METHOD OF DISTRIBUTING INFORMATION DATA

The invention relates to a method of distributing information data (ID) from at least one central server system (S) to at least one decentralized client computer (DCC), said method comprising the steps of: -installing at least one viewer program (VIP) on said at least one decentralized client computer (DCC), said viewer program (VIP) being adapted to displaying information data (ID) on said at least one decentralized client computer (DCC), -storing request criteria (RC) on said at least one decentralized client computer (DCC), -said at least one decentralized computer comprising at least one computer input device (CID) -transferring updated information data (ID) to said at least one decentralized client computer (DCC) from said at least one central server system (S) via communication lines (DL) upon request (IDR) by said client computer when said at least one request criterion (RC) is met, -said viewer program (VIP) being adapted to displaying said information data (ID) on said at least one decentralized client computer (DCC) when the computer input devices (CID) of said decentralized computer (DCC) have been inactive for a predetermined period of time (IAP). According to the invention, an update schedule, i.e. the request criteria, may be stored by the decentralized computers, thereby facilitating an update of information data under the control of the decentralized computer. The decentralized control of the update makes it possible to optimize the data transfer from the central server to the decentralized client computers in the sense that the conditions of the decentralized computers may be taken into consideration individually when a data transfer is intended.
METHOD OF DISTRIBUTING INFORMATION DATA

Field of the invention
The present invention relates to a method of distributing information data according to claim 1.

Background of the invention
Several advertising techniques are well-known within the art of web-based marketing.

Web-based marketing may typically involve advertisers paying revenues to web-portals in order to obtain access to many web-sites on which they may advertise. Moreover, another variation over the same theme may be for advertisers to pay additional fees to the portals if users click on an advertisement and thereby link up to the advertiser's site.

Other variants of advertising techniques may be for the user to be offered free values if he accepts exposure to advertising. Such advertising may e.g. be overlay advertising always appearing at the top of the screen when the user is accessing the Internet.

Generally, the exposure of different target groups to promotion or advertising is significantly limited due to different technical barriers.

A problem with e.g. known web-based lotteries and advertising facilities based on the above-mentioned techniques is that the user must be connected to the world wide web in order to earn the offered values. Consequently, an online connection is required between the client (the user) and the value server. An online connection invokes further problems in at least two areas when handling data transferred from the remote provider. Firstly, problems occurring during the transfer of data must be handled extremely carefully if the user is not to disconnect the data source. Secondly,
the performance of the user computer is reduced due to the increased load on the computer caused by the data transfer.

It is the object of the invention to provide a system adapted for distribution of advertisements or information from a central server to decentral computers.

Summary of the invention

The invention relates to a method of distributing information data ID from at least one central server system S to at least one decentral client computer DCC, said method comprising the steps of

- installing at least one viewer program VIP on said at least one decentral client computer DCC, said viewer program VIP being adapted to displaying information data ID on said at least one decentral client computer DCC,

- storing at least one request criterion RC on said at least one decentral client computer DCC,

- said at least one decentral computer comprising at least one computer input device CID

- transferring updated information data ID to said at least one decentral client computer DCC from said at least one central server system S via communication lines DL upon request IDR by said client computer if said at least one request criterion RC is met.

- said viewer program VIP being adapted to displaying said information data ID on said at least one decentral client computer DCC when the computer input devices CID of said decentral computer DCC have been inactive for a predetermined period of time IAP.
According to the invention, an update schedule, i.e. the request criterion, may be stored by the decentral computers, thereby facilitating an update of information data under the control of the decentral computer. The decentral control of the update makes it possible to optimize the data transfer from the central server to the decentral client computers in the sense that the conditions of the decentral computers may be taken into consideration individually when a data transfer is intended. Such conditions of interest may e.g. be determination of whether the computer is online or not prior to any attempt of data transferring. Other conditions of interest may e.g. be whether the viewer program is active or not, thereby facilitating initiation of a data transmission when the decentral computer is online and not used by the user at that particular time.

Hence, flexible user settings may be applied according to the invention dependent on the hardware.

According to the invention, the central server system may service different decentral computers having various hardware setups since the requesting part is the decentral computers. The decentral computers may specify the available hardware and software, thereby facilitating transmission to the server of information data fitting the decentral computer making the request.

According to the invention, the display may also comprise the establishment of audio signals on said decentral computer, although visual indications are typically preferred. Moreover, scent may be applicable within the scope of the invention.

The predetermined period may be a very short period of time, but typically involves several minutes.

Computer input devices may be known computer input devices such as computer mouse, computer keyboard, computer pen, trackball, etc.
When, as stated in claim 2, said communication lines DL are established by means of Internet-based I data traffic, a further advantageous embodiment of the invention has been obtained.

According to the invention, an Internet-based transfer of information data is the far most advantageous network in the sense that global or regional distribution may be established.

When, as stated in claim 3, said request criterion RC is established as a time-based schedule stored on said at least one decentral computer DCC and refers to the internal timer of said at least one computer DCC, a further advantageous embodiment of the invention has been obtained.

According to the invention, the time-based schedule may e.g. be supported by a timer or a counter of the decentral computer, and this schedule may determine when a request for updated information data to the remote server should be established e.g. when the current information data stored in the decentral computer are older than e.g. 24 hours.

The invention features advantageous local control of the request to the server in the sense that the request criteria may determine when and where new information data are to be requested, or when dealing with systems only online from time to time, a schedule indicating that a new download should be requested when the decentral computer is online.

Moreover, the invention provides the possibility to modify this schedule when the decentral computer communicates with the remote server, thereby offering changes in the schedule from time to time. In other words, the request criteria may be downloaded from the server dynamically.

An advantage according to the invention is that the update frequency may be adapted to any kind of information data which itself can change over time.
When, as stated in claim 4, said request criterion RC is met if

- the period from the latest updated information data ID exceeds a certain
5 predetermined time limit, a further advantageous embodiment of the invention has
been obtained.

An applicable time limit according to the invention may be e.g. equal to or older than
10 24 hours.

Evidently, the predetermined time limit may be anything from seconds to years.

When, as stated in claim 5, a table of contents COL listing the information data
stored on the at least one decentral computer DCC is transferred from said decentral
15 computer DCC to said at least one server system S if the request criteria RC are met
prior to said transfer of updated information data ID, a further advantageous
embodiment of the invention has been obtained.

According to an alternative embodiment of the invention, the computer may initially
20 request a table of contents from the central server describing the new information
data available on the server. When the table of contents is received from the central
server, the decentral computer may determine the missing parts of the information
data and submit a request to the central server describing the requested data
information. Subsequently, the requested data may be transmitted from the server to
25 the computer.

When, as stated in claim 6, parts of said information data ID are stored for reuse on
said decentral computer DCC, a further advantageous embodiment of the invention
has been obtained.

According to the invention, data transfer over time may be minimized which reduces
30 the bandwidth and results in huge advantages for the user and the network load.
When, as stated in claim 7, measuring means MM associated with said decentral
computer DCC measures local activity data LAD when said viewer program VIP
displays said information data ID, a further advantageous embodiment of the
invention has been obtained.

Typically, the measuring means may be adapted to measuring the accumulated
period of time during which the viewer program displays the information data ID.

It should be noted that the measuring means are located decentrally, i.e. on the
individual client computers.

According to the current embodiment of the invention, data does not have to be sent
to the server all the time, but can be sent in chunks when needed or when a
connection has already been established. Such local measuring allows the user to
benefit from rewards offered when the viewer application is used even if the
computer is offline.

When, as stated in claim 8, said local activity data LAD are transferred to said at
least one central server S via said Internet-based communication lines DL and
registered in at least one central storage means CSM associated with said at least one
central server S, said central server S thereby registering the local activity data LAD
of at least one and preferably of all said decentral client computers DCC, a further
advantageous embodiment of the invention has been obtained.

According to the invention, information data may be tailored to groups or to users
according to their data/details.

When, as stated in claim 9, said central server S converts said local activity data
LAD into values, such as lottery numbers, money, gifts, etc., a further advantageous
embodiment of the invention has been obtained.
According to the invention, the users of the decentral computers may "earn" gifts, lottery numbers, etc. when a certain activity level of a local viewer on e.g. a screensaver has been registered locally and the relevant measures have been transferred to the central server.

According to a preferred embodiment of the invention, a lottery number may be transmitted to the user of the decentral computer in a de-activated state. When the screensaver has been active for a certain period of time, e.g. an hour during a week, the lottery number may be activated.

When, as stated in claim 10, updated information data ID are stored in temporary storage means TSM, a further advantageous embodiment of the invention has been obtained.

According to the invention, the transferred information data may be validated before being activated, i.e. before submitting the data to the viewer program.

When, as stated in claim 11, updated information data ID stored in said temporary storage means TSM are transferred to viewer storage means CD adapted to storing the information data ID displayed by said viewer program VIP, a further advantageous embodiment of the invention has been obtained.

According to the invention, the viewer program, request criteria and information data may be updated via the Internet during periods when none of these are active.

When, as stated in claim 12, said transfer of information data ID from the temporary storage means TSM to said viewer storage means CD is initiated subsequent to said predetermined period of time IAP and completed prior to activation of said viewer program VIP, a further advantageous embodiment of the invention has been obtained.
When, as stated in claim 13, said information data ID represent advertising, a further advantageous embodiment of the invention has been obtained.

When, as stated in claim 14, said predetermined period IAP is determined and established by a user of a decentral computer DCC, a further advantageous embodiment of the invention has been obtained.

According to the current embodiment of the invention, each user is free to configure his own setup.

When, as stated in claim 15, said transfer of updated information data from at least one central server means S is initiated upon activation of said viewer program VIP, a further advantageous embodiment of the invention has been obtained.

According to the invention, the load on the computer resulting from the transfer of information data via e.g. the Internet may be concentrated to periods during which a user is not using the decentral computer and thereby avoid a situation in which the user is bothered by slow processing of the computer.

When, as stated in claim 16, further update data UPD, such as request criteria RC and/or a viewer program VIP may be transmitted to the decentral computer DCC from the central server S, a further advantageous embodiment of the invention has been obtained.

According to the invention, further updated data UPD, e.g. a viewer program and request criteria, may be downloaded and refreshed from time to time via the data lines DL, e.g. simultaneously with the downloading of information data ID.

According to a preferred embodiment, the update of the viewer program and update manager may be performed when necessary.
It should nevertheless be noted that the transfer of update data should be reduced as much as possible in order to reduce the transmission over the Internet.

When, as stated in claim 17, the at least one decentral computer DCC submits data to the at least one central server specifying a set of available hardware and/or software characteristics on said at least one decentral computer DCC, a further advantageous embodiment of the invention has been obtained.

According to the invention, the information data and update data transmitted to the decentral computer may be adapted to fit the available hardware, such as hard-disc, graphic cards, soundcards etc.

Hence, the overall system may address a large variety of decentral computers.

When, as stated in claim 18, a request is submitted to the central server S from the decentral computer DCC for a table of contents COL listing the current information data stored on the at least one server S

- a table of contents COL is submitted from the central server S to the decentral computer DCC

- the decentral computer DCC submits a request to the central server S for specified information data ID after comparing the received table of contents COL with the information data stored on said decentral computer DCC, a further advantageous embodiment of the invention has been obtained.

According to the invention, the computer may initially request a table of contents from the central server describing the new information data available on the server. When the table of contents is received from the central server, the decentral computer may determine the missing parts of information data and submit a request to the central server describing the requested data information. Subsequently, the requested data may be transmitted from the server to the computer.
Again, the invention provides advantageous decentral control of the transmission of data information.

When, as stated in claim 19, the viewer program comprises a screensaver program, said screensaver being terminated if at least one of said computer input devices CID is activated, a further advantageous embodiment of the invention has been obtained.

According to the invention, a viewer program may simply be a screensaver program which is

activated when the computer input devices have been inactivate for a predetermined period of time and
deactivated when at least one of the computer input devices is activated.

According to the “usual” understanding of a screensaver, the screensaver is
immediately deactivated if the user uses his keyboard or mouse.

When, as stated in claim 20, the viewer program VIP is deactivated when at least one of the computer input devices is activated and when at least one termination command has been entered into the viewer program VIP by means of said computer input devices CID, a further advantageous embodiment of the invention has been obtained.

According to the invention, a viewer program may simply be a screensaver program which is

activated when the computer input devices have been inactivate over a predetermined period of time and
deactivated when at least one of the computer input devices is activated and when at least one termination command has been entered into the viewer program VIP.

The present viewer program may thus be regarded as a kind of interactive screensaver, e.g. adapted to handling communication with the user of the computer while the computer is in viewer program mode.
Hence, different questions may be posed to the user and answers may eventually be registered and transferred to the remote server where an online connection is available. Evidently, such questioning may be applied together with advertising etc. and the obtained information may be passed on to the advertiser.

Moreover, the invention relates to a method of downloading screensaver data ID from at least one central server S to at least one client DCC

said method comprising the steps of

- establishing at least one screensaver data instance at said at least one central server S

- transferring said at least one screensaver data instance to at least one client DCC upon request by the at least one client DCC

- storing the at least one screensaver data instance in a temporary data storage means TSM associated with said at least one client DCC,

- transferring said at least one stored screensaver data instance to data storage means CD associated with said at least one client DCC,

- activating a screensaver program VIP associated with said client DCC

- said screensaver program VIP displaying said at least one stored screensaver data instance in said data storage means CD.

When, as stated in claim 22, at least one client comprises a period for measurement of the activity of the screensaver VIP, a further advantageous embodiment of the invention has been obtained.
When, as stated in claim 23, a check routine ST checks whether a new screensaver instance has been transferred to said temporary data storage means TSM prior to activation of said the screensaver program VIP and when said routine check initiates a transfer of the screensaver data instance to the data storage means CD if the check reveals that a new screensaver instance has been transferred to the temporary data storage means TSM, a further advantageous embodiment of the invention has been obtained.

When, as stated in claim 24, data indicating the result of said activity measure of the screensaver is transferred to said at least one central server S, a further advantageous embodiment of the invention has been obtained.

When, as stated in claim 25, a lottery number associated with said at least one client (account number) is activated when a certain level of screensaver activity has been registered by said at least one central server S, a further advantageous embodiment of the invention has been obtained.

Moreover, the invention relates to a method of facilitating distribution of screensaver advertising from at least one central server S to at least on decentral client computer DCC

said method comprising the steps of

- distributing screensaver data ID to at least one client computer DCC,

said screensaver data ID forming advertising data

- establishing a measure of the activity on the at least one client computer DCC

- transferring said measure to said central server means S,

- dedicating a reward to the user/owner of the at least on client computer DCC when the measure transferred to the central server indicates that the screensaver VIP
running said distributed screensaver data ID of said at least one client computer DCC has been active for a certain period of time.

According to the invention, a user of a client computer may “earn” money, lottery numbers or other values even if the computer is offline.

When, as stated in claim 27, at least one lottery number dedicated to said client computer DCC is activated if a pre-established measuring criterion is met, a further advantageous embodiment of the invention has been obtained.
The figures

The invention will now be described in detail with reference to the drawings, in which

5 fig. 1 illustrates the basic functioning of a computer applied according to the invention,

figs. 2 to 4 illustrate different embodiments of the invention,

10 fig. 5 illustrates a method whereby a system according to the invention restores optimal communication with the remote server

fig. 6 illustrates a flowchart of a preferred distribution method of information data according to the invention

fig. 7 illustrates a flowchart of a preferred scheme of downloading data information to the computer and running the viewer program on the computer

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figs. 8a to 8c illustrate the control of information data transfer to the computer from the server

figs. 9a to 9b illustrate a preferred embodiment of the invention

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Detailed description

General computer description

Fig. 1 shows a personal computer COM including a CPU (not shown), said computer COM comprising a data disk and an arithmetic logic circuit configured to prepare the data disk to magnetically or optically store selected data (not shown).

The computer moreover comprises a monitoring unit MON and a number of input devices such as keyboard KBD, mouse M etc.

Computers with windows-based systems typically comprise a screensaver function as standard equipment. This screensaver may be activated by the operating system itself at user-defined intervals provided that the computer COM and thus the operating system is active. A screensaver is traditionally used to protect the monitor MON and is deactivated by the computer COM by receipt of an input from one of the input devices such as the keyboard KBD or the mouse M. The screensaver is hereby deactivated if the user of the computer COM or potential inputs from the outside activate the computer’s COM hardware or software.

Embodiments

Fig. 2 shows an embodiment according to the invention. The system comprises an Internet I which serves as communication means between a server S and some client computers C1, C2, and Cx and the high-lighted computer C2 shows the functionalities applying to all client computers C1, C2 and Cx in the shown embodiment. The communication means constitutes a virtual data link DL which includes as well Internet-based transfers as specific data line switchings such as ISDN and DSL/xDSL. The client computers comprise a starter program ST which is designed to activate a viewer VIP. Once the starter program ST is activated, it transmits a message to an update manager UM to initiate an update of the system. The update manager UM subsequently checks the storage means new data ND to determine whether new data have been downloaded which do not match those already in the storage means current data CD. If this is the case, the update manager UM will start transferring the new updated data from new data ND to current data
CD (while erasing potentially old data from current data CD). Such transfer and check-up on data in new data ND and current data CD, respectively, only takes place immediately after start-up of the starter program ST. Subsequently, the viewer VIP will be activated by the starter program ST while the server S receives a transmission from the update manager UM through the data line DL regarding the nature of the data in the storage means current data CD. After that, the server S may check with its database whether any new data should be transferred to the client computers C1, C2, Cx. If this is the case, data may be transferred via the Internet-based data line DL to the client computers Cx. It is implicit that this embodiment is only one of many.

Another important functionality of the screensaver program is the counter CNT. The counter CNT is used to establish an objective for the screensaver activity on the client computers C1, C2, C3 and Cx. One way of doing this is for the counter CNT to be used to register the period in which the screensaver is activated, i.e. for example how long the viewer VIP is active. The counter CNT will typically use the internal clock of the computer or a derivative thereof and store the activity data in the update manager UM, after which the data will be passed on to the server S via the Internet I. After this, the server S may register the screensaver activity for the different client computers C1, C2, C3 and Cx and thereby gain an impression of the total activity, incl. e.g. certain periods in a day or the like for each client computer C1, C2, C3 and Cx. Since the server S is capable of registering such activity, it can also register when the individual client computers C1, C2, C3 and Cx have an active screensaver, if so desired. This information may be used to provide users of client computers C1, C2, C3 and Cx with favorable offers if they e.g. have an active screensaver for a predefined number of minutes during office hours. In accordance with an advantageous embodiment, the objective could be to assign/allocate a certain value to each client such as a lottery number, money or other additional advantages.

A typical embodiment for registration of screensavers could be for the internal clocks of the client computers C1, C2, C3 and Cx to provide the update manager UM with information of the duration of an active screensaver of a certain client, after which the update manager UM passes the information on to the server database which
subsequently accumulates the time and determines the total activity for a predefined period of time. The server S may hereafter assign/allocate e.g. a lottery number to the user if the user has had an active screensaver for a predefined period of time in the course of a week.

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Fig. 3 shows the functionality of at least one of the client computers C1, C2, C3 and Cx and includes a variant of the system in fig. 2. The shown client computer Ci basically works like the client computer C2 described in fig. 2 since the update manager controls current downloading of screensaver data ID from the server S via the Internet I by means of an appropriately designed data line.

In accordance with the above-mentioned embodiments of the invention, current downloading is when the program is programmed to download online at certain times or intervals. The client computer Ci could also automatically request the server S to carry out current updates from time to time when the computer is online anyway. The downloading could e.g. take place over the Internet. It should be understood that the operating program may be configured in a variety of ways.

The update manager UM controls storage of the screensaver data ID in a storage means new data ND. A starter program ST residing on the client computer Ci controls the data transfer from the storage means new data ND to the storage means current data CD. The transfer of these screensaver data ID by the starter program ST from the storage means new data ND to the storage means current data CD will typically be initiated by the screensaver function of the client computer Ci which is traditionally a part of all Windows-based operating programs. Once the starter program ST has transferred all screensaver data ID from the storage means new data ND to the storage means current data CD, the program is closed down and the viewer may start to play the screensaver data ID from the storage means current data CD. In accordance with the invention, the starter program ST interacts with the viewer VIP in such a manner that the viewer VIP cannot play the screensaver data ID from the storage means current data CD while the starter program ST is storing new downloaded screensaver data ID in the same storage means.
Thus, fig. 3 is an embodiment of the invention, according to which the system is

designed in such a manner that error situations in relation to the playing of data from
the storage means current data CD may be solved automatically. In this system, a

client computer Ci comprises the viewer VIP showing the data stored in the storage
means current data CD. If the data in current data CD are not valid, the viewer VIP
may e.g. transmit a signal Si to the server S via the Internet I. Once the server S has

received the signal Si from the viewer VIP, the server S transmits updated
screensaver data ID to the client computer Ci. The updated data will then be

transmitted via the Internet I to the update manager UM which checks the data and
stores them in the storage means new data ND. Hereafter, the starter program ST will
retrieve the updated and valid data and switch them from new data ND to current
data CD as soon as the program is reactivated. Thus, it can be claimed that the latter
process comprises a method for switching screensaver data ID from the update

manager UM to the storage means current data CD via new data ND under the
control of the starter program ST. In this manner, it is ensured that the data transfer
does not conflict with the viewer’s VIP use of screensaver data ID from current data

CD.

It is understood that the viewer’s VIP request to the server S will typically be
controlled by the update manager UM. It is also understood that the viewer VIP may
interact with the update manager UM in such manner that it handles all
communication with the server. In accordance with the shown embodiment, the basic

function of the computer Ci is that it actively makes a request to the server S to

update the screensaver data ID if the control routines of the computer Ci indicate or
suspect that the screensaver data ID on the client computer Ci have not been updated
or contain errors. If the transfer between ND and CD goes wrong in such a way that
the current data CD are not updated correctly and the screensaver data ID can

therefore not be used by the viewer VIP, the starter program ST will not activate the

viewer VIP until the starter program ST has validated correct transfer.
If a computer COM as mentioned above should be cut off in the middle of a transfer from new data ND to current data CD and result in the screensaver data ID in current data CD not being valid (i.e. they cannot be used by the viewer program), the starter program ST will subsequently and upon reactivation check whether both the stored current data CD and the screensaver data ID are valid and whether any new screensaver data ID have been stored in the new data ND. This means that irrespective of whether the storage means new data ND is updated or the screensaver data ID in the storage means current data CD are invalid, the transfer will be initiated by the starter program ST and thereby complete any potential semi-transferred screensaver data ID before the viewer is initiated and able to use the screensaver data stored in the current data CD.

Another advantageous method according to the invention involves the recovery of a simultaneous state of error in both the storage means new data ND and the storage means current data CD which will be described in detail in the following.

Fig. 4 shows a third embodiment of the invention. The system is based on the Internet I, which serves as a communication means between the viewer VIP on the client computer Cx and the server S, and switches screensaver data from the server S to the computer Cx by means of a project file PF. In this embodiment, the integrated screensaver function of the client computer Ci will initiate a special kind of viewer VIP which will hereafter transmit a message over the Internet I to the project file PF which registers that the viewer VIP is active. The project file PF then transmits a message over the Internet I to the server indicating that it may start the transfer of data to the viewer VIP via the project file PF.

According to this embodiment, the viewer VIP serves both as a starter program ST and a viewer VIP. This means that the client computers Ci do not need to have a heavy downloaded program on their hard disks but that they may have a residing program responsible for the transmission over the Internet I to the server S and for displaying the project data transferred from the server.
Fig. 5 shows yet another embodiment according to the invention whereby the system is capable of choosing an advantageous server S1, S2, S3 and Sx if the connection from a client computer C1, C2, C3, etc. to a desired server is bad or non-existent. The system is based on the Internet I which serves as the communication means between the servers S1, S2, S3 and Sx and the client computers C1, C2, C3 and Cx, of which only C1 is shown in fig. 5. Again, the client computers C1, C2, C3 and Cx may work as previously described in e.g. figs. 2 and 3. However, this embodiment also allows for bypass of the Internet I and thereby the creation of a direct line between the client computer Cx and the server in question by means of a connection such as ISDN, DSL/xDSL or the like. In this example, the client computer Cx may establish such a direct connection Con1 to a server S1.

According to fig. 5, the data flow on the system between the individual clients C1, C2, C3 and Cx and the corresponding online servers S1, S2, S3 and Sx may e.g. take place as previously described in figs. 2 and 3.

In this embodiment, the system of the client computers Cx comprises a viewer VIP, a reset program R, a server access program SAP and a storage means PA for storage of pointer data P.

In this connection, pointer data are addresses transferred from one of the servers S1, S2, S3, Sx to the individual client computers C1, C2, C3 and Cx together with screensaver data ID. These pointer addresses specify to the individual client computers C1, C2, C3 and Cx the location of the next downloading.

The viewer VIP of the individual clients C1, C2, C3 and Cx will thus be informed of the next downloading location by means of the current update of the storage means PA.

Fig. 5 basically shows a system, in which the server access program SAP is constantly registering which alternative servers S1, S2, S3 and Sx the downloading
should take place from, if a connection Con1, Con2 and Con3 to the server in question, e.g. S3 via the connection Con3, is e.g. interrupted, unstable or slow.

In this connection, a client computer may typically be connected to one or several servers at a time.

In reality, this means that if the connection Con3 between the client computer Cx and the server S3 is interrupted, the client computer Cx is automatically switched over to another server S2 by means of the server access program SAP. If this connection Con2 is also interrupted, unstable or slow for various reasons, the server access program SAP will route the client computer Cx to a new server S1, by means of which a sufficiently good connection may be obtained.

According to the invention, the server access program SAP of the system mentioned above will keep viewing the already downloaded screensaver data ID while at the same time attempting to create a connection to one of the servers S1, S2, S3 and Sx so that the user will not be disturbed by potential communication problems of the above-mentioned type. Furthermore, the total amount of time during which the client computer’s screensaver has been active will still be controlled in accordance with the invention, since a local counter CNT on the client computer Cx is used for registration of the activity time.

The server access program may e.g. be a short software routine comprising a list of applicable remote servers which may be accessed if certain conditions are fulfilled.

If the above-mentioned system according to the invention should fail and the server access program SAP cannot establish contact with one of the servers S1, S2, S3 and Sx after repeated attempts, this may be due to an error in the above-mentioned pointer data P which the viewer VIP uses to select the servers S1, S2, S3 and Sx. This, in turn, may be due to a transmission error or simply an error in the programming of the transferred screensaver data ID.
In the latter case, a reset program will be activated. A reset program R according to the invention comprises one or more fall-back pointers SP permanently allocated to fixed addresses.

Thus, the reset program will transfer one or more of these fall-back pointers to the pointer storage means PA. This means that the fall-back pointers may be used by the viewer VIP to log onto the servers S1, S2, S3 and Sx again if one of these should for some reason be lost.

Alternatively and in accordance with yet another embodiment of the invention, the viewer VIP may also attempt to establish a direct connection Con1 to a server S and thereby bypass the Internet.

Once a client computer Cx has been reset by means of one of the methods mentioned above, the client computer Cx may again initiate downloading of screensaver data ID from one of the servers S1, S2, S3 and Sx, after which it is “put into orbit again” so to speak, by means of current updates of the pointer data in the pointer storage means PA in such a manner that the viewer/client Cx will receive information of the next location of downloading from time to time.

Fig. 6 shows a review of an advantageous screensaver distribution by means of a flow chart.

The chart comprises a user side U and a server side S.

The user learns of the screensaver through a friend or a link 1. The user U hereafter enters the London Factory Ltd. web site to get the screensaver 2. In order to be able to download the screensaver, the user U must first provide some personal information 3 and send the details to the server S. The server S receives the entered information and stores it in the server database 4.
Then, the server transmits the web-site back to the user with a link to the screensaver program so that the user may download the program 5. The user clicks on the link and starts to download the screensaver 6 and once it has been successfully downloaded, the user will install it on his computer 7. The screensaver program will hereafter ask the user for lottery numbers 8. Once the user has entered the lottery numbers, they are transmitted via HTTP numbers to the server S 9, which receives the lottery numbers and stores them in the database 10. When the lottery numbers have been stored in the database, the server S returns a confirmation message to the user U 11 on the web site or via e-mail 12. Hereafter, the process has been completed and the program runs on all the information 13 it needs.

Fig. 7 shows a flow chart of an advantageous process of the screensaver viewer and of the update function.

It should be noted that several other processes are applicable within the scope of the invention.

The chart also describes a user-oriented process U and a server-oriented process S. The starting point is a user 14 using his computer. The user is communicating with a server S via the Internet I.

The first group of process steps 14 and 15 forms a starter program ST.

The first step 14 is performed if a user has not used his computer for a predefined amount of time. At the first step, a start-up request is established.

At step 15, the program initially checks whether new screensaver data have been downloaded to the viewer’s data storage means current data CD (previously described). If new data are present in the storage means new data ND (also previously described), these data will be transferred under control of the starter program. Moreover, at step 15 the data of current data CD are validated, thereby ensuring that the data are complete and ready for use by the viewer program VIP.
Subsequently, two processes - 17 to 21 and 24 to 31 - are activated as parallel processes.

The parallel processes may basically be regarded as two separate processes where the first process is a viewer program VIP and the second process is an update manager UM.

Hence, according to the illustrated embodiment, the starter program activates the viewer program VIP and the update manager subsequent to the validation of the data to be used by the viewer program VIP.

The viewer program loop is subsequently initiated and comprises steps 17, 18, 19.

At step 17, the viewer program is activated, and the viewer program will detect the status of the lottery number by checking a register on the computer indicating whether a lottery number (i.e. a value) has been earned or not. The update of this register may be performed more or less independently of the first process in the sense that updating of this register requires an online connection to the server as the update must be controlled or at least confirmed by the central server prior to any indication of whether the value has been earned to the user.

Moreover, step 17 involves an update of an internal counter of the decentral computer. This counter updates the activity of the viewer program on a realtime basis (or at relatively small intervals of time, e.g. a couple of minutes).

From time to time, the contents of the counter will be transferred to the central server as indicated above, and the central server may check whether the above-mentioned register of the computer should be updated, i.e. changed from inactive to active.
According to a preferred embodiment, the viewer monitors the status of the register on the screensaver in such a manner that the user is kept up-to-date on whether the lottery number is active or not.

At step 18, the viewer program will show current screensaver data CD.

At step 19, the program will detect whether the user has pressed exit. If not, the user returns to step 17. If yes, the user continues to step 20 where the screensaver data and current data CD are released and may subsequently be updated upon reactivation of the screensaver as described in step 15.

It should be noted that the screensaver program may be initiated at step 15 when the computer has been inactive for e.g. 5 minutes. The user U may adjust the period of time under user settings for the computer.

According to a further embodiment of the invention, the measure and display of the viewer activity may be displayed somewhat differently than described above since the above-mentioned update of the counter indicating the activity of the viewer may be performed outside the loop, steps 17 to 19. If this is the case, a step prior to step 17 should run a check-up on the current status of the value, i.e. check the register whether e.g. a lottery number is active or not.

If this is the case, this status should be passed on to the viewer program thereby displaying the number on the viewer and indicating the status registered prior to the loop, steps 17 to 19.

Moreover, this further embodiment should imply a step inserted subsequent to the loop, steps 17 to 19, in order to make a final measure, i.e. an update of the counter, indicating the accumulated viewer activity.

Hence, this further embodiment simply implies that the current measure of the viewer activity is moved from inside the loop, steps 17 to 19, to a one-time measure
performed subsequent to termination of the viewer and a “one-time” status display established prior to the activation of the viewer.

Evidently, several other methods of measuring the viewer activity and updating the viewer activity counter may be applied within the scope of the invention.

According to the above-mentioned embodiment, the updated status refers to the status of a lottery number. Several other status objects may be applied within the scope of the invention, e.g. gifts, values or any reward applicable.

Moreover, the screensaver data may comprise several other objects than advertising, e.g. news, stock information, car prices, anything “updatable” via the Internet.

Now, the second previously mentioned parallel process, the downloading process controlled by the update manager UM, will be described. This activity starts with the starter program ST of the screensaver activating the viewer according to the sequence of steps described above. Initially, it should be noted that according to an advantageous embodiment of the invention, the downloading process takes place simultaneously with the screensaver being activated or is at least activated simultaneously with the screensaver being activated. This means that disturbances caused by the computer downloading are minimized as such downloading will typically take place while the user is not actually using the computer.

At step 24, the most recent update of the program is checked to determine whether it has taken place e.g. less than 24 hours ago 24. If this is the case, the downloading sequence is terminated by a jump to termination step 31.

However, if the update is more than 24 hours old, the update manager UM (previously described) will transmit a request to the server S (also previously described) in order to be provided with the current data list 25. Once the server S has received the request, it will start to send the data list to the user U, step 27, which will begin to download the data list at step 26. Once the list has been downloaded, it
will be compared with a data list describing the data in the storage means current data CD at step 28. Hereafter, at step 28, the update manager UM transmits yet another data list to the server S, in which the data to be updated have been specified. When the server receives this request, it will start to transmit the data 29 and the screensaver program will transfer the downloaded data to the storage means new data ND 28. During this activity, the out-of-date data in the storage means new data ND will be replaced by the new data from the server S. Once the program has completed the downloading of data from the server S, the program will check whether all data are OK. If so, the timer controlling the updating process will be reset. If all data have not been properly downloaded, one reason may be that the program has been shut down in the middle of the process or that the Internet connection has been interrupted. If this happens, the starter program will make a new request for a data list from the server once the program is reactivated.

The reason for this safety measure is that it prevents any incomplete or damaged data from being stored in the storage means current data CD. Once all data have been properly downloaded, this part of the parallel process will be terminated.

It is understood that the downloading process of the new screensaver data ID to the storage means new data ND does not necessarily have to be initiated by activating the screensaver but may generally also take place independently of the viewer activity. However, in accordance with an advantageous embodiment of the invention, it is suitable to carry out downloading processes to the client computer from the remote server S simultaneously with the activation of the viewer program VIP, since the download activity will thus bother the user as little as possible as it is only natural to assume that the user is not using the computer when the screensaver is activated.

It will be advantageous to implement the transfer of the status of the lottery number or e.g. the activity time of a screensaver when initiating the above-mentioned downloading process.
Typically, it will be advantageous to transfer data representing the accumulated activity of the screensaver over a period of time to the server which will subsequently convert this activity into a status, i.e. determine whether the lottery number is active or not. The determined activity may typically be returned immediately upon receipt of the information of the accumulated activity of the screensaver so that this status may be transferred within a moment to the client and be monitored in the first parallel process by means of the viewer.

In the following, an advantageous transfer of screensaver data ID from a server S to a client computer will be illustrated.

Fig. 8a is a list of the advertisements Ad to be played on a screensaver according to the invention. In general, a few weeks have been illustrated, W1-Wx indicating the current week and the weeks to follow. It is also possible to see the names of the advertisements to be shown during the weeks in question. Thus, the advertisements will typically not be new all the time. They will often be played in one week or for several weeks in one or more version of the same theme:

It will also be possible to have an advertisement shown for only a week after which it will not be shown again until a certain number of weeks has passed. At the bottom row in the survey, the time at which the individual advertisements will be erased ER or maintained in accordance with the accompanying text is illustrated.

The specific example in fig. 8a shows an advertisement, Tikiit, which is downloaded to the computer in week W1, specified by UP. This advertisement is reused in week 2, W2, after which it is erased ER from the client computer.

In week 3, W3, an advertisement, Smadit, is downloaded UP. This advertisement has not been updated/played by UP/ER before, so it must first be downloaded to the client computer. However, we can see that the advertisement will not be erased ER after having been played since it will be played again in week 5, W5, after which it
will be erased ER. Also, we can see that in week 4, W4, an advertisement, Kolyt, will be updated Up and erased ER again at the end of the week.

In the above-mentioned manner, it is possible to minimize the load of data traffic between the server and the computers forming part of the system. As can be seen, the control of traffic in the system can be made centrally.

This data traffic can be optimized even further according to the invention.

Fig. 8b shows a simplified version of the figure previously described according to the invention. In this case, the system comprises a client database CLDK stored on a client computer. At the transfer from week 1, W1, to week 2, W2, the server informs the client computer that there are no changes in the composition of advertisements and that the data Mod1 to Mod5 may remain in current data CD which means that no new data must be downloaded.

Fig. 8c also shows a simplified version of how the composition of advertisements between e.g. week 4, W4, and week 5, W5, may be with reference to a partial update of screensaver data.

According to the shown embodiment of the invention, it is thus advantageous to split the screensaver data into modules, Mod1 to Mod5. One module, e.g. Mod1, may e.g. comprise a graphic file of a company logo to be used in connection with different advertisements from the same company.

The figure also shows two advertisement modules Mod1 and Mod2 in week 4, W4, to be replayed in week 5, W5, which is why they will remain in the storage means current data CD. Furthermore, it can be seen that three other advertisement modules Mod3, Mod4 and Mod5 are not to be reused in the immediate future and they are therefore erased from the local client database CLDB.
The client computer will typically transmit a message to the server S of the advertisements already stored and the server S will subsequently send the necessary screensaver data modules, in this case X, Y and Z to the client, whereby the screensaver data are completed.

Thus, data transfer between the server S and the clients C1, Cx may be optimized by designing the structure of the data in modules and by letting the server control the transfer, e.g. by carrying out current updates of the screensaver modules which have already been distributed to the individual client computers.

According to the invention, data transfer often takes place over the Internet I, but could also take place by means of a separate connection such as ISDN and DSL/xDSL.

It should also be noted that according to the invention, it will often be advantageous to let the screensaver viewer reside on the individual client computers whereby the transfer of screensaver data is minimized. In addition, the screensaver viewers on the client computers may also be updated from time to time, if so desired.

It should be stressed that the above-mentioned terms and module limitations do not necessarily represent a physical separation of the in-tray functionalities but are solely used for illustrative purposes of the technical features of the invention in the broadest sense.

According to the invention, the separation of the functionalities into groups is not crucial as long as the general interaction between the functionalities is maintained.

Fig. 9a and fig.9b illustrate a preferred embodiment of the invention.

The illustrated system of fig. 9a comprises a number of decentral computers DCC communicating with a central server system S.
The decentral computers DCC communicate with the central server system by means of data lines DL established via a data network, such as the Internet.

The decentral computer comprises input devices CID such as mouse, keyboard, pen trackball, touch screen, etc.

A viewer program VIP is installed on the decentral computers DCC.

The viewer program VIP is adapted to displaying information data on the respective decentral client computer DCC. A viewer may e.g. display a screensaver specified and formed by information data transferred from the central server S to the decentral client computer DCC.

The viewer data, information data, applied by the viewer program VIP are stored in viewer storage means, CD.

According to the illustrated embodiment, the information data are initially downloaded to the computer DCC from the central server to temporary storage means. Subsequently, the downloaded data may be transferred to the viewer storage means CD. Thereby, and as previously described, the transfer of data from one internal storage TSM to another CD may be carried out in such a way that it does not conflict with the viewer.

Prior to activation, a starter program checks whether information data transferred from the central server S and stored in local temporary storage means TSM are up to date. Several criteria for determining whether the information data are up to date may be applied within the scope of the invention.

One preferred method within the scope of the invention is simply that of checking whether data stored in the temporary storage means TSM are valid.
If this is the case, the data is transferred from the temporary storage means TSM to the viewer storage means CD. Subsequently, the viewer may be started.

The viewer program is adapted to displaying information data ID on the decentral client computer DCC when the computer input devices CID of the decentral computer DCC have been inactive for a predetermined period of time IAP.

The predetermined period IAP may typically be modified and determined by the user of the computer, typically as a specified delay. The programming of this period is for instance possible in a Windows-operated system.

Request criteria RC are stored in the decentral computer DCC.

The criteria RC, which may also be regarded as a kind of schedule, are established for controlling the downloading of information data from the central server S to the decentral computer DCC.

Hence, when the request criteria RC are fulfilled, the decentral computer DCC transmits a request IDR for updated information data to the central server via the Internet.

An example of such criteria may e.g. be a time limit, which invokes preparation or submission of a request IDR to the central server once it has been exceeded. What is meant by “preparation” is that a decentral computer communicating with the Internet by means of a conventional modem, i.e. offline from time to time, needs to maintain the request IDR until the decentral computer is on-line connected to the Internet.

Moreover, the decentral computer comprises measuring means MM adapted to measuring the activity of the viewer program. VIP. The established activity measure, local activity data LAD, expresses e.g. the period in which the viewer program has been active over a certain period. Thus, the local activity data LAD may e.g. be an
accumulated measure of how long the viewer program, e.g. a screensaver, has been active during a week.

Moreover, this information may also contain information obtained by means of an interactive screensaver.

According to the invention, an interactive screensaver may be a viewer program which is activated when the computer input devices have been inactive for a predetermined period of time and deactivated when at least one of the computer input devices are activated and when at least one termination command has been entered into the viewer program (VIP).

The present viewer program may thus be regarded as a kind of interactive screensaver, e.g. adapted to handling a communication with the user of the computer, when the computer is still in viewer program mode.

This information may e.g. be transferred to the central server S together with the local activity data LAD or the information may simply be comprised in the local activity data and transferred as such.

Hence, different questions may be posed to the user and answers may eventually be registered and transferred to the remote server where an online connection is available. Evidently, such investigation may be applied together with advertising etc. and the obtained information may be passed on to the advertiser.

Basically, a system according to the preferred embodiment comprises several significant sub-processes.

The first process is adapted to communicating with the central server in order to transfer the measured local activity data LAD to the central server S. The central server S registers these data LAD in a central storage means CSM and registers e.g. if a viewer program VIP has been active for a period longer than a predetermined
threshold. If the threshold is exceeded, the user of the decentral computer may have earned a certain value, e.g. a lottery number. This status is transferred back to the decentral computer via the Internet, thereby validating to the user of the computer DCC that a certain value has been earned.

A further important process, also related to the above-mentioned process, is the process illustrated by fig. 9b.

According to the illustrated embodiment, the downloading of information data ID from the central server S may be trigged by exceeding a predetermined period IAP and simultaneously fulfilling the above-mentioned request criteria RC.

If this is the case, the decentral computer may transmit a table of contents COL to a central server. The table of contents describes the information data currently stored by the decentral computer DCC.

It should be noted that such information data may also comprise other data than the data stored in the storage means TSM and CD.

Subsequently or simultaneously, a request IDR may be submitted to the central server in order to obtain specified updated information data. It should be noted that the specification of the update content may be established both centrally on the server on the basis of the submitted table of contents COL or decentrally as a request of the type: I've got these data, please provide the required new data and tell me what data a can delete.

It should be noted that other updated data UPD e.g. a viewer program and request criteria, may be downloaded and refreshed from time to time via the data lines DL, e.g. simultaneously with the downloading of information data ID.
Claims

1. Method of distributing information data (ID) from at least one central server system (S) to at least one decentral client computer (DCC), said method comprising the steps of

- installing at least one viewer program (VIP) in said at least one decentral client computer (DCC), said viewer program (VIP) being adapted to displaying information data (ID) on said at least one decentral client computer (DCC),

- storing at least one request criterion (RC) on said at least one decentral client computer (DCC),

- said at least one decentral computer comprising at least one computer input device (CID)

- transferring updated information data (ID) to said at least one decentral client computer (DCC) from said at least one central server system (S) via communication lines (DL) upon request (IDR) by said client computer if said at least one request criterion (RC) is met.

- said viewer program (VIP) being adapted to displaying said information data (ID) on said at least one decentral client computer (DCC) when the computer input devices (CID) of said decentral computer (DCC) have been inactive for a predetermined period of time (IAP).

2. Method of distributing information data according to claim 1, whereby said communication lines (DL) are established by means of Internet-based (I) data traffic.

3. Method of distributing information data according to claim 1 or 2,
whereby said request criteria (RC) are established as a time-based schedule stored on said at least one decentral computer (DCC) and refer to the internal timer of the said at least one computer (DCC).

4. Method of distributing information data according to any of claims 1 to 3, whereby said request criteria (RC) are met if
- the period from the latest updated information data (ID) exceeds a certain predetermined time limit.

5. Method of distributing information data according to any of claims 1 to 4 whereby
- a table of contents (COL) listing the information data stored on the at least one decentral computer (DCC) is transferred from said decentral computer (DCC) to said at least one server system (S) when the request criteria (RC) are met prior to said transfer of updated information data (ID).

6. Method of distributing information data according to any of claims 1 to 5 whereby parts of said information data (ID) are stored for reuse on said decentral computer (DCC).

7. Method of distributing information data according to any of claims 1 to 6 whereby measuring means (MM) associated with said decentral computer (DCC) measures local activity data (LAD) when said viewer program (VIP) displays said information data (ID).

8. Method of distributing information data according to any of claims 1 to 7, whereby said local activity data (LAD) are transferred to said at least one central server (S) via said Internet-based communication lines (DL) and registered in at least one central storage means (CSM) associated with said at least one central server (S), said central server (S) thereby registering the local activity data (LAD) of at least one and preferably of all said decentral client computers (DCC).
9. Method of distributing information data according to any of claims 1 to 8, whereby said central server (S) converts said local activity data (LAD) into values such as lottery numbers, money, gifts, etc.

10. Method of distributing information data according to any of claims 1 to 9 whereby updated information data (ID) are stored in temporary storage means (TSM).

11. Method of distributing information data according to any of claims 1 to 10, whereby updated information data (ID) stored in said temporary storage means (TSM) are transferred to viewer storage means (CD) adapted to storing the information data (ID) displayed by said viewer program (VIP).

12. Method of distributing information data according to any of claims 1 to 11, whereby said transfer of information data (ID) from the temporary storage means (TSM) to said viewer storage means (CD) is initiated subsequent to said predetermined period of time (IAP) and completed prior to activation of said viewer program (VIP).

13. Method of distributing information data according to any of claims 1 to 12 whereby said information data (ID) represent advertising.

14. Method of distributing information data according to any of claims 1 to 13 whereby said predetermined period (IAP) is determined and established by a user of a decental computer (DCC).

15. Method of distributing information data (ID) according to any of claims 1 to 14 whereby said transfer of updated information data from at least one central server means (S) is initiated upon activation of said viewer program (VIP).

16. Method of distributing information data (ID) according to any of claims 1 to 15, whereby further update data (UPD), such as request criteria (RC) and/or a viewer
program (VIP), may be transmitted to the decentral computer (DCC) from the central server (S).

17. Method of distributing information data (ID) according to any of claims 1 to 16 whereby the at least one decentral computer (DCC) submits data to the at least one central server specifying a set of available hardware and/or software characteristics in said at least one decentral computer (DCC).

18. Method of distributing information data according to any of claims 1 to 17 whereby
- a request is submitted to the central server (S) from the decentral computer (DCC) for table of contents (COL) listing the current information data stored on the at least one server (S)
- a table of content (COL) is submitted from the central server (S) to the decentral computer (DCC)
- the decentral computer (DCC) submits a request to the central server (S) for specified information data (ID) after comparing the received table of contents (COL) with the information data stored in said decentral computer (DCC).

19. Method of distributing information data according to any of claims 1 to 18 whereby the viewer program comprises a screensaver program, said screensaver being terminated if at least one of said computer input devices (CID) is activated.

20. Method of distributing information data according to any of claims 1 to 19, whereby the viewer program (VIP) is deactivated when at least one of the computer input devices is activated and when at least one termination command has been entered into the viewer program (VIP) by means of said computer input devices (CID).

21. Method of downloading screensaver data (ID) from at least one central server (S) to at least one client (DCC)
said method comprising the steps of

- establishing at least one screensaver data instance at said at least one central server (S)
- transferring said at least one screensaver data instance to at least one client (DCC) upon request by the at least one client (DCC)
- storing the at least one screensaver data instance in a temporary data storage means (TSM) associated with said at least one client (DCC),
- transferring said at least one stored screensaver data instance to data storage means (CD) associated with said at least one client (DCC),
- activating a screensaver program (VIP) associated with said client (DCC)
- said screensaver program (VIP) displaying said at least one stored screensaver data instance stored in said data storage means (CD).

22. Method according to claim 21, whereby the at least one client comprises a period for measurement of the activity of the screensaver (VIP).

23. Method according to claim 21 or 22, whereby a check routine (ST) checks whether a new screensaver instance has been transferred to said temporary data storage means (TSM) prior to activation of said screensaver program (VIP) and whereby

- said routine check initiates transfer of the screensaver data instance to the data storage means (CD) if the check reveals that a new screensaver instance has been transferred to the temporary data storage means (TSM).
24. Method according to any of claims 21 to 23, whereby data indicating the result of said activity measure of the screensaver is transferred to said at least one central server (S).

25. Method according to any of claims 21 to 24, whereby a lottery number associated with said at least one client (account number) is activated when a certain level of screensaver activity has been registered by said at least one central server (S).

26. Method of facilitating distribution of screensaver advertising from at least one central server (S) to at least one decentral client computer (DCC)

said method comprising the steps of

- distributing screensaver data (ID) to at least one client computer (DCC),
  said screensaver data (ID) forming advertising data

- establishing a measure of the activity on the at least one client computer (DCC)

- transferring said measure to said central server means (S),

- dedicating a reward to the user/owner of the at least one client computer (DCC) when the measure transferred to the central server indicates that the screensaver (VIP) running said distributed screensaver data (ID) of said at least one client computer (DCC) has been active for a certain period of time.

27 Method of facilitating distribution of screensaver advertising according to claim 26, whereby at least one lottery number dedicated to said client computer (DCC) is activated if pre-established measuring criteria are met.
Abstract:
The invention relates to a method of distributing information data (ID) from at least one central server system (S) to at least one decentral client computer (DCC), said method comprising the steps of

- installing at least one viewer program (VIP) on said at least one decentral client computer (DCC), said viewer program (VIP) being adapted to displaying information data (ID) on said at least one decentral client computer (DCC),
- storing request criteria (RC) on said at least one decentral client computer (DCC),
- said at least one decentral computer comprising at least one computer input device (CID)
- transferring updated information data (ID) to said at least one decentral client computer (DCC) from said at least one central server system (S) via communication lines (DL) upon request (IDR) by said client computer when said at least one request criterion (RC) is met.

- said viewer program (VIP) being adapted to displaying said information data (ID) on said at least one decentral client computer (DCC) when the computer input devices (CID) of said decentral computer (DCC) have been inactive for a predetermined period of time (IAP).

According to the invention, an update schedule, i.e. the request criteria, may be stored by the decentral computers, thereby facilitating an update of information data under the control of the decentral computer. The decentral control of the update makes it possible to optimize the data transfer from the central server to the decentral client computers in the sense that the conditions of the decentral computers may be taken into consideration individually when a data transfer is intended.
Fig. 2
Fig. 6
Fig. 8a

Fig. 8b

Substitute Sheet (Rule 26)
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 G06F17/60

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G06F

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)

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
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<th>Category</th>
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<th>Relevant to claim No.</th>
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<tr>
<td>X</td>
<td>WO 97 26729 A (ROBINSON GARY B) 24 July 1997 (1997-07-24)</td>
<td>1-8, 10-24,26</td>
</tr>
<tr>
<td></td>
<td>page 13, line 3 - page 14, line 27 figure 1</td>
<td>9,25,27</td>
</tr>
<tr>
<td>Y</td>
<td>WO 00 62879 A (LEASON DAVID ; SULLIVAN SCOTT L (US)) 26 October 2000 (2000-10-26) page 4, line 3 - page 6, line 6</td>
<td>9,25,27</td>
</tr>
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Further documents are listed in the continuation of box C.

Patent family members are listed in annex

* Special categories of cited documents:

*A* document defining the general state of the art which is not considered to be of particular relevance

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Date of the actual completion of the international search 14 December 2001

Date of mailing of the international search report 21/12/2001

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Bowler, A
<table>
<thead>
<tr>
<th>Patent document cited in search report</th>
<th>Publication date</th>
<th>Patent family member(s)</th>
<th>Publication date</th>
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</thead>
<tbody>
<tr>
<td>WO 9726729 A</td>
<td>24-07-1997</td>
<td>AU 1566597 A</td>
<td>11-08-1997</td>
</tr>
<tr>
<td></td>
<td></td>
<td>WO 9726729 A2</td>
<td>24-07-1997</td>
</tr>
<tr>
<td></td>
<td></td>
<td>US 5918014 A</td>
<td>29-06-1999</td>
</tr>
<tr>
<td></td>
<td></td>
<td>AU 4662200 A</td>
<td>02-11-2000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>WO 0062879 A2</td>
<td>26-10-2000</td>
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</tbody>
</table>