Title: ELECTRONIC COMMERCE SYSTEM AND METHOD

Abstract: The present invention is a system and method for linking a broadcast signal to a website. The system embeds command data into a broadcast signal; transmits the broadcast signal to a home entertainment appliance; plays the broadcast signal on the home entertainment appliance; extracts the command data from the broadcast signal emanating from the home entertainment appliance with a remote sensing device; transfers the command data from the remote sensing device to an internet appliance; and access the website based upon the command data. The command data, which includes URLs and special codes, is embedded into the audio portion of the broadcast signal. The Internet appliance may be pre-loaded with website pages based upon pre-specified user preference information and the accessed if present with the Internet appliance based upon the command data.
For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.
ELECTRONIC COMMERCE SYSTEM AND METHOD

Technical Field
This invention relates generally to an electronic commerce system and method, and more particularly, it relates to the convergence of traditional media advertising with electronic purchasing via the Internet.

Background Art
One of the windfalls of the explosive growth of the Internet has been the onslaught of the online shopping industry. Retailing is a nearly $2 trillion dollar industry in North America, with catalog shopping making up over $70 billion in retail sales according to Forrester Research. Online shopping, while still in its infancy, makes up nearly $37 billion in sales and represents by far the fastest growing single segment in retailing. The essential element behind the surge of online shopping is the convenience factor. Forrester Research reports that 45% of online shoppers cited convenience as the primary reason they shop online, outdistancing other factors like price and product research.
The growth of online shopping is not lost on the retail establishment. The market dominance (and market capitalization) of online establishments like Amazon.com has caught everyone's attention. New "eTailers" are emerging daily, and the traditional brick and mortar retailers are quickly bringing up their own e-commerce sites. For example, Sears, one of the nation's top retailers, is putting $100 million in total marketing to promote its online site, sears.com, in an attempt to sell into a younger, more Web-savvy, and higher income-bracketed consumer base. Many of these sites offer discounts available only online. The cost advantages of selling online versus through the traditional storefronts are driving much of the decision making to compete online.

From an advertising standpoint, the traditional media is still the largest sector. Television advertising accounted for $47.6 billion in 1998 according to the Direct Marketing Association. Even "pure" online shopping sites like Amazon.com do not rely on web advertising to draw customers to their sites. The online retailer is reported to have spent $17 million on TV advertising in 1998. In fact, there is a current trend for on-line companies to spend far beyond the traditional 3-4% of retail revenue on advertising. The first half of 1999 saw over $400 million in TV ad spending totals for Internet companies, up from $323 million for the whole of 1998. Forecasts for 1999 are over $1 billion. There is a great departure from online advertising into TV to increase brand/site awareness. In 1998, roughly 70-80 percent of eTailer marketing budgets targeted web advertising, whereas now that figure is targeted for TV advertising.

The present invention recognizes that the ultimate dream of the TV advertiser is to capture the effect of the millions of dollars spent in the creative process to create an impulse buy. At the same time, TV consumers want flexibility. They want to buy when they feel the impulse, but not have to miss the end of the program, football game or mini-series they are viewing. As noted above, the online shopping industry is driven by convenience.
Interactive TV claims have been promoted for several years. The vision of a future with millions of consumers buying products through their TV has spawned dozens of companies and commanded hundreds of millions of dollars of investment. Yet, a solution that targets the here and now, that does not require new televisions or expensive equipment, and that is focused on working with the existing of TV and online technologies is only found in the present invention.

As is obvious to all, the Internet has become a global communications force giving millions of people all over the world the ability to communicate without regard for location or hour. According to all projections, Internet traffic is still increasing at a blistering pace. IntelliQuest Research reports that 79.4 million adults, or 38% of the U.S. population age 16 and older are online today and that number is to grow by 18.8 million people to nearly 100 million by the year 2000. Projections abound as to the future size and growth of the Internet. Regardless of which one adopts, it is clear that the population of the online public will continue to expand at staggering growth rates for several years to come.

Online shopping is the one of the fastest growing segments of all the Internet industries. A recent Commercenet & Nielsen Media Research study found that of the 92 Million people (adults and children) online today in the US, 55 Million, or just under 60%, shop online. Those 55 million shoppers were responsible for $37 billion in retail sales from the first quarter of 1998 to the first quarter of 1999, an increase of 127% over the previous year according to the University of Texas’ Center for Research in Electronic Commerce. Forrester Research estimates that online retail sales will total $184 billion by 2004, and another $500 billion worth of goods purchased offline will have been influenced by Internet research.

Like the volume of online shopping, consumer-based e-commerce sites are growing at extremely fast rates. International Data Corp. has forecasted that by 2003 there will be 1.2 million e-commerce sites up from 687,000 in 1999. Standard brick and mortar retailers have all but given up trying to compete
without an online presence. Nine out of ten of the top retailers have added online shopping sites as another channel to the buying public.

Current solutions for e-commerce stems mainly from the interactive TV players. Some of these players are part of the Advanced Television Enhancement Forum, or ATVEF, which is a body whose mission is to establish a standard for displaying Web pages and content on enhanced TV platforms. Companies, such as Wink Communications, Liberate Technologies, and WebTV, are focusing on more "proprietary" solutions, requiring a set-top box or specialized TV in their implementation.

Wink Communications designs, builds, and sells interactive TV solutions. The Wink service is offered free to TV consumers but to access the service, consumers must have a Wink-enabled set-top box or TV. The Wink solution includes four components: authoring tools to design interactive programming; a broadcast server, that manages the delivery of those applications; client software running on set-top boxes or Wink-enabled TVs; and response server and network to enable the connectivity between viewer and the merchant/interactive partner.

Liberate Technologies is the former Network Computer, Inc., the Oracle subsidiary, is building an Internet appliance. In October of 1999, Liberate and Wink announced a partnership deal announcing the integration of the Wink and Liberate products to deliver enhanced TV programming and advertising to consumers for enabling network operators to access Wink functionality from Liberate platforms.

Microsoft's WebTV announced in 1997 their WebTV Plus, that included a technology called the "cross-over link" which was designed to enable the integration data embedded in TV broadcast signals to the web. The WebTV Plus box recognizes this embedded data signal and responds by placing an icon in a corner of the television screen that links to the Web, representing the "crossover" link. By clicking on this icon, the user is taken to a Web page that combines Web and TV content.
Another example of converging television programs and the Internet through a combination television/Internet appliance is discussed in U.S. Patent No. 5,761,606 issued to Wolzien. This Wolzien patent discloses a method for providing direct automated access to an online information service provider through an address embedded in a video or audio program, commercial message or news story. The system automatically establishes a direct link to the online information provider.

These e-commerce solutions have a number of drawbacks. In particular, there is a lack of integration with desktop PC's, slow download data rates, necessity of a proprietary set-top box or circuitry, additional expensive equipment required in customers' homes, and difficulty in tracking the customers purchasing behavior and other important marketing and sales information. The present invention as discussed below solves these numerous problems.

**Summary of the Invention**

The present invention is a system and method for linking a broadcast signal to a website. The system embeds command data into a broadcast signal; transmits the broadcast signal to a home entertainment appliance; plays the broadcast signal on the home entertainment appliance; extracts the command data from the broadcast signal emanating from the home entertainment appliance with a remote sensing device; transfers the command data from the remote sensing device to an internet appliance; and accesses the website based upon the command data. The command data, which includes URLs and special codes, is embedded into the audio portion of the broadcast signal. The Internet appliance may be pre-loaded with website pages based upon pre-specified user preference information and accessed if present with the Internet appliance based upon the command data.

The present invention has other objects and advantages which are set forth in the description of the Best Mode of Carrying Out the Invention. The features and advantages described in the specification, however, are not all inclusive, and particularly, many additional features and advantages will be apparent to one of ordinary skill in the art in view of the drawings, specification, and claims herein.
Brief Description of the Drawings

FIG. 1 is a functional block diagram of the best mode of the electronic commerce system of the present invention.

FIG. 2 is a flow chart of the process employed by the best mode of the electronic commerce system of the present invention.

FIG. 3 is a block diagram of the structure of the remote sensing device depicted in figure 1.

FIGS. 4A and 4B are exemplary web pages provided by the shopping list portal employed by the best mode of the electronic commerce system of the present invention.

Best Mode of Carrying Out the Invention

In general terms, the system of the present invention converges traditional media transmission sources, such as a television broadcast station, cable television head-end or radio station with the Internet. Data is embedded in the broadcast signal to facilitate consumer access to targeted e-commerce web sites. The present invention extracts the data from the broadcast signals received by the consumer. The data is then used to direct the consumer to targeted web sites. This is accomplished by a managed shopping list page. This web page acts as a portal to the e-commerce web sites that the consumer has expressed an interest in by pressing a "capture" key in a remote and later transferring the captured data to a PC.

Users of the present invention are divided into two categories: the online consumer e-commerce companies and the home TV viewer/online shopper (i.e., consumer). Through convergence of traditional broadcast media and the Internet, the present invention provides a novel mechanism for enabling e-commerce companies to better reach consumers.
Online e-commerce Companies fall into two distinct categories: retail and non-retail companies. The online retailers, or as someone has coined—"eTailers", are made up of "pure" online stores as well as traditional brick and mortar establishments and catalog/home shopping companies. These companies target their advertising to push consumers into their stores and to drive end users to make purchases over the web at their online stores. These companies sell a multitude of products and services over the web.

Non-retail companies are those that have web sites for brand awareness and product information. Unlike the retailers, they do not sell product directly online. Most of these represent manufacturers of products such as the automobile manufacturers, household goods & product makers, fast food establishments and clothing companies.

Online companies utilize standard commercials, infomercials, online shopping channels, and media related content on traditional broadcast media to reach their consumer base. The present invention enables these companies to simply embed promotions on specific products or discounts for any and all products sold on their sites.

The ultimate end user is the TV viewer/online shopper at home. Convenience has been identified as the number one appeal of online shopping. Any time, day or night, shoppers can gather information and place orders online.

As mentioned above, convenience is a driving force in our society today. The present invention enables the convergence of TV advertising and programming and online shopping, bringing the ultimate in convenience to the home. With just a push of a button, the TV viewer can store away links to product promotions and advertiser e-commerce web sites.
The structure of the preferred embodiment is depicted in figure 1. System 10 includes a broadcast transmission station 12, consumer equipment 14 (including an entertainment appliance 16, remote sensing device 18, and an internet appliance 20), Internet service provider (ISP) 21, Internet 22, system distributor 24, and a plurality of e-commerce web sites 26. Entertainment appliance is preferably a standard television and does not need any special or unique equipment, although some may be included as described in relation to some of the alternate embodiments.

In operation, data is embedded into a television commercial or program during the post-production phase of the commercial or program. Data is preferably embedded into the audio portion of broadcast signal 28, however the data may also be embedded into the video portion of broadcast signal 28. The data includes the URL of e-commerce web sites corresponding to the content of the commercial or program as well as special codes specifying coupons or special promotions, identifying the consumer as originating from the system, and corresponding to other marketing information. The commercial or program is transmitted in a broadcast signal 28 from broadcast transmission station 12 over the air, cable or satellite broadcast media. Although the best mode is directed to television signals transmitted over the air, cable or satellite media, the present invention is applicable to radio or other broadcast media. The term broadcast signal 28 as used herein includes signals such as television, radio, satellite, cable, streaming media and the like.

Broadcast signal 28 is received by a consumer's television 16 where the video portion of broadcast signal 28 is displayed and the audio portion is audibly reproduced. Each e-commerce-enabled TV commercial or program will have a simple watermark in a fairly unobtrusive area on the screen as an indicator. This watermark will inform the viewer that there is an e-commerce promotion that accompanies the commercial or program. Consumers will simply respond to the watermark, based on their shopping interests, by pushing a button on remote sensing device 18 which stores the embedded data for the later shopping time with Internet appliance 20.
Remote sensing device 18 receives the audible signal from television 16 (or attached stereo system) and extracts the embedded data. When consumers select commercials and programs in which they have an interest by pressing a designated button on remote sensing device 18, remote sensing device 18 extracts and stores the embedded data from the selected commercial/program. Certain data, such as remote sensing device software updates, may be automatically extracted without any knowledge or action on part of the consumer.

Once the consumer is ready to surf the Internet, the consumer places remote sensing device 18 near Internet appliance 20 and presses a button for linking remote sensing device 18 and Internet appliance 20. Through a commercially available communications mechanism and protocol, such as wireless infrared, IrDA or Bluetooth, or wired USB or Firewire connection, the extracted and stored data is downloaded to Internet appliance 20. As will be explained with respect to one of the alternate embodiments, the data may be directly extracted by Internet appliance 20 with remote sensing device 18 controlling when Internet appliance 20 actually extracts the embedded data.

Once downloaded, all URLs and special codes contained in the extracted data are used by a web browser (e.g., Netscape or MS Internet Explorer) that is immediately connected to shopping list portal 31 which is managed by system distributor 24; the system distributor 24 is a type of web server. The URLs and special codes for each URL identify to system distributor 24 the e-commerce web sites where the consumer is to be directed, information identifying specific promotions, regional identity (depending on where the data is embedded) and identifying the particular commercial or program selected by the consumer. An example, assuming the system distributor has a domain name of www.etvnet.com, the URLs and special codes of the e-commerce web sites selected are amazon.com with a code of "abc" and ebay.com with a code of "xyz", is http://www.etvnet.com/selected=www.amazon.com/abc&www.ebay.com/xyz. Additionally, the identity of the user may be provided to system distributor 24 by the special codes or through the use of
cookies. Thus, shopping list portal is customized for both each consumer and each transaction (i.e., selected products and promotions).

System distributor 24 redirects the consumer's browser to the particular web page on the e-commerce web site 26 dictated by the extracted data. For example, a consumer selecting a Ford pickup truck commercial broadcasted during a football game will be redirected to a web page on Ford's web site with survey that enters the consumer in a drawing for tickets to the Super Bowl in exchange for the consumer answering the survey. However, a consumer selecting the same Ford pickup truck commercial broadcasted during a automobile race will be redirected to a web page on Ford's web site with a survey that enters the consumer in a drawing for tickets to the Daytona 500 in exchange for the consumer answering the survey.

By initially directing the consumer to system distributor 24 and then re-directing the consumer to e-commerce web site 26, system distributor 24 can collect data regarding consumer use of the system, consumer profile information, purchase statistics and other useful marketing and usage information. System 10 includes shopping list portal application 30 resident on Internet appliance 20 that enables the online shopper to manage promotions and transactions. Shopping list application 30 runs as a plug-in to access shopping list portal 31 which is a web page or series of web pages displayed by the consumer's browser. Shopping list portal 31 is a portal to partner (advertiser) e-commerce sites 26 as well as a manager of the transactions.

In an alternate embodiment, the consumer remains on system distributor 24 to browse information regarding the product, services or promotion relating to the selected commercial or program. All browsing, shopping, checkout and purchase is performed at system distributor 24. System distributor 24 obtains the necessary promotional web pages and content from e-commerce web sites 26. This embodiment is a direct form of online shopping complete with checkout in contrast to the previously
described method where the consumer is re-directed to e-commerce web sites 26 to complete the purchase transaction.

The operation of system 10 is described in figure 2. In methodology 100, first a program or commercial is produced 102 and then undergoes traditional post production audio and video editing 104. URL and special promotion codes are input 106 to data embedding equipment 50 which embeds 108 the data into the audio portion of the program or commercial. The e-commerce enabled (i.e., embedded data) program or commercial is transported 110 to broadcast transmission station 12 and then transmitted 112 on a broadcast medium. The e-commerce enabled program or commercial is received 114 by the consumer on television 16 which then plays 116 the broadcast signal to the consumer. The consumer is alerted 118 to the presence of the e-commerce enabled program or commercial and the consumer indicates 120 their decision to obtain more information by pressing the capture button on remote sensing device 18. Remote sensing device extracts 122 and then stores 124 the embedded data. The extracted and stored data is then transferred 126 to Internet appliance 20 which then accesses 128 shopping list portal 31. Finally, the consumer completes the e-commerce transaction by linking 130 to e-commerce web site 26.

Turning to the specifics of system 10, the e-commerce enabled commercials and programs are created by steganographically embedding data signals in the audio portion of the TV signal 10dB to 20dB dynamically below the spectral envelope of the audio signal. The embedding process is steganographic, meaning that the data is hidden but readily retrievable. This is in contrast to cryptographic embedding where the embedded information is rendered unintelligible to any unauthorized persons or devices that might intercept the signal.

This is generally done as an added task in the post production editing of the commercial or program. Alternately, for live broadcasts such as sporting events, the data embedding process may occur in real time. Since the data is steganographically embedded, the data can be transmitted along with the audio,
but is not discernable to the broadcast viewer. The signal conforms to all audio quality controls under NTSC guidelines. Working with their web developers and client's e-commerce web sites 26, advertisers simply input the URL data and special codes representing particular promotions, products, services, coupons discounts and/or the like into data embedding equipment 50. System 10 then transmits the complete signal with the embedded data to the consumer's entertainment appliance 16.

The centerpiece of the system convergence is remote sensing device 18. The structure of remote sensing device 18 is depicted in figure 3. As shown, remote sensing device 18 consists of a universal multi-function TV/VCR/STEREO/DVD infrared remote control device combined with a microphone 32 and an audio decoding chipset implementation of a spread spectrum receiver 34. The addition of microphone 32 and spread spectrum receiver 34 provide the added capability to receive the audio from the commercial or promotional program and decode the data-embedded in that audio signal. In addition to the standard buttons found on any standard universal remote, remote sensing device 18 has three additional buttons conspicuously marked and placed on keypad 36. The first of these buttons enables the capture of the promotion found on the current audio signal. The second transfers the captured data to Shopping List application 30 on the consumer's Internet appliance 20. The transfer is made by a standard infrared transmitter 38 on the remote to infrared receiver attached to Internet appliance. The third button allows the viewer to clear memory 40. This function requires a deliberate action (confirmation) so that accidental clearing is difficult to do.

Control logic 42 scans the keypad 36 looking for a key press command. If the key command is for a universal remote control function remote sensing device 18 simply transmits the selected code using infrared transmitter 38. If the key command is the capture command, remote sensing device 18 stores the data received from spread spectrum receiver 34 in the stored data memory 40. If the command is transfer to Internet appliance 20, control logic 42 causes all the stored data to be transmitted to Internet appliance 20 via infrared transmitter 38. If the key command is the clear command, then all the stored data is cleared from memory.
Additionally, voice recognition circuitry may be added to remote sensing device 18. The voice recognition circuitry in conjunction with microphone 12 provides voice activated control of the consumers entertainment appliance 16 and other home automation functions. Also, remote sensing device 18 that has the audio alert capability may also include a locator feature. In this feature a user who has forgotten where she/he has placed the device could use her/his voice command to instruct the device to activate the audio alert and then be able to locate it.

Yet another, more simple embodiment of remote sensing device 18 is limited solely to providing e-commerce convergence. In this smaller device, about the size of a key chain ornament, only the 3 buttons described above would be present.

In the alternate embodiment where watermarks are not used, remote sensing device 18 has indicator LEDs or audio alerts (not shown in the drawing) that are activated when spread spectrum receiver 34 detects a data signal that the consumer may want to store. The consumers would then press the capture key to cause the data to be stored. With respect to radio broadcasts, the use of an indicator light and/or audio alert on remote sensing device 18 is required in lieu of watermarks. The indicator light may also be used in combination with watermarks or as a consumer selectable preference.

System 10 includes a simple infrared receiver 44 attached to the serial or parallel printer port on the consumer's Internet appliance 20. Once the consumer has stopped watching TV, the consumer places remote sensing device 18 near and aims at infrared receiver 44 and presses the data transfer button to invoke the data transfer to Internet appliance 20. In response, Internet appliance 20 launches the consumer's default browser (if it is not already running), loads shopping list portal application 30, and displays the promotions in which the consumer had expressed interest.

The term Internet appliance as used herein means any device that provides access to the Internet such as a personal computer, laptop computer, PDA, a web enabled television, cellular telephone and the
like. Internet appliance 20 includes some type of interface device for communicating with remote sensing device 18 that is standard on most internet appliances in production today. The interface mechanisms include IR ports, Bluetooth, serial ports and parallel ports. Internet appliance 20 is linked to system distributor 24 and the plurality of e-commerce web sites 26 via ISP 21 and Internet 22.

As previously explained, the linking of Internet appliance 20 to e-commerce web sites 26 is facilitated by shopping list portal 31 which is accessed by shopping list portal application 30. Shopping list portal application 30 is implemented as a plug-in application to either Microsoft's Internet Explorer, Netscape Navigator or other browser resident on Internet appliance 20. Shopping list portal 31 is both locally stored on Internet appliance as pre-loaded shopping list portal 31a and remotely on system distributor 24 as remote shopping list portal 31b. With the pre-loading capability, promotion pages and shopping catalogs are accessed off of the consumer's hard drive at speeds much faster than waiting for the page to be delivered from the advertiser's e-commerce web site 26.

Normal Internet access requires waiting 30-45 seconds for a dial up connection using the telephone modem. Pre-loading allows the consumer instant access to the shopping list portal 31 without this wait by having pre-loaded the hard drive of Internet appliance 20 with information on all or some of the e-commerce promotions for a period of time. This pre-loading occurs before the broadcast of programs and advertisements that have the embedded data. When the consumer has selected a one or more e-commerce promotions, Internet appliance 20 can immediately display the requested information. While the consumer is browsing through that information, Internet appliance 20 simultaneously makes the dial up connection in anticipation of the consumer following up to the checkout.

The pre-loading can occur during off-peak times (late night or early morning) and/or as a background process. Dial-up access consumers pre-load by automated pre-scheduled off-peak time dial-up via Internet 22 to system distributor 24. High speed access consumers such as DSL, cable modem or
other always-on connections pre-load as a background process at anytime while the connection is not in use by other processes.

System 10 works without pre-loading, with partial pre-loading, or with full pre-loading at the consumer's election. The faster the consumer's Internet connection, the less the need for pre-loading. For partial pre-loading, the information that is pre-loaded is selected based upon pre-determined consumer e-commerce preferences. For example, when the consumer first joins system 10, the consumer is queried to determine demographics, economic background, shopping habits, sports preferences, etc which are then used to create a pre-load profile for the consumer. If the consumer indicates they are a sports fan, all sports related information will be included in the pre-load for pre-loaded shopping list portal 31a.

The pre-load and the connection device are controlled by a program or application running simultaneously and in the background on Internet appliance 20. In the preferred mode, the pre-loading uses a local proxy server, running on Internet appliance 20. This proxy server controls the connection device and is able to request web pages to be pre-loaded if connected or initiate the connection via dial-up. In addition, by a configuration option the proxy server initiates either an off-peak pre-scheduled connection or a background process to perform the pre-load.

The data is transferred from remote sensing device 18 to infrared receiver 44 and then on to plug-in application 30. Plug-in application 30 decodes the transferred data, and hands it off to pre-loaded shopping list portal 31a for display to the consumer. At this point there is an offline interaction between the user and shopping list portal 31a where the consumer then selects which of the displayed items to either browse or buy. The browse capability allows the user to get more information on the product or service, while the buy option immediately starts the checkout procedure. If all the web pages have been pre-loaded, then the user remains offline. Regardless of the pre-load process, Internet appliance 20 goes online simultaneously, transparent to the consumer, to be ready for any further
consumer interaction with web pages from either pre-loaded shopping list portal 31a, remote shopping list portal 31b for web pages that are not pre-loaded, or e-commerce web site 26 to obtain additional information or complete the checkout process.

5 The promotions are listed, with the advertiser's name, the item promoted, the price, the promotional discount, and the date. New items are displayed in bold, indicating that no action has been taken as depicted in figure 4A. Once a promotional e-commerce web site 26 has been visited, application 30 will remove from the list the bold lettering of the promotion indicating that the site/promotion has been seen. If the consumer finalizes a purchase there, a check mark indicator will be displayed along with the date of the purchase as depicted in figure 4B. These action indicators are designed to help the consumer manage their online shopping experience.

Working in coordination with the Shopping List Portal application 30 is a digital wallet that feeds the specific purchasing and shipping information to the advertiser's e-commerce web site 26 without the consumer having to constantly type the same information in at each shopping site 26. Shopping List Portal application 30 works similarly to many standard email applications. The consumer is able to create folders to store products purchased or researched based on user, interest, or product category. Moving an item from one folder to another is a simple drag and drop process. System distributor 24 also has a unique ability to target advertising to the consumer based on both the user profile developed at registration and by the long-term and immediate buying patterns of the consumer.

The system convergence for purchasing and browsing brings another direct benefit to the advertiser. As a promotion or advertisement link is stored on remote sensing device 18. The time and channel/network the ad was placed on is logged as well. This information is stored on system distributor 24 and advertisers are provided periodic reports showing the effectiveness of certain ad campaigns, on various channels/networks at various time slots nationwide. This enables the advertiser to measure the
effectiveness of ads in generating interest in products and discern the effectiveness of the ads in influencing direct online purchasing decisions.

In an alternate embodiment, the data embedded in the audio is extracted directly by Internet appliance 20 without the use of remote sensing device 18 as a data intermediary. If Internet appliance 20 is located within the audible range of television 16, microphone 32, spread spectrum receiver 34 and memory 40 is located in Internet appliance 20. A controller in Internet appliance 20 directs the extraction and storing of the embedded data in response to the consumer pressing the capture button on remote sensing device. Infrared transmitter 38 transmits the capture command to Internet appliance 18. Thus, remote sensing device 18 does not store the embedded data.

Additionally, the entertainment appliance and the Internet appliance may be combined as one as described in the description of the background art. In this alternate embodiment, remote sensing device 18 does not store the embedded data, but only controls that storage in a combined entertainment/Internet appliance. In this case a PC is not involved and the combined entertainment/Internet appliance could be a TV set-top box, or an integrated TV with Internet circuits included within the TV chassis.

In both alternate embodiments where remote sensing device 18 does not need to store the embedded data, the Internet appliance or combined entertainment/Internet appliance is pre-loaded with shopping list portal 31 and the consumer is linked to system distributor 24.

System 10 has alternatives to the preferred method of embedding the data in the audio portion of the broadcast signal. The data may be embedded in the vertical or horizontal blanking interval of the television broadcast signal. Also, code words may be provided either displayed on television 16 or by some other mechanism. The consumer then enters the code word via shopping list portal 31 to receive the corresponding e-commerce information.
In another alternate embodiment, bar codes representing the command data (i.e., URLs and special codes) may be placed in print media such as magazines and newspapers. The consumer passes a bar code reader in the form of either a remote sensing like device or directly connected to Internet appliance 20 over the bar code. The command data is extracted from the bar code by shopping list portal application 30 and used in the same manner as described in the best mode to link the consumer to shopping list portal 31 and e-commerce web sites 26.

From the above description, it will be apparent that the invention disclosed herein provides a novel and advantageous electronic commerce system and method. The foregoing discussion discloses and describes merely exemplary methods and embodiments of the present invention. One skilled in the art will readily recognize from such discussion that various changes, modifications and variations may be made therein without departing from the spirit and scope of the invention. Accordingly, disclosure of the present invention is intended to be illustrative, but not limiting, of the scope of the invention, which is set forth in the following claims.
WE CLAIM:

1. A method for linking a signal to a website comprising the steps of:
   embedding command data into a signal;
   transmitting the signal;
   extracting data; and
   accessing the website based upon command data.

2. The method of claim 1 wherein the signal is a broadcast signal, the transmitting step is
   transmitting the broadcast signal to a home entertainment appliance; the extracting step being
   extracting the command data from the broadcast signal emanating from the home entertainment
   appliance with a remote sensing device; the method further comprising playing the broadcast
   signal on the home entertainment appliance; and transferring the command data from the remote
   sensing device to an internet appliance.

3. The method recited in claim 1 or 2, wherein the signal is a television broadcast signal.

4. The method recited in claim 1 or 2, wherein the signal is a radio signal.

5. The method recited in claim 1 or 2, wherein the transmitting step is transmitting via radio
   waves.

6. The method recited in claim 1 or 2, wherein the transmitting step is transmitting via cable.

7. The method recited in claim 1 or 2, wherein the transmitting step is transmitting via satellite.
8. The method recited in claim 1 or 2, wherein the transmitting step is transmitting via over-the-air television broadcast.

9. The method recited in claim 1 or 2, wherein the command data is embedded in the video portion of the signal.

10. The method recited in claim 1 or 2, wherein the command data is embedded in the audio portion of the signal.

11. The method recited in claim 2 wherein the home entertainment appliance is a television.

12. The method recited in claim 2 wherein the home entertainment appliance is a radio.

13. The method recited in claim 1 or 2 wherein the command data contains a URL and product code associated with a product being simultaneously advertised on the signal.

14. The method of claim 1 wherein the linking is linking of advertisement in a television signal having audio and video components to a corresponding Internet web site, the embedding step being embedding advertisement command data into the audio component of the television signal; the transmitting step being transmitting the television signal to a remote location with a television; the extracting step being extracting the advertisement command data from the audio wave with a remote sensing device; the method further comprising the steps of:

   producing an audio wave from the television broadcast signal; and

   transferring the advertisement command data from the remote sensing device to an internet appliance; wherein in the accessing step, the corresponding Internet website is accessed with the internet appliance based upon the advertisement command data.
15. The method recited in claim 14 further comprising the step of:
   receiving the television signal at the remote location.

16. The method recited in claim 14 further comprising the step of:
   storing the advertisement command data in the remote sensing device.

17. The method of claim 1 wherein the linking is of linking advertisement in a television
    signal having audio and video components to a corresponding Internet web site, the embedding
    step being embedding advertisement command data into the audio component of the television
    signal; the transmitting step being transmitting the television signal to a remote location with a
    television; the extracting step being extracting the advertisement command data from the audio
    wave sensed by a remote sensing device; the method further comprising the steps of:
    receiving the television signal at the remote location;
    displaying the video component on the television;
    generating an audio wave from the audio component of the television signal;
    sensing the audio wave with a remote sensing device;
    storing the advertisement command data in the remote sensing device; and
    transferring the advertisement command data from the remote sensing device to an
    internet appliance; wherein in the accessing step, the corresponding Internet website is accessed
    with the internet appliance based upon the advertisement command data.

18. The system of claim 1, 2, 14, or 17 further comprising the step of:
    alerting a consumer viewing the television of the presence of the advertisement command
    data.

19. The method of claim 1, 2, 14, or 17 further comprising the steps of:
pre-loading the internet appliance with website pages based upon pre-specified user
preference information;

accessing the pre-loaded web pages if present with the internet appliance based upon the
command data.

20. The method of claim 1 wherein the linking is linking a broadcast signal to an e-commerce
website, the embedding step is embedding command data into a broadcast signal; the
transmitting step being transmitting the broadcast signal to a web enabled home entertainment
appliance; the extracting step being extracting the command data from the broadcast signal; the
accessing step being accessing shopping list web pages on a system distributor via the Internet
based upon the command data; the method further comprising the step of:

linking to the e-commerce website from the system distributor based upon the command
data.

21. The system of claim 20 further comprising the step of:

alerting a consumer viewing the home entertainment appliance of the presence of the
command data.

22. The method of claim 20 further comprising the steps of:

pre-loading the web enabled home entertainment appliance with at least some of the web
pages from the system distributor; and

accessing the pre-loaded web pages if present with the web enabled home entertainment
appliance based upon the command data.

23. The method of claim 1 wherein the linking is linking a broadcast signal to a website, the
embedding step is embedding command data into a broadcast signal; the transmitting step being
transmitting the broadcast signal to a web enabled home entertainment appliance; the extracting
step being extracting the command data from the broadcast signal; the accessing step being accessing web pages on the website based upon the command data; the method further comprising the steps of:

pre-loading the web enabled home entertainment appliance with at least some of the web pages from the website; and

accessing the pre-loaded web pages if present with the web enabled home entertainment appliance based upon the command data.

24. A system for linking advertisements in a television signal having audio and video components to a corresponding Internet web site based upon advertisement command data embedded in the audio component comprising:

a home entertainment appliance configured to receive and play the television signal;

a remote sensing device having a microphone, a receiver, a data store and a transmitter; and

an Internet appliance;

wherein the microphone senses the audio component of the television signal playing from the home entertainment appliance, the receiver extracts the embedded advertisement command data, the data store stores the advertisement command data extracted by the receiver, and the transmitter transfers the advertisement command data to the Internet appliance;

wherein the Internet appliance accesses the corresponding Internet website based upon the advertisement command data.

25. The system of claim 24 wherein the Internet appliance is pre-loaded with web pages from the corresponding Internet website and the Internet appliance accesses the pre-loaded web pages if present based upon the advertisement command data.
FIG. 2

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Produce program or commercial
Post production editing
Embed data
Input URLs and special codes
Transport program or commercial
Transmit on broadcast medium
Received by consumer
Play on television 16
Alert consumer
Consumer indicates decision
Extract data
Store data
Transfer data to internet appliance 20
Access shopping list portal 31
Link to e-commerce website 26

SUBSTITUTE SHEET (RULE 26)
<table>
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<tr>
<th>Item</th>
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<td>ORITRON DVD 200 DVD player</td>
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<td>Showtime Rotisserie &amp; BBQ</td>
<td>$159.80</td>
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<td>ORITRON DVD 200 DVD player</td>
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<td>red carpet DELIVERY</td>
<td>Ronco Showtime Rotisserie &amp; BBQ</td>
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<td>KENSINGTON</td>
<td>&quot;Sea of Tranquility&quot; Ltd. Ed. Print by T. Kinkade</td>
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<tr>
<td></td>
<td>VH-1/CD-Now Ricky Martin - Ricky Martin</td>
</tr>
</tbody>
</table>

Which is the greatest of the world's cuisine?

FIG. 4B