks 404 if said directory contains the file 1a, which in this example is called "f1a.mp4". If the directory does not contain said file, or if said directory has just been created 403, it moves 405 one of the copies of the original file 1a, which are stored in a directory of original files containing the files delivered by intermediary site 2, to the directory "RS-5000". Said copy of the original file 1a is called "cp-f1a.mp4" for example. Then 406, it renames the file "cp-f1a.mp4", attributing to it the same name as the original "f1a.mp4" file and copies the URL address of the referring site 9 in the URL9 label of the metadata of said "f1a.mp4" file. As

explained previously, the URL address of the referring site 9 was previously received by the download management application 40 as a parameter of the URL address contained in the link which was activated in the referring site 9. Once this information has been copied in the URL9 label of the metadata of the "f1a.mp4" file, the download of said file to the computer of the user starts 407. The download management application 40 then checks 408 if there are copies of the original file 1a on reserve, i.e. it checks if there is any file called "cp-f1a.mp4" in the directory of original files. If not, it creates 409 one or several "cp-f1a.mp4" copies of the original "f1a.mp4" file in said directory of original files. If said copy of the file already existed, or after having created it, the algorithm ends 410.

Once the user has downloaded the files 1a or 1b, said files are used in the computer 5 of a user, specifically in an application which, as has been seen at the beginning, can be a digital player 52a or a computer program 52b and comprises a control application 53b.

The files 1a, 1b that the user has downloaded have use limitations allowing the user to use said files in a limited manner until he purchases a use license therefor. If the downloaded file is a computer program (file 1b), the limited use may consist of a time limitation of 30 days, for example, for the user to try the program. After the 30 trial days, the user must purchase a use license for the program. If the downloaded file is an audiovisual content file (file 1a), such as music for example, the limited use can consist of the fact that the user can only listen to the music for a reduced number of times or that the user can only listen to part of the music. If it is a movie, the restriction can be, for example, that the user can only see the first few minutes. Restrictions for other files 1a containing any other digital content, for example digitalized books, can be established in the same manner.

A number of DRM systems which allow limiting the use of a file until the user acquires the rights to use said file are known. These known systems are described in the following patent documents for example: US 7,120,250, US 7,110,982, US 7,103,574, US 7,103,351, US 7,065,507, US 7,054,443, US 7,051,005, US 7,036,011, US 7,024,393, US 7,007,042, US 6,981,217, US 6,947,981, US 6,775,655, US 6,772,340, US 6,766,064, US 6,704,733, US 6,697,944, US 6,654,754, US 6,640,093, US 6,535,871, US 6,522,866, US 6,452,903, US 6,436,230, US 6,324,658, US 5,297,071, US 4,916,747.

Since the DRM systems are within the reach of a person skilled in the art, the following brief explanation about the DRM system used in the embodiment of the invention according to Figure 1 is considered to be sufficient.

5       When the user decides to purchase the rights to use a file 1a, 1b, the control application 53a, 53b is in charge of requesting the billing data and a credit card number from the user and sends on-line 153 said data by means of web services to the vendor site 3 to receive in turn a use license for said file. The control application 53b, 53b knows the URL address of the vendor site 3, since said information is contained in the identification data 13 of the  
10       vendor site 3 incorporated as metadata of the file 1a, 1b, which said control application 53b, 53b can access locally. At the time of carrying out the purchase, the control application 53a, 53b also sends on-line 152 the identifying data 19 of the referring site 9, the identifying data 13 of the vendor site 3 and the identifying data 14 of the download site 4 to the intermediary site 2, which data are also incorporated as metadata in the file 1a, 1b  
15       and include the URL addresses of said sites 9, 3 and 4. The intermediary site 2 can thus remunerate the sites 9 and 4 for having participated in the process which has led to the purchase of a use license and can charge the vendor site 3 an amount corresponding to the remuneration of the sites 9 and 4, as well as a commission for its own involvement as an intermediary site 2. Optionally, once the purchase has been carried out, the control  
20       application 53a, 53b also sends these identifying data 19, 13 and 14 to the other participating sites, which in this case are the referring site 9 and the download site 4. To that end, it uses, for example, web services of said sites 9 and 4.

25       The processes of purchasing and activating a use license for a digital file are essentially carried out in the same manner for both an audiovisual content file 1a and in the case of a file 1b containing a computer program. The difference basically consists of the fact that in the first case, the control application 53a supervising the process is a DRM system which is comprised in the digital player playing the content of the file 1a, whereas in the second case, it is a component 53b of the computer program installed by the file 1b. An  
30       embodiment of these processes when the downloaded files is a file 1b containing a computer program is described below by way of example. The case of an indirect sale process, i.e. in which the purchase of the use license is carried out in the vendor site 3 and the activation of said license is carried out in a licensing site 8 different from said vendor

site 3, is particularly described. However, a person skilled in the art will understand without any effort at all that the process according to the invention can also be applied to the more classic case of a direct sale, i.e. in which the purchase of a use license and the activation of said license are carried out in the same site, which is normally the vendor site 3.

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The file 1b which has been downloaded by a user according to the described process is a program for installing a computer program 52b. When the file 1b is executed in the operative system 51 of a computer 5, the program 52b is installed in said computer 5 and can be used but in a limited manner as long as a use license has not been purchased and activated. The program 52b incorporates a component 53b forming a control application capable of detecting that the use of the program 52b is protected by intellectual property rights, checking that the user has the suitable license for using said program 52b and using said license for allowing the use of said program. Furthermore, when the user decides to acquire a use license for the program 52b the component 53b manages the purchase and activation of said use license on-line, as set forth below.

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To carry out the on-line purchase of the use license, the component 53b locally accesses 101 the download identifying data incorporated as metadata of the file 1b and comprising the identifying data 12, 13, 14, 18 and 19. Another option consists of the fact that when the file 1b is executed to install the program 52b, the installation program reads said download identifying data in the file 1b and stores them locally in a location of the computer 5; in this case, the component 53b locally reads the identifying data 13 in said location instead of reading them in the file 1b. Once the component 53b has locally accessed said download identifying data, either reading them in the file 1b or in another location of the computer 5, it sets up communication 158 with the licensing site 8 and transmits the identifying data 13 of the vendor site 3 to it. The licensing site 8 then checks if the vendor site 3 is authorized to sell a use license and if so, it returns a purchase authorization to the component 53b. The component 53b then sets up communication 153 with the vendor site 3 and warns it that it wishes to start a license purchasing process. During this communication 153, the user can become involved through the graphical interface of the component 53b and choose the type of license that is most suitable for him or her. He then chooses the type of license he wants to purchase and carries out a purchase by means of an on-line payment, receiving in turn a purchase receipt. In this example the component 53b itself sets up

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communication 153 with the vendor site 3. As an alternative, it can be provided that the component 53b displays in the graphical interface with the user a link to the URL address of the vendor site 3 and allows the user to set up communication 153 through the browser of his or her computer 5. Instead of setting up direct communication 158 with the licensing site 8, the component 53b can do so optionally by means of indirect communication 152 and 182 with the intermediary site 2.

To activate the license which has been purchased, the component 53b locally accesses 156 hardware identifying data 56 of hardware in the computer 5. These data 56 are, for example, the serial number of the hard disk in which the program 52b is installed. It then sets up communication 158 with the licensing site 8 and warns it that it wishes to commence a license activation session. In communication 158, it sends said hardware identifying data 56 and said purchase receipt and in turn receives a license file including said hardware identifying data 56, such that the license file will only be valid for using the program 52b in said computer 5, and an electronic signature carried out with the private key which the licensing site 8 has. The component 53b has the public key of the electronic signature and checks it. If the electronic signature is correct, the component 53b authorizes the use of program 53b. If the electronic signature is not correct, the license file is rejected.

Once a use license for a file 1a or 1b is purchased, the vendor site 3 must pay commissions to the referring site 9, to the download site 4 and to the intermediary site 2. The payment can be carried out directly by the vendor site 3 or through the intermediary site 2. In the latter case, the intermediary site 2 charges the vendor site 3 for the commissions, including a commission for the intermediary site 2 itself, and carries out the payment to the referring site 9 and to the download site 4.

The intermediary site 2 optionally allows a certain time period to elapse to prevent a chargeback or a return of payment by credit card, and subsequently pays the commissions corresponding to the referring site 9 and to the download site 4. This waiting period is useful for preventing possible fraud with fraudulent credit card payments, which could occur if a referring site 9 downloaded the files it advertises itself and purchased use licenses for said files with counterfeit cards from any computer. If the payment of



commissions to the referring site 9 were immediate, it would not be possible to recover the money. In this way, the risk of fraud decreases upon waiting out a prudent time period. As mentioned at the beginning, fraud is a serious problem in the promotion through Internet, especially in systems allowing website proprietors to receive a return on the visits, as  
5 occurs with fraudulent clicks in on-line advertising through websites.

The process according to the invention is compatible with different download technologies, such as the BitTorrent file transfer protocol. In one embodiment of the invention, instead of  
10 directly downloading a complete file 1a, 1b from the download site 4, the user can download a Torrent type locator file from said download site 4, i.e. a file with a ".torrent" extension containing information which allows locating nodes in Internet which have already downloaded file 1a, 1b or parts thereof and which may be useful as a source for  
15 downloading said file 1a, 1b in parallel from a plurality of said nodes. In this case, the download identifying data, which in this example are formed by the data 12, 13, 14, 18 and 19, are incorporated as metadata of the Torrent file. The control application 53a, 53b can read the download identifying data in the Torrent file. An advantageous alternative solution consists of a Torrent file download application being executed in the computer 5 of the user, reading said download identifying data in the Torrent file and including them as  
20 metadata in the file 1a, 1b which has been downloaded. The advantage of this solution is that it allows discarding the Torrent file once the download of file 1a, 1b is complete, therefore it is possible to use standard processes, such as those described above, to purchase and activate a use license, independently of whether the 1a, 1b has been downloaded directly or by means of a locator file.

**CLAIMS**

1.- A process for the on-line distribution, through a data network, of digital files protected  
5 by intellectual property rights, characterized in that it comprises the following steps:

[i] an intermediary site (2) receives digital files (1a, 1b) protected by intellectual property  
rights and selects referring sites (9) suitable for offering said digital files (1a, 1b) on-  
line;

[ii] said referring sites (9) selected by said intermediary site (2) offer said digital files (1a,  
10 1b) on-line in the form of links (100a, 100b) associated with the download of said  
digital files (1a, 1b);

[iii] a user, from equipment (5) connected to the data network, accesses one of said  
referring sites (9) on-line, activates one of said links (100a, 100b) and downloads said  
associated digital file (1a, 1b) on-line;

[iv] download identifying data are incorporated to said digital file (1a, 1b) which is  
15 downloaded on-line, such download identifying data including at least identifying data  
(19) of said referring site (9);

[v] said digital file (1a, 1b) downloaded on-line is used in an equipment (5) and when a  
user carries out from said equipment (5) an on-line purchase of a use license for said  
20 digital file (1a, 1b), a control application (53a, 53b) which is executed in said  
equipment (5), transmits at least said identifying data (19) of the referring site (9) to  
said intermediary site (2);

[vi] from said identifying data (19) of the referring site (9), said intermediary site (2) carries  
out an action to remunerate said referring site (9).

2.- A process according to claim 1, characterized in that said incorporation of said  
download identifying data in each digital file (1a, 1b) consists of introducing said download  
identifying data as file properties metadata of said digital file (1a, 1b).

3.- A process according to claim 1, characterized in that said digital file which is  
30 downloaded on-line is a computer program (1b) and said control application (53b) is  
formed by a component which is included in said computer program (1b).

4.- A process according to claim 1, characterized in that said control application (53a) is an independent application which is not included in said digital file (1a) downloaded on-line.

5 5.- A process according to claim 1, characterized in that said download identifying data incorporated in said digital file (1a, 1b) comprise identifying data (13) of a vendor site (3), and said control application (53a, 53b) which is executed in said equipment (5) manages, from said identifying data (13) of a vendor site (3), an on-line purchase in said vendor site (3) of a use license for said digital file (1a, 1b).

10 6.- A process according to claim 5, characterized in that said download identifying data incorporated in said digital file (1a, 1b) comprise identifying data (18) of a licensing site (8) and said control application (53a, 53b) which is executed in said equipment (5) manages, from said identifying data (18) of a licensing site (8), the on-line activation, in said licensing site (18), of said use license purchased in said vendor site (3).

15 7.- A process according to claim 1, characterized in that said intermediary site (2) provides said referring sites (9) with links (100a, 100b) to be installed in said referring sites (9), such that when a user activates one of said links (100a, 100b) in one of said referring sites (9), said user is redirected to a download site (4) to download from said download site (4) the  
20 digital file (1a, 1b) associated to said link (100a, 100b).

8.- A process according to claim 7, characterized in that a download management application (40) is executed in said download site (4) and receives said identifying data (19) of said referring site (9) and when said user is redirected to said download site (4) to  
25 download said digital file (1a, 1b), said download management application (40) incorporates said identifying data (19) of the referring site (9) to said digital file (1a, 1b) downloaded by said user.

9.- A process according to claim 8, characterized in that said download management  
30 application (40) incorporates said identifying data (19) of the referring site (9) to said digital file (1a, 1b) as file properties metadata of said digital file (1a, 1b).

10.- A process according to claim 9, characterized in that said download management

application (40) which is executed in said download site (4) incorporates to said digital file (1a, 1b), apart from said identifying data (19) of the referring site (9), identifying data (14) of said download site (4).

5 11.- A process according to claim 10, characterized in that said download management application (40) incorporates said identifying data (14) of the download site (14) to said digital file (1a, 1b) as file properties metadata of said digital file (1a, 1b).

10 12.- A process according to claim 7, characterized in that said intermediary site (2) incorporates identifying data (14) of one of said download sites (4) from which said digital file (1a, 1b) will be downloaded to each digital file (1a, 1b).

15 13.- A process according to claim 12, characterized in that said intermediary site (2) incorporates said identifying data (14) of said download site (4) to said digital file (1a, 1b) as file properties metadata of said digital file (1a, 1b).

20 14.- A process according to claim 1, characterized in that when a user activates one of said links (100a, 100b) in one of said referring sites (9) and downloads said digital file (1a, 1b) associated to said link (100a, 100b) on-line, said download is carried out from said intermediary site (2), and the incorporation of said download identifying data to said digital file (1a, 1b) is carried out in said intermediary site (2).

25 15.- A process according to claim 14, characterized in that said intermediary site (2) incorporates said download identifying data to said digital file (1a, 1b) as file properties metadata of said digital file (1a, 1b).

30 16.- A process according to claim 1, characterized in that to carry out said selection of referring sites (9), said intermediary site (2) carries out the following actions: it receives, together with said digital files (1a, 1b), key words referring to the characteristics of each of said digital files (1a, 1b); it analyzes the content of a candidate site on-line; it determines the degree of coincidence of said content with said key words of each digital file (1a, 1b); and, on the basis of said degree of coincidence, it decides if said candidate site is suitable for being one of said referring sites (9) for said digital file (1a, 1b).

17.- A process according to claim 1, characterized in that to carry out said selection of referring sites (9), said intermediary site (2) carries out the following actions: it carries out a statistical control of the number of sales of use licenses for digital files (1a, 1b) the download of which has been brought about by a link (100a, 100b) in each existing referring site (9); it analyzes the content of a candidate site on-line, it determines the degree of coincidence of said content with the content of one of said existing referring sites (9); and, on the basis of said degree of coincidence, it decides if said candidate site is suitable for being one of said referring sites (9) for said digital file (1a, 1b).

18.- A process according to claim 1, characterized in that said intermediary site (2) updates the selection of each existing referring site (9) according to the percentage of downloads brought about from said referring site (9) which have led to a purchase of a use license for a digital file (1a, 1b).

19.- A computer readable medium storing a program suitable for being executed in equipment (5) to carry out at least the following actions:

- accessing download identifying data incorporated in a digital file (1a, 1b) used in said equipment (5), said download identifying data comprising at least identifying data (19) of an referring site (9) in which a user has activated a link which has led to the download of said digital file (1a, 1b) on-line; and
- when a use license for said digital file (1a, 1b) is purchased, transmitting at least said identifying data (19) of the referring site (9) to an intermediary site (2).

20.- A computer readable medium according to claim 19, characterized in that said program accesses said download identifying data incorporated in said digital file (1a, 1b) reading them as file properties metadata of said digital file (1a, 1b).

21.- A computer readable medium according to claim 20, characterized in that said program further carries out the following actions:

- checking if a use of said digital file (1a, 1b) in said equipment (5) requires obtaining a use license;
- accessing identifying data (13) of a vendor site (3) comprised in said download

identifying data incorporated in said digital file (1a, 1b); and

- from said identifying data (13) of a vendor site (3), managing an on-line purchase of a use license for said digital file (1a, 1b) in said vendor site (3).

5 22.- A computer readable medium according to claim 21, characterized in that said program further carries out the following actions:

- accessing identifying data (18) of a licensing site (8) comprised in said download identifying data incorporated in said digital file (1a, 1b); and
  - from said identifying data (18) of a licensing site (8), managing in said licensing site
- 10 (18) an on-line activation of said use license purchased in said vendor site (3).

23.- A computer readable medium according to any one of claims 19 to 22, characterized in that said program is a software component.

15 24.- A computer readable medium storing a program suitable for being executed in a download site (4) to carry out the at least the following actions:

- receiving identifying data (19) of a referring site (9) which has redirected a user to said download site (4) to download a digital file (1a, 1b);
  - when said user requests a download of said digital file (1a, 1b) from said download site
- 20 (4), incorporating said identifying data (19) of said referring site (9) to said digital file (1a, 1b).

25 25.- A computer readable medium according to claim 24, characterized in that said program incorporates said identifying data (19) of the referring site (9) to said digital file (1a, 1b) as file properties metadata of said digital file (1a, 1b).

26.- A computer readable medium according to claim 24, characterized in that said program incorporates to said digital file (1a, 1b), apart from said identifying data (19) of the referring site (9), identifying data (14) of said download site (4).

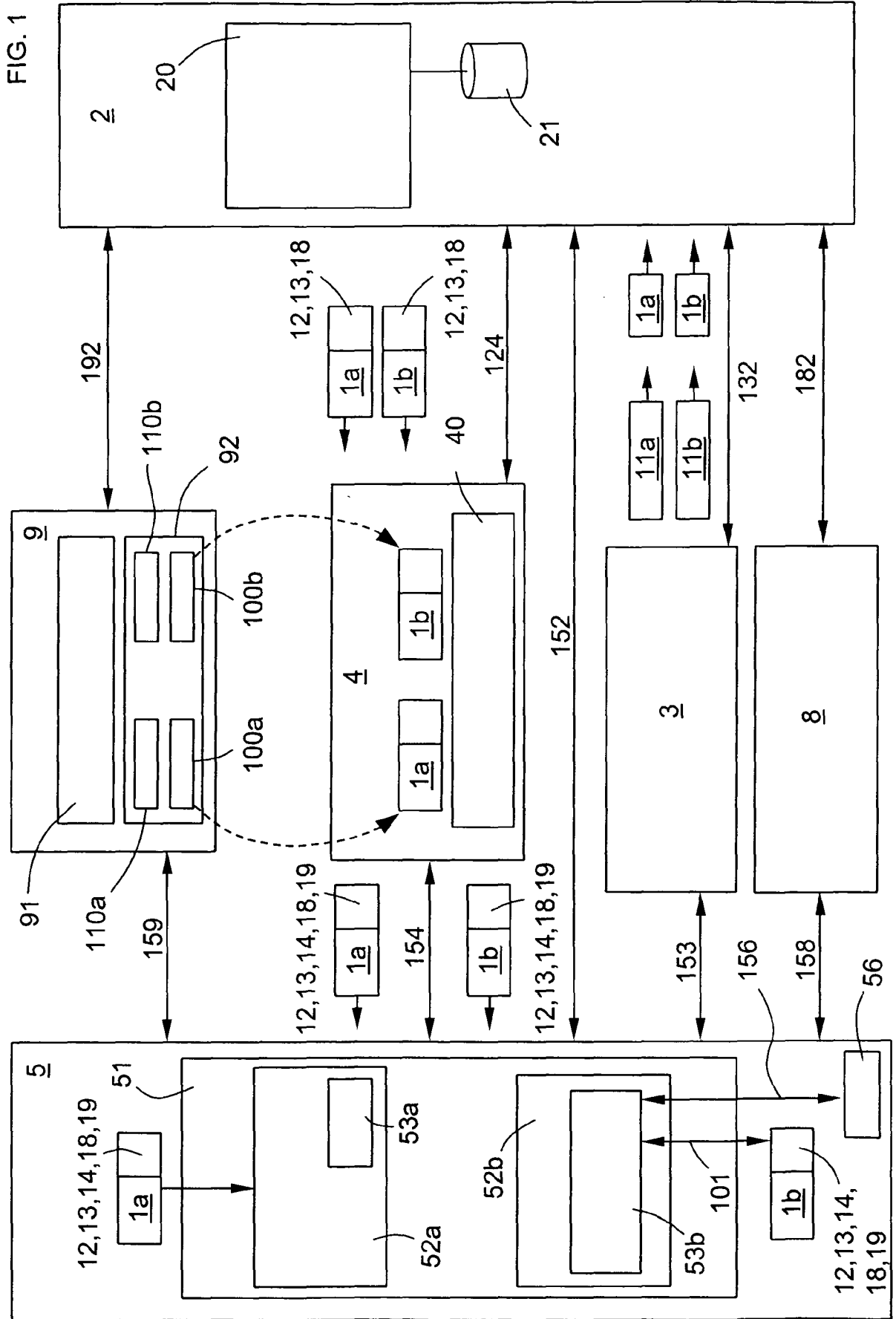
30

27.- A computer readable medium according to claim 26, characterized in that said program incorporates identifying data (14) of the download site (4) to said digital file (1a, 1b) as file properties metadata of said digital file (1a, 1b).

28.- A process for adding metadata to a digital file (1a, 1b) which is to be downloaded on-line by a user from a download site (4), characterized in that said metadata includes information of the origin of said download, and in that said download site (4) has one or several copies of said digital file (1a, 1b) prepared so that metadata can be added to them, and after a user has requested the download of said digital file (1a, 1b) and just before said download starts, said download site (4) adds said metadata to said copy of the digital file (1a, 1b), after which the download of said copy of the digital file (1a, 1b) starts.

29.- A process for identifying the download origin of a digital file (1a, 1b) protected by intellectual property rights, when a user downloads a locator file containing information which allows locating download nodes of said digital file (1a, 1b) and, from said locator file, said user downloads said digital file (1a, 1b) from said nodes, characterized in that, prior to the download of said locator file, download origin information of said locator file is incorporated to the metadata of said locator file.

30.- A process according to claim 29, characterized in that a download application which is executed in the equipment (5) in which said locator file and said digital file (1a, 1b) are downloaded reads said download origin information in the metadata of said locator file and incorporates said download origin information in the metadata of said digital file (1a, 1b).





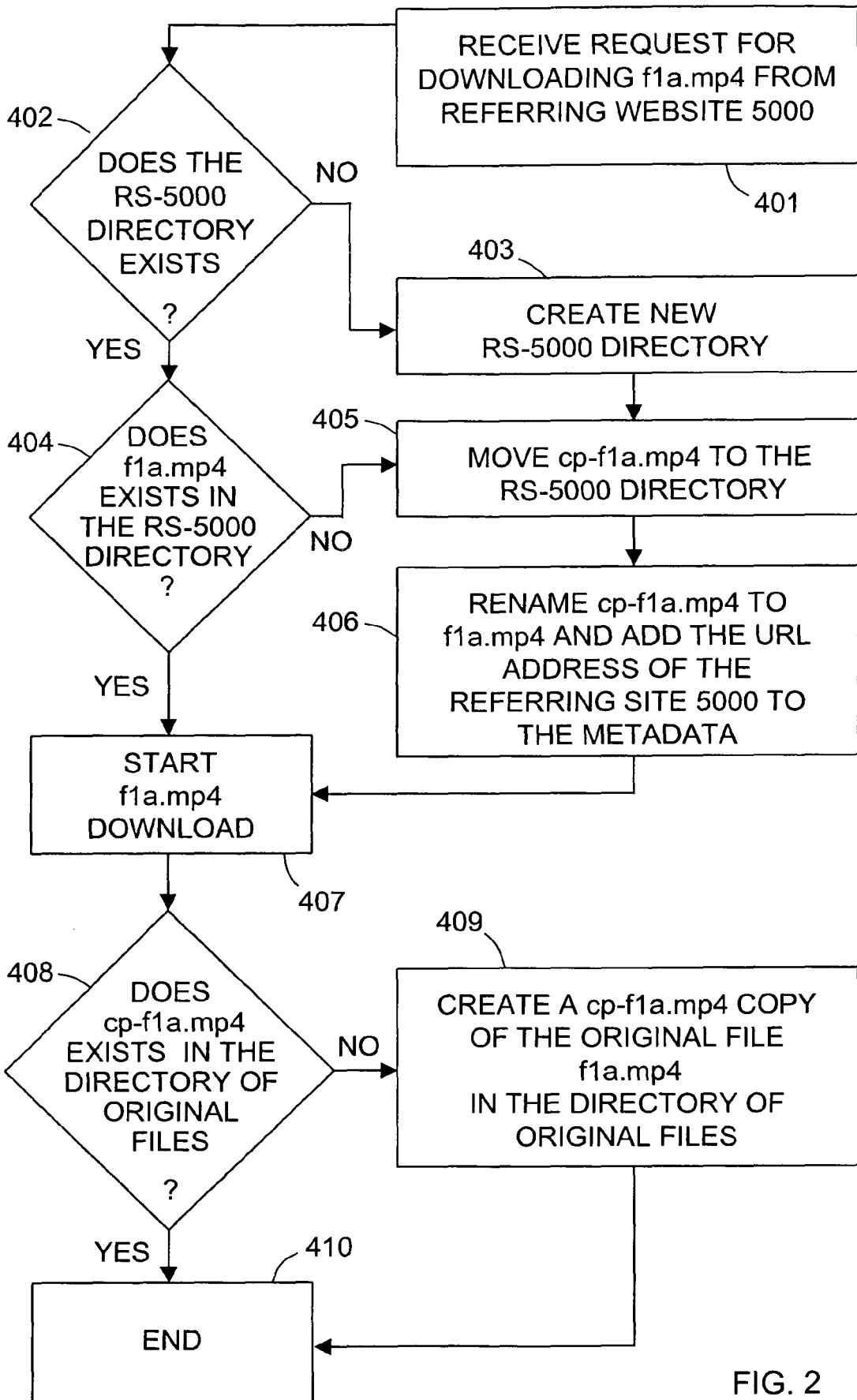


FIG. 2

**INTERNATIONAL SEARCH REPORT**

International application No  
PCT/EP2007/005049

**A. CLASSIFICATION OF SUBJECT MATTER**  
INV. G06Q30/00

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)  
G06Q

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)

EPO-Internal, WPI Data, IBM-TDB, INSPEC, COMPENDEX

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>HWANG S O ET AL: "Modeling and implementation of digital rights" JOURNAL OF SYSTEMS &amp; SOFTWARE, ELSEVIER NORTH HOLLAND, NEW YORK, NY, US, vol. 73, no. 3, November 2004 (2004-11), pages 533-549, XP004560797 ISSN: 0164-1212 abstract section "3. Modeling the rights protection system" section "4. Implementation of the rights protection system" figures 1-7</p> <p align="center">----- -/--</p>	1-30

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
- \*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 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.
- \*Z\* document member of the same patent family

Date of the actual completion of the international search

7 December 2007

Date of mailing of the international search report

17/12/2007

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## INTERNATIONAL SEARCH REPORT

International application No

PCT/EP2007/005049

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 073 124 A (KRISHNAN GANAPATHY [US] ET AL) 6 June 2000 (2000-06-06): abstract column 9, line 24 - column 10, line 55 column 12, line 60 - column 14, line 40; figure 3  -----	1-30
X	EP 1 243 998 A (FULLY LICENSED GMBH [DE]) 25 September 2002 (2002-09-25) paragraph [0027] - paragraph [0029] paragraph [0041] - paragraph [0053] paragraph [0072] - paragraph [0082] paragraph [0110] - paragraph [0111] paragraph [0139] - paragraph [0142] figures 1-11  -----	1-30

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/EP2007/005049

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 6073124	A	NONE	
EP 1243998	A	US 2002138441 A1	26-09-2002