SENDING REAL TIME INFORMATION TO SELECTED VIEWERS OF TRANSMITTED SIGNALS

FIELD AND BACKGROUND OF THE INVENTION

The present invention relates to providing an electronic service to viewers of transmitted video or computerized signals, and more particularly to a system and method for providing service of sending real time electronic information to selected individual viewers of transmitted video or computerized signals.

An important aspect of the 'information' superhighway' features viewers receiving transmitted signals from senders via a provider of video or computerized signals. Hereinafter, the term 'electronic information' refers to any type and form of information which can be transmitted and received as video or computerized signals (for example, via standard or cable TV, or, via computer), from a provider (for example, standard or cable TV station, or internet service provider (ISP) of video or computerized software signals, to viewers capable of receiving and displaying such transmitted video or computerized software signals (for example, via television sets, or computers with a display screen). Lately, computerized software signals are capable of including video data, such that a computer with a display screen is also capable of receiving and displaying video data.

The objective of viewers receiving transmitted video or computerized signals is to have access to electronic information contained in the transmitted signals. Ordinarily, viewers are given access to electronic information (for example, in the form of TV programs, internet web sites, personal messages) made available and transmitted by a sender utilizing services of a provider. Details of content and format of electronic information provided to viewers are

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chosen either by a provider or by a sender (i.e., an entity, for example, an individual or an entire company, which uses provider services for transmitting electronic information to viewers, usually for a monetary charge), based on criteria relevant to the provider or the sender, for purposes of maintaining a business, institution, governmental function, organization, or personal relationship, which includes among its activities or characteristics, a function for sending electronic information to viewers.

A significant limitation in current systems and methods of the relationship between providers or senders, and viewers of video or computerized signals, is that, except for electronic mail (e-mail), they are ordinarily based on essentially a 'one-way street', especially with respect to real viewing time, whereby, electronic information is initiated and sent by a sender to all potential viewers of a sender's TV station or internet provider, without the ability to transmit electronic information in a discriminatory manner to specifically targeted or selected individual viewers of that provider (sender). Moreover, using current systems and methods of indiscriminately sending electronic information limits a provider (sender) from having the ability to receive feedback response, during real time, from selected individual viewers of transmitted video or computerized signals.

There is thus a need for, and it would be useful to have a system and a method that enable a provider or sender to transmit electronic information, during real viewing time or not, to selected individual viewers of transmitted video or computerized signals.

Typically, criteria used by providers or senders for deciding on content and format of information transmitted to viewers are based on information coming from three sources: (1) viewers, (2) advertisers (for example, advertising companies), and (3) marketers (for example, marketing companies). Viewers are ultimate end-users of transmitted video and computerized electronic information, whereas advertisers and marketers supply information to providers or senders, based on market segments made up of selected individual viewers exposed to advertisements, for the main objective of advertising or marketing to viewers.

Thus, criteria used by providers or senders for deciding on content and format of information transmitted to viewers ultimately originates from the viewers themselves. These criteria are defined with respect to qualified or characteristic information about viewers, for the purpose of fulfilling or satisfying viewer interests, pleasures, requests, or specific needs. Hereinafter, viewer interests, pleasures, requests, or specific needs are collectively considered here as part of a set of 'viewer attribute information'. Viewer attribute information may also include demographic and personal information and details about viewers, such as names of viewers, locations of viewers, activities, lifestyles, likes, dislikes, habits, hobbies, etc.. According to identified viewer attribute information, providers or senders match resources available to them for transmission of video or computerized electronic information to their selected viewer audience. Viewer attribute information may be obtained either directly by sender providers, or by senders themselves such as advertisers and marketers, who in turn typically supply the information to providers.

Providers or senders of electronic information identify viewer attribute information by using various different methods and techniques, usually involving some form of market research. Market research techniques used by providers or senders for obtaining viewer attribute information, include the usage of provider or sender designed surveys, questionnaires, and interviews, of viewers, by contacting viewers through in-person, telephone, surface mail, or electronic means, such as electronic mail (e-mail), or by inserting the attribute information to a memory device located within the display device or to a communication set-off box located outside the display device. Providers or senders also obtain viewer attribute information by other electronic means, such as electronic monitoring or tracking of selected provider transmissions seen by viewers.

In the transmission of video signals to TV viewers, electronic monitoring or tracking of provider or sender transmissions sent to viewers involves connection of electronic black boxes to TVs, which identify viewing habits including, for example, categories or specific TV programs viewed, frequency of

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viewing, and times of viewing. TV program ratings are based on this kind of electronic monitoring of viewers. Results of TV program ratings are used by TV stations, and TV advertisers, for deciding upon content and format of information to be provided to TV viewers. In the transmission of computerized electronic information to viewer computer displays, a similar form of electronic monitoring, for example, featuring internet Web site or Web site page visit counters, is based on counting the number of viewer visits to a particular Web site or Web site page transmitted through the internet. Results of Web site visit counters are used by internet service providers and users, such as internet advertisers, for deciding upon content and format of information to be transmitted to internet viewers.

With respect to effectively servicing or targeting viewers, using market research techniques and results obtained therefrom, although quite developed and sophisticated, have several significant limitations which have not yet been overcome. Market research techniques, used by providers for obtaining viewer attribute information, are typically applied to entire viewer populations, of relatively large sizes, at the same time, during a specific time period, and not to selected individual viewers on a case by case basis, during real viewing time. Population size may be hundreds, thousands, tens of thousands, or higher, of viewers of video or computerized electronic information. Statistical analyses are performed on the raw data of surveys, questionnaires, interviews, and electronic monitoring, of entire populations of viewers, and not of individuals.

Results of these statistical analyses, enable providers of video or computerized electronic information to design transmission criteria in a statistical, not individualized, fashion, thereby, transmitting to statistically based viewer populations sharing viewer attribute information in a statistical, not individualized, fashion. Moreover, these results are dated, during a specified viewing time period, which, for example, may be of several weeks or months. After periods of several months, and especially after several years, accuracy of such results decreases as viewer attribute information changes, for both individual viewers and large populations of viewers. Thus, results of such market

research techniques are of limited value to providers or senders of electronic information, such as advertisers and marketers, desiring to efficiently transmit individualized electronic information to large numbers of selected individual viewers on an individualized basis, during real viewing time.

Current techniques and results of electronic monitoring of internet viewers, for the purpose of effectively servicing or targeting selected individual viewers by internet service providers or users, are less developed and more limited than those of electronic monitoring of TV viewers. Principle among these are Web site or Web site page counters, which simply count, electronically, the number of times any internet viewer visits, or 'hits', a particular Web site or Web site page. Web site counters are anonymous, unattached from internet viewer demographics, and are ordinarily unrelated to viewer personal names, e-mail names or addresses, and other useful individualized viewer attribute information.

Individualized viewer attribute information, such as internet usage habits, including, for example, categories of internet Web sites viewed, frequency of viewing, and times of viewing, relating to an individual internet viewer, are not ordinarily electronically recorded. An additional significant limitation compared to electronic monitoring of TV viewers is that, ordinarily, for a particular Web site having its own site counter, counter data obtained is applicable only to that particular Web site, and not to the usual plethora of Web sites accessible to internet viewers by internet service providers or users.

Provider or user initiated methods of connecting electronic black boxes to individual internet viewer displays, in order to monitor an individual's internet viewer usage habits relating to a multitude of Web sites visited by that individual viewer, during real viewer time or over extended periods of time, have not yet been developed to the extent of electronic monitoring TV viewers. Moreover, obtaining internet viewer ratings information analogous to TV viewer ratings information is not yet possible, due to the huge number of internet Web sites compared to a smaller number of TV channels, and also due to the nature of internet viewers 'surfing' the internet, where for example, internet viewers often

surf from one internet Web site to another in a time period of seconds, without investing sufficient time required for recording accurate ratings information. Such electronic monitoring techniques, and results obtained therefrom, represent very inefficient and low accuracy means for internet service providers to propose criteria for deciding on content and format of electronic information transmitted to viewers.

There is thus a need for, and it would be useful to have a system and a method that are capable of being used by providers or senders of electronic information to effectively monitor, record, and service viewer attribute information of selected individual viewers of video or computerized signals, during real time, whereby such a system and method are based on obtaining results with high accuracy, and which are cost effective to implement.

SUMMARY OF THE INVENTION

The present invention relates to providing an electronic service to viewers of transmitted video or computerized signals, and more particularly to a system and method for providing service of sending real viewing time electronic information to selected individual viewers of transmitted video or computerized signals.

The system and method of the present invention features a unique electronic device which has the capability of selectively recognizing electronic information sent by a sender to one or more viewers, where sender electronic information is an additional component of, and is included in, the same video or computerized signal regularly transmitted by a provider to the one or more viewers. Recognition by the electronic device is based on a decision step involving matching viewer attribute information previously stored in the electronic device, by the viewers, to a subset of viewer attribute information included in the electronic information being sent to the viewers by request of the sender, via a provider of transmitted video or computerized signals to the viewers.

The system and method of the present invention enable a sender to send real time electronic information to selected individual viewers of regularly transmitted video or computerized signals. Sender electronic information conveniently 'piggy-backs' on regularly transmitted video or computerized signals being sent to one or more selected individual viewers, during real time, in contrast to current communication systems and methods, where sender electronic information is either transmitted to individual viewers separate from regularly transmitted video or computerized signals to the viewers, or is sent to all the viewers of a provider, in a non-discriminatory mode, where sender electronic information may have something in common with only a fraction of targeted viewer attribute information, and therefore, have something in common with only a fraction of all targeted viewers.

An additional benefit of the system and method of the present invention is that, as a result of enabling providers to target selected individual viewers via matching of viewer attribute information, whereby provider transmissions of video and computerized signals are sent and selectively recognized, with essentially perfect accuracy, to those selected individual viewer display devices, they offer providers of electronic information the opportunity to more effectively monitor, record, and service selected individual viewer activity of video or computerized signals, during real time, in a way of obtaining results with high accuracy, and which are cost effective to implement. This benefit is extremely valuable to senders of electronic information to large groups of potentially targeted viewers, for example, advertisers or marketers sending electronic information to large groups of potential customers viewing their products or ads. Currently, such a highly accurate system or method for targeting selected individual viewers of transmitted video or computerized signals, during real time, is not available.

A preferred embodiment of a system for providing service of sending real time electronic information to selected individual viewers of transmitted video or computerized signals of the present invention features the following five main areas or categories of components: (1) viewer, (2) viewer display device such as

a television, including an electronic device central to implementing the method, (3) service center, (4) providers of video or computerized signals, and (5) sender, whereby each area further includes components required for implementation of the system and method of the present invention.

A preferred embodiment of a method for implementing the system for providing service of sending real time electronic information to selected individual viewers of transmitted video or computerized signals of the present invention features the following five principle steps: (1) initialization of system, (2) activation of system by sender of electronic information, (3) viewer reception of a transmitted compound video or computerized signal, (4) display of compound video or computerized signal, featuring sender requested electronic information, and (5) viewer response, in real time, back to provider, according to a fully interactive information system.

According to the present invention, there is provided a system for providing service of sending real time electronic information to a selected individual viewer of transmitted video or computerized signals, the system comprising: (a) a set of viewer attribute information related to the selected individual viewer; (b) an electronic device in communication with a display device of the selected individual viewer for receiving and storing the set of viewer attribute information; (c) electronic information of a sender to be transmitted to the selected individual viewer, the electronic information of the a sender including a subset of the set of viewer attribute information related to the selected individual viewer; (d) a service center for communicating to a provider of transmitted video or computerized signals encoding instructions to form encoded electronic information of the sender; (e) the provider of transmitted video or computerized signals for transmitting the encoded electronic information of the sender to the electronic device in communication with the display device of the selected individual viewer; (f) the electronic device for recognizing the encoded electronic information of the sender by matching elements of the subset of the viewer attribute information to the elements of the set of viewer attribute

information related to the selected individual viewer, and for decoding the encoded electronic information of the sender to form decoded electronic information of the sender; and (g) a subwindow within the display device of the selected individual viewer for displaying the decoded electronic information of the sender.

According to the present invention, there is provided a method of providing service of sending real time electronic information to a selected individual viewer of transmitted video or computerized signals, the method comprising the steps of: (a) providing a set of viewer attribute information related to the selected individual viewer; (b) receiving and storing the set of viewer attribute information by an electronic device in communication with a display device of the selected individual viewer; (c) providing electronic information of a sender to be transmitted to the selected individual viewer, the electronic information of the sender including a subset of the set of viewer attribute information related to the selected individual viewer; (d) providing a service center for communicating to a provider of transmitted video or computerized signals encoding instructions to form encoded electronic information of the sender; (e) transmitting the encoded electronic information of the sender by the provider of transmitted video or computerized signals to the electronic device in communication with the display device of the selected individual viewer; (f) recognizing the encoded electronic information of the sender by the electronic device in communication with the display device of the selected individual viewer, whereby the electronic device recognizes the encoded electronic information of the sender by matching elements of the subset of the viewer attribute information to the elements of the set of viewer attribute information related to the selected individual viewer; (g) decoding the encoded electronic information of the sender by the electronic device in communication with the display device of the selected individual viewer to form decoded electronic information of the a sender; (h) formatting decoded electronic information of the sender by the electronic device in communication with the display device of the

selected individual viewer to form formatted decoded electronic information of the sender; (i) opening up of a subwindow within the display device of the selected individual viewer; and (j) displaying the formatted decoded electronic information of the sender within the subwindow within the display device of the selected individual viewer.

Several steps of the present invention could be implemented by hardware or by software on any operating system of any firmware or a combination thereof. For example, as hardware, indicated steps of the invention could be implemented as a chip or a circuit. As software, indicated steps of the invention could be implemented as a plurality of software instructions being executed by a computer using any suitable operating system. In any case, indicated steps of the method of the invention could be described as being performed by a data processor, such as a computing platform for executing a plurality of instructions, regardless of the implementation of the present invention.

BRIEF DESCRIPTION OF THE DRAWINGS

The invention is herein described, by way of example only, with reference to the accompanying drawings, wherein:

FIG. 1 is a schematic diagram illustrating an exemplary preferred embodiment of the system, according to the present invention; and

FIG. 2 is a flow diagram of a preferred embodiment of the method for providing service of sending real time electronic information to selected individual viewers of transmitted video or computerized signals, according to the present invention.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

The present invention is of a system and method for providing service of sending real time electronic information to selected individual viewers of transmitted video or computerized signals.

The components and operation of the system and method for providing service of sending real time electronic information to selected individual viewers of transmitted video or computerized signals according to the present invention are better understood with reference to the drawings and the accompanying description. It is to be understood that the invention is not limited in its application to the details of the system and method set forth in the following drawings, descriptions, and examples. The invention is capable of other embodiments or of being practiced or carried out in various related ways. Also, it is to be understood that the phraseology and terminology employed herein are for the purpose of description and should not be regarded as limiting.

For example, the system and method of the present invention could be applied to (a) a single sender requesting to send electronic information via a provider of video or computerized signals to a single viewer having a display device capable of receiving and displaying the new signal including the sender's electronic information, or, could be applied to (b) a single sender and a plurality of viewers, or, could be applied to (c) a plurality of senders and a single viewer, or, could be applied to (d) a plurality of senders and a plurality of viewers. For illustrative purposes in the following drawings and accompanying description, case (a), featuring a single sender and a single viewer, is referred to with respect to the present invention. Where appropriate, for comparative purposes, mention of cases (b), (c), and (d) appear in the description.

Referring now to the drawings, FIG. 1 is a schematic diagram illustrating an exemplary preferred embodiment of the system, according to the present invention. System **1** features five main areas or categories of components, (1) viewer **2**, (2) viewer display device **4** including an electronic device **8** critical to implementation of the system, (3) service center **20**, (4) providers of video or computerized signals **30** and **34**, and (5) sender **42**, whereby each main area further includes components required for implementation of the system and method of the present invention.

In FIG. 1, viewer **2** represents an individual viewer or a group, for example, a family, of more than one viewer, associated with a single viewer television **4**. Viewer **2** features viewer attribute information **2a**, related to the individual viewer, or to the just described group of viewers. Viewer attribute information **2a** includes personal, demographic, and equipment related information about viewer **2**, which is to be used as criteria for viewer television **4** to recognize and receive, or, to not recognize and send back, transmitted video or computerized signals. For example, viewer attribute information **2a** may include detailed information such as name of viewer **2**, location of viewer **2**, identification number of viewer television or a component of viewer television, activities, lifestyle, likes, dislikes, habits, hobbies, interests, pleasures, requests, specific needs, etc., of viewer **2**.

In the present invention, television **4** features a display screen (not shown) capable of receiving and displaying video and/or computerized signals. For example, display screen of television **4**, in addition to displaying TV station signals, could be used as a computer display to display computerized signals. Moreover, display screen of viewer television **4** has the capability of displaying transmitted video or computerized electronic information in a subwindow **60**. In a preferred embodiment of the system of the present invention, television **4**, identified by a serial or TV identification (I.D.) number **6**, includes electronic device **8**. In an alternative preferred embodiment (not shown) of the system of the present invention, electronic device **8** is located outside of viewer television **4**, and is in direct electronic communication with viewer television **4**. For example, electronic device **8** could be located outside of, and in the immediate vicinity of viewer television **4**, or alternatively, located elsewhere, for example, at the site of service center **20**.

Electronic device **8** includes central processing unit (CPU) **10**, where CPU **10** features identification (I.D.) number **12**. Electronic device **8** also includes memory unit **14**, and software package **16**. Memory unit **14** stores viewer attribute information **2a**, to be recalled upon reception by viewer television **4** of

transmitted signals sent by a sender. Memory unit **14** also stores electronic information sent by a sender **42** via provider **30** or **34** of transmitted video or computerized signals. Electronic device **8** has the capability of recognizing and decoding coded electronic information sent to it by a provider **30** or **34** of transmitted video or computerized signals. Viewer **2** is in communication with electronic device **8** via electronic connection **18**, enabling direct input of viewer attribute information into viewer television **4**.

Viewer **2** is in communication with service center **20** via electronic connection **22**, where electronic connection **22** could be a telephone, fax, letter, or electronic mail (e-mail) connection, enabling contact between viewer **2** and either personnel or electronic equipment of service center **20**. Service center **20** primarily serves providers of transmitted video or computerized signals **30** or **34** by providing them with codes required for transmitting sender requested electronic information as part of regularly transmitted video or computerized signals. Service center **20** includes general database center **26**, and specific database **28**, where specific database **28** enables the storing of viewer attribute information **2a**, such as CPU I.D. number **12** of electronic device **8**, included in television **4** belonging to viewer **2**. Via electronic connection **22**, viewer **2** has the option of providing viewer attribute information **2a** to service center **20**. Alternatively, television electronic device **8** is in communication with service center **20** via electronic connection **24**, enabling direct sending of CPU I.D. number **12** or any other viewer attribute information **2a** from electronic device **8** to service center **20**.

Service center **20** is also in communication with providers of transmitted video or computerized signals, including TV station provider **30**, via electronic connection **32**, and internet service provider **34**, via electronic connection **36**. Electronic connection **32** or electronic connection **36** could be a telephone, fax, letter, or electronic mail (e-mail) connection, enabling contact between either personnel or equipment of service center **20** and either personnel or electronic equipment of provider **30** or **34**.

TV station provider **30** or internet service provider **34**, or both, are in communication with electronic device **8** of television **4** belonging to viewer **2**, via electronic connections **38** and **40**, respectively. TV station provider **30** transmits video or computerized signals **48** to electronic device **8**, during regular on-going provider service to viewer **2**. Alternatively, internet service provider **34** transmits video or computerized signals **50** to electronic device **8**, during regular on-going provider service to viewer **2**. Transmitted signals **48** or **50** serve as vehicles for providers **30** or **34**, respectively, to transmit sender requested electronic information in addition to, and included with provider regular transmission of video or computerized signals, in the form of 'compound' transmitted video or computerized signals.

Sender **42** is any entity, for example, an individual sender, or a group of senders such as a company or other organization, desiring to be provided with service of sending real time sender requested electronic information **42a** to selected individual viewers of transmitted video or computerized signals according to the present invention. Sender requested electronic information **42a** is any form or combination of video or computerized electronic information, to be sent to viewer **2**, in addition to, and included with, regular transmission of video or computerized signals to viewer **2** by TV station provider **30** or internet service provider **34**. Sender **42** has capability of being in communication either with TV station provider **30** via electronic connection **44**, or with internet service provider **34** via electronic connection **46**, for the purpose of ordering the transmission of sender requested electronic information **42a**. Electronic connection **44** or electronic connection **46** could be a telephone, fax, letter, or electronic mail (e-mail) connection, enabling contact between either personnel or equipment of sender **42** and either personnel or electronic equipment of provider **30** or **34**. In an alternative embodiment of the system of the present invention, sender **42** could be in direct communication (not shown) with service center **20**, for the purpose of placing requests for transmission of sender requested electronic

information **42a** to viewer **2**, via service center **20**, in addition to, or instead of, via TV station or internet service provider **30** or **34**, respectively.

As described below in a preferred embodiment of the method of the present invention, TV station provider **30** or internet service provider **34** includes sender requested electronic information **42a** in addition to, and included with, regular transmission of video or computerized signals **48** or **50**, respectively, to viewer **2**. Upon activation of system **1**, for transmitting sender requested electronic information **42a**, TV station provider **30**, adds to regular transmitted video or computerized signal **48**, the following electronic information: a subset **52** of viewer attribute information **2a**, encoded form **42b** of sender requested electronic information **42a**, and format information **54** for formatting sender requested electronic information **42a**. Thus, TV station provider **30** transmits a compound video or computerized signal, indicated in this description as TV station provider compound signal **(48 + 52 + 42b + 54)**. Alternatively, internet service provider **34**, adds to regular transmitted video or computerized signal **50**, the following electronic information: a subset **56** of viewer attribute information **2a**, encoded form **42c** of sender requested electronic information **42a**, and format information **58** for formatting sender requested electronic information **42a**. Thus, internet service provider **34** transmits a compound video or computerized signal, indicated in this description as internet service provider compound signal **(50 + 56 + 42c + 58)**.

TV station provider compound signal **(48 + 52 + 42b + 54)** is transmitted by TV station provider **30** to viewer television **4**, via electronic connection **38**, or, alternatively, internet service provider compound signal **(50 + 56 + 42c + 58)**, is transmitted by internet service provider **34**, to viewer television **4**, via electronic connection **40**. Following reception, positive recognition, and decoding of TV station provided encoded sender requested electronic information **42b**, or of internet service provided encoded sender requested electronic information **42c**, by electronic device **8**, viewer television **4** opens a subwindow **60** within the

display screen for formatted display of sender requested electronic information **42a**.

FIG. 2 is a flow diagram of a preferred embodiment of the method, relating to above described system **1** shown in FIG. 1, for providing service of sending real time electronic information to selected individual viewers of transmitted video or computerized signals according to the present invention.

In FIG. 2, **Step 1** features initialization of exemplary system **1**. In step **(a)**, viewer **2** turns on viewer television **4**. In step **(b)**, viewer **2** inputs viewer attribute information **2a** into electronic device **8**, via electronic connection **18**. In an alternative preferred embodiment (not shown) of the method of the present invention, viewer **2** contacts service center **20**, requesting to set up a service contract, with service center **20**, for coordinating the service of receiving real time electronic information of transmitted video or computerized signals. Furthermore, in an alternative preferred embodiment (not shown) of the method of the present invention, viewer **2** contacts service center **20** via electronic connection **22** or electronic connection **24**, and provides service center **20** with viewer attribute information **2a**, such as CPU I.D. number **12**, which is used as criterion by electronic device **8** to recognize encoded sender requested electronic information **42b** or **42c**, sent by TV station provider **30** or internet service provider **34**. Viewer attribute information **2a** may include detailed information such as names of viewers, locations of viewers, activities, lifestyles, likes, dislikes, habits, hobbies, viewer interests, pleasures, requests, specific needs, etc..

In **Step 2**, there is activation of system **1** by sender **42** of sender requested electronic information **42a**. In step **(a)**, sender **42** contacts TV station provider **30** via electronic connection **44**, or internet service provider **34** via electronic connection **46**, requesting to send electronic information **42a** to selected individual viewer **2**. In an alternative preferred embodiment (not shown) of the method of the present invention, sender **42** contacts service center **20**, requesting to send electronic information **42a** to selected individual viewer **2**.

In step **(b)** of **Step 2**, provider **30** or **34** prepares a compound video or computerized signal, including sender requested electronic information **42a** of sender **42**. TV station provider **30** or internet service provider **34** includes sender requested electronic information **42a** in addition to, and included with, regular transmission of video or computerized signals **48** or **50**, respectively, to viewer **2**. TV station provider **30**, adds to (i) regular transmitted video or computerized signal **48**, the following electronic information: (ii) a subset **52** of viewer attribute information **2a**, (iii) encoded form **42b** of sender requested electronic information **42a**, and (iv) format information **54** for formatting sender requested electronic information **42a**. Alternatively, internet service provider **34**, adds to (i) regular transmitted video or computerized signal **50**, the following electronic information: (ii) a subset **56** of viewer attribute information **2a**, (iii) encoded form **42c** of sender requested electronic information **42a**, and (iv) format information **58** for formatting sender requested electronic information **42a**. In step **(c)**, TV station provider **30** transmits a compound video or computerized signal, indicated in this description as TV station provider compound signal **(48 + 52 + 42b + 54)**, to viewer television **4** via electronic connection **38**, or alternatively, internet service provider **34** transmits a compound video or computerized signal, indicated in this description as internet service provider compound signal **(50 + 56 + 42c + 58)**, to viewer television **4** via electronic connection **40**.

In **Step 3**, there is viewer reception of TV station provider compound signal **(48 + 52 + 42b + 54)**, or, alternatively, of internet service provider compound signal **(50 + 56 + 42c + 58)**, whereby each signal received includes sender requested electronic information **42a** in coded form, indicated as **42b** or **42c**, respectively.

In step **(a)**, compound signal **(48 + 52 + 42b + 54)**, or, **(50 + 56 + 42c + 58)**, transmitted by TV station provider **30**, or transmitted by internet service provider **34**, respectively, is received by electronic device **8** of viewer television **4**.

Step **(b)** involves a decision step (i), whereby software package **16**, as part of electronic device **8**, decides to recognize or not to recognize subset of viewer attribute information **52** or **56**, respectively, corresponding to compound video or computerized signal sent by TV station provider **30** or internet service provider **34**. If there is not recognition of subset of viewer attribute information **52**, as part of compound video or computerized signal sent by TV station provider **30**, or subset of viewer attribute information **56**, sent by internet service provider **34**, then viewer TV electronic device **8** does not accept encoded form of sender requested information **42b** or **42c**. Alternatively, if there is recognition of subset of viewer attribute information **52**, as part of compound signal **(48 + 52 + 42b + 54)** sent by TV station provider **30**, or subset of viewer attribute information **56**, as part of compound signal **(50 + 56 + 42c + 58)** sent by internet service provider **34**, viewer TV electronic device **8** accepts encoded form of sender requested information **42b** or **42c**.

In step **(c)**, components of TV station provider compound signal, (ii) subset **52** of viewer attribute information **2a**, (iii) encoded form **42b** of sender requested electronic information **42a**, and (iv) format information **54** for formatting sender requested electronic information **42a**, are stored into memory unit **14** of electronic device **8**, of viewer television **4**. Alternatively, components of internet service provider compound signal, (ii) subset **56** of viewer attribute information **2a**, (iii) encoded form **42c** of sender requested electronic information **42a**, and (iv) format information **58** for formatting sender requested electronic information **42a**, are stored into memory unit **14** of electronic device **8**, of viewer television **4**.

In step **(d)**, there is decoding of sender requested electronic information, according to decoding instructions provided by service center **20**. Encoded form **42b**, or encoded form **42c**, of sender requested electronic information **42a**, is decoded, according to decoding instructions provided by service center **20**.

In step **(e)**, there is opening of subwindow **60** within display device of viewer television **4**, according to formatting information **54** or **58**, included in TV

station or internet service provider compound video or computerized signal, **(48 + 52 + 42b + 54)** or **(50 + 56 + 42c + 58)**, respectively.

In **Step 4**, sender requested electronic information **42a** is displayed in subwindow **60** of viewer television **4**, in formatted form.

In **Step 5**, viewer **2** has the option of responding to sender requested electronic information **42a**, by sending back a message to TV station provider **30**, or sending back a message to internet service provider **34**, via electronic connection **38** or via electronic connection **40**, respectively. According to implementation of this option by viewer **2**, the system and method for providing service of sending real time electronic information to selected individual viewers of transmitted video or computerized signals of the present invention perform as a fully interactive information system.

While the invention has been described in conjunction with general and specific embodiments thereof, it is evident that many alternatives, modifications and variations will be apparent to those skilled in the art. Accordingly, it is intended to embrace all such alternatives, modifications and variations that fall within the spirit and broad scope of the appended claims.

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WHAT IS CLAIMED IS:

1. A system for providing service of sending real time electronic information to a selected individual viewer of transmitted video or computerized signals, the system comprising:

(a) a set of viewer attribute information related to the selected individual viewer;

(b) an electronic device in communication with a display device of the selected individual viewer for receiving and storing said set of viewer attribute information;

(c) electronic information of a sender to be transmitted to the selected individual viewer, said electronic information of said sender including a subset of said set of viewer attribute information related to the selected individual viewer;

(d) a service center for communicating to a provider of transmitted video or computerized signals encoding instructions to form encoded electronic information of said sender;

(e) said provider of transmitted video or computerized signals for transmitting said encoded electronic information of said sender to said electronic device in communication with said display device of the selected individual viewer;

(f) said electronic device for recognizing said encoded electronic information of said sender by matching elements of said subset of said viewer attribute information to said elements of said set of viewer attribute information related to the selected individual viewer, and for decoding said encoded electronic information of said sender to form decoded electronic information of said sender; and

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(g) a subwindow within said display device of the selected individual viewer for displaying said decoded electronic information of said sender.

2. The system of claim 1, wherein said electronic device in communication with a display device of the selected individual viewer further comprises a central processing unit, a memory unit, and a software package.

3. The system of claim 1, wherein said viewer attribute information is selected from the group consisting of name of the selected individual viewer, location of the selected individual viewer, identification number of said display device of the selected individual viewer, identification number of said electronic component in communication with said display device of the selected individual viewer, activities, lifestyle, likes, dislikes, habits, hobbies, interests, pleasures, requests, and specific needs of the selected individual viewer.

4. The system of claim 1, wherein said electronic device in communication with said display device of the selected individual viewer is used to format said decoded electronic information of said sender for display in said subwindow within said display device of the selected individual viewer.

5. The system of claim 1, wherein said provider of transmitted video or computerized signals for transmitting said encoded electronic information of said sender to said electronic device in communication with said display device of the selected individual viewer is selected from the group consisting of a television station provider and an internet service provider.

6. The system of claim 1, wherein physical location of said electronic device in communication with said display device of the selected individual viewer is selected from the group consisting of inside said display device of the

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selected individual viewer and outside of said display device of the selected individual viewer.

7. The system of claim 1, wherein said sender of said electronic information represents a plurality of senders of said electronic information to the selected individual viewer.

8. The system of claim 1, wherein said service center may also be said provider of transmitted video or computerized signals for transmitting said encoded electronic information of said sender to said electronic device in communication with said display device of the selected individual viewer.

9. A method of providing service of sending real time electronic information to a selected individual viewer of transmitted video or computerized signals, the method comprising the steps of:

(a) providing a set of viewer attribute information related to the selected individual viewer;

(b) receiving and storing said set of viewer attribute information by an electronic device in communication with a display device of the selected individual viewer;

(c) providing electronic information of a sender to be transmitted to the selected individual viewer, said electronic information of said sender including a subset of said set of viewer attribute information related to the selected individual viewer;

(d) providing a service center for communicating to a provider of transmitted video or computerized signals encoding instructions to form encoded electronic information of said sender;

(e) transmitting said encoded electronic information of said sender by said provider of transmitted video or computerized signals to said

electronic device in communication with said display device of the selected individual viewer;

(f) recognizing said encoded electronic information of said sender by said electronic device in communication with said display device of the selected individual viewer, whereby said electronic device recognizes said encoded electronic information of said sender by matching elements of said subset of said viewer attribute information to said elements of said set of viewer attribute information related to the selected individual viewer;

(g) decoding said encoded electronic information of said sender by said electronic device in communication with said display device of the selected individual viewer to form decoded electronic information of said sender;

(h) formatting said decoded electronic information of said sender by said electronic device in communication with said display device of the selected individual viewer to form formatted decoded electronic information of said sender;

(i) opening up of a subwindow within said display device of the selected individual viewer; and

(j) displaying said formatted decoded electronic information of said sender within said subwindow within said display device of the selected individual viewer.

10. The method of claim 9, wherein physical location of said electronic device in communication with said display device of the selected individual viewer is selected from the group consisting of inside said display device of the selected individual viewer and outside of said display device of the selected individual viewer.

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11. The method of claim 9, wherein said service center may also be said provider of transmitted video or computerized signals for transmitting said encoded electronic information of said sender to said electronic device in communication with said display device of the selected individual viewer.

12. The method of claim 9, wherein said viewer attribute information is selected from the group consisting of name of the selected individual viewer, location of the selected individual viewer, identification number of said display device of the selected individual viewer, identification number of said electronic component in communication with said display device of the selected individual viewer, activities, lifestyle, likes, dislikes, habits, hobbies, interests, pleasures, requests, and specific needs of the selected individual viewer.

13. The method of claim 9, wherein said sender of said electronic information represents a plurality of senders of said electronic information to the selected individual viewer.

14. The method of claim 9, wherein said electronic device in communication with said display device of the selected individual viewer further comprises a central processing unit, a memory unit, and a software package.

15. The method of claim 9, wherein said provider of transmitted video or computerized signals for transmitting said encoded electronic information of said sender to said electronic device in communication with said display device of the selected individual viewer is selected from the group consisting of a television station provider and an internet service provider.

16. The method of claim 9, wherein the selected individual viewer of said electronic information of said sender replies back to said provider of transmitted video or computerized signals.

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