Making Viewers Happy while Making Money for the Networks: A Comparison of the Usability, Enhanced TV and TV Commerce Features between Broadcast and Cable Network Web Sites

by

Louisa Ha, Ph.D.
Associate Professor
Department of Telecommunications
108 West Hall
Bowling Green State University
Bowling Green, OH 43403
Telephone: (419) 372-9103
Fax: (419) 372-9449
E-mail: louisah@bgnet.bgsu.edu

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Abstract

This study compares the use of enhanced TV features and TV commerce features on the web sites of cable and broadcast TV networks. Both the quantitative analysis of the specific programs featured on the web sites and the qualitative analysis of the overall web sites show some differences in their strategies. Three enhanced TV strategy models are proposed as a result of the analysis. The managerial implications of these models on TV revenue and viewership are discussed.

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Television watching as a favorite pastime for Americans is no longer confined to watching programs with a TV set. With increasing penetration of Internet access to over 60 million households in the U.S., TV viewers can "enhance" their TV watching experience through the World Wide Web. More than eight million computer users have logged on to ABC Network's web site for the online play-along game of "Who Wants to be a Millionaire" (Tedesco, 2000; Gruenwedel, 2000). Media entertainment web sites are on top of the must-visit lists according to the latest web traffic reports, capturing more than 72% of web visitors (Pastore, 2001).

Broadcast TV networks and Cable TV networks are the two largest players in media entertainment on the Web. Cable TV networks are gaining more visitors than ever. According to a recent report from the Cable TV Advertising Bureau based on Nielsen's NetRatings, cable sites accounted for more than 57 percent of all media-entertainment related Web sites visited by Americans. For example, in the month of July in 2001, advertising-supported cable networks' web sites received almost 44 million visitors, with a person spending an average of 39 minutes on these sites. Broadcast networks also enjoyed 11.3 million visitors (Cable Advertising Bureau, 2001).

The U.S. broadcast TV industry consists of broadcast TV networks and local broadcast TV stations. Broadcast TV networks, such as ABC and NBC, are national suppliers and distributors of TV programs to local broadcast network affiliate stations. Independent local stations obtain programs from syndication companies. Despite the

increasing interest in the TV industry on the World Wide Web and related Internet technology, few studies examine the use of web sites by broadcast networks either as a marketing tool or as an additional medium for the network's brand extension. The studies that have been published only investigate broadcast TV stations (Ferguson, 2000; Chan-Olmsted & Park, 2000). There are two limitations in focusing broadcast stations in the studying of TV industry's use of the Web: The localized nature of broadcast stations mandates their strong interest in local news and community service which are the areas under local stations' control. In addition, many local TV stations are limited in resources. It would be unreasonable to expect them to master the state-of-the-art technology. Broadcast TV networks and cable TV networks, in contrast, are national in scope. They can benefit even more from the geographical-free nature of the Web and reach a potential viewer from every town in the country. In addition, the Web can help the network to reach non-TV viewers (Kerschbaumer, 2000a) or viewers in the workplace, such as Weather.com which receives 300 million hits a month mostly from visitors who are at work (Flamer, 2000).

The current study focuses on the major national suppliers of TV programs--broadcast and cable networks. Syndication companies, though an important supplier of TV programs, are excluded in the analysis, because they are much less recognized by the general public. An inherent difference exist in the programming between broadcast and cable networks. Broadcast networks serve a broad audience and rely on advertising as the primary source of revenue. In contrast, most cable networks serve a niche audience with specialized interests, and have dual sources of income: advertising and cable subscription fee. Such difference may affect the networks' use of their web sites. A

study comparing the web sites between broadcast and cable networks can provide insights on the role of audience scope in developing appropriate web strategies for the networks and assess their impact on their viewers.

Research Questions

This study will attempt to answer four research questions relating to the use of the Web by both broadcast and cable networks in enhancing the viewing experience of their viewers and in obtaining revenue from sources other than advertising:

1. Are there any differences between broadcast and cable networks because of the difference in the nature of the audience and scope of the network?
2. What enhanced TV features are being used by the networks? Are some features associated more with certain program genres than others?
3. How high is the usability (user-friendliness) of the networks' web sites? Which type of TV networks' web sites score better in usability?
4. How do broadcast and cable networks prepare themselves for TV commerce? What are the preliminary TV commerce features available in their web sites?

Literature Review

Enhanced TV and Interactivity

Enhanced TV is the use of Internet features to improve or enhance the viewing experience of TV viewers. Dennis Quinn, the Executive Vice-President of TBS, for example, viewed enhanced TV as a tool to "increase time spent viewing", "attract viewers attention and keep them engaged in programs" (Foley, 2000; Robins, 2001). There are four major types of enhanced TV features that enable the interaction between a TV station/network and its viewers on the Web (Hurst, 2000): (a) Fan-based features, (b)

game-based features, (c) information-based features, and (d) programming-based features. Fan-based features aim at building better relationships with the fans of a show by providing opportunities to learn more about and/or connect with the show and stars. For example, by using chat room or other sharing features such as message boards, a TV network can facilitate the creation of a fan community for its programs/stars in the programs. Game-based features enable users to participate or simulate a contestant's experience on a game show, such as the "Millionaire Game" featured on ABC's highly successful "Who wants to be a millionaire" web site (Gruenwedel, 2000). Information-based features are online functions that bestow supplemental, personalizable news/sports/weather information. Programming-based features are the online systems that either facilitate a viewer's programming selection process or deliver selected web-based programs to the viewer.

Much of the attraction of enhanced TV features lies in its ability to interact with the viewers, fulfilling their communication needs before, during and after watching a TV program. One function that network executives treasure about the Internet is the large quantity of immediate feedback that viewers provide to programmers and its potential to improve ratings for the program. For example, CNN's News Site collected comments from the site visitors and used some of them in the stories. The perspectives of the viewers offered diversity of viewpoints in the show. The ratings of the show almost doubled in a year after the online editorial meeting format was launched. Another example of the increased communication with the viewers is the Food Network, which receives about 8,000 posts per week on its bulletin boards and about 1,500 e-mail messages each day (Whitney, 2001).

Interactivity is the crucial advantage that the Internet offers as a medium over other traditional media (Ries & Ries, 2000). The five-dimensional nature of interactivity proposed by Ha and James (1998) provides a useful framework for analyzing the interactivity of a web site and measuring a user's online experience. The five dimensions they proposed were (a) playfulness, (b) choice, (c) connectedness, (d) information collection, and (e) reciprocal communication. To investigate the factor of interactivity in the context of web visits, this study will examine the users' perspective of interactivity, incorporating these five dimensions of interactivity.

Fandom and Usability

In a sense, TV web sites are attempting to transform general viewers to fans. Fans are skilled audiences who are more engaged in the TV programs than general casual TV viewers. These skilled audiences are also likely to be heavy viewers of the programs so that they can fully indulge themselves in those programs (Fiske, 1998). Networks see the Web as the ideal medium to meet the demands of fans that cannot get enough of the programs they have on TV. These fans are also viewed as better consumers for the networks because they deliver more value to advertisers (Kerschbaumer, 2000b).

Indeed, the features on TV web sites make the viewers more informed about what is going on in each program, how they can participate (for example writing feedback in chat rooms, participating in a poll, getting tickets to a show, etc.). Sometimes, they write to the producers to express their opinions about the shows in attempts to influence the outcome or content of a TV show. Sometimes they collect information and artifacts so that they become experts of the shows. Their adoration of the TV characters help to define their own identity and even help to establish their own aspiration (Abercrombie &

Longhurst, 1998). The previously relatively detached TV viewers who were the majority in the past can now be converted to enthusiastic viewers with the various interactive features on the web sites.

One of the main reasons for networks to build presence on the Web is to develop brand loyalty of their viewers (Ferguson, 2000) as a part of the network brand franchise (Ince, 2001), or to use the web site to market their on-air programs (Kershbaumer, 2000b; Chan-Olmsted, 2000). Nevertheless, to succeed in this brand building effort, it is essential that those interactive features on the web sites are actually being used by the visitors and that the visitors can realize the associated benefits of these features. In other words, the visitor must have a pleasant experience in using the web site and leave with an impression that will give him or her top-of-mind awareness to return again (Kania, 2001). Usability or user-friendly design of the web site is the key to create such magnet or audience pulling power for the TV networks (Bucy et al., 1999).

Jakob Nielsen is one of the pioneers in the study of web site usability. His research on usability in the past two decades showed that many web sites failed because of poor usability design, many of which are simply misuses of the Web technology without consideration of the user. Nielsen (1999) suggested nine principles for web site design to be user-friendly or have high usability: (a) content – maximize the screen for content, (b) simplicity, (c) accommodate different web browsers of users, (d) provide context – company logos and links to home page, (e) resolution independent so that it can be displayed in all environments (large or small screens), (f) one year behind the latest technology because many users do not possess the state of the art technology , (g) fast

and predictable response time, (h) meaningful first screen, and (i) printable web page. These principles can provide a benchmark for evaluating usability of web sites.

TV Commerce

The fragmentation of audiences in the age of multichannel services and the audience's usage of devices such as remote controls and personal video recorders reduce the advertising effectiveness of traditional mass media. The decline in commercial viewership forces television networks to seek new sources of revenue other than advertising. One possible revenue source is by using their wide audience base to conduct business transactions with new interactive technology (Williamson, 2001). Such business transaction model is termed TV commerce or T-Commerce in short (McKay, 2000; The Carmel Group, 2000). Some networks have begun to try to capitalize on the loyalty of fans in obtaining revenue on the Web. For example, Fox Sports' web site features fantasy football games. These games allow viewers to choose players and make them a team that compete with other teams. Some fantasy football products are offered free and some cost around $20 (Kerschbaumer, 2001). Comedy Central, a cable network, is offering web visitors complete episodes of South Park and Dr. Katz in video files on its web site for purchase or rental (Kerschbaumer, 2000c).

TV has an advantage over the computer in engaging consumers in shopping because of the relaxed environment (Swann, 2000). Yet cable companies have been slow in providing the interactive set-top box technology to consumers. Most consumers experience a preliminary form of interactive TV experience through the web sites of the TV networks. Many of the features on the web sites are the features available in future interactive set-top boxes. Indeed, some even called the enhanced TV features as

"interactive TV without the TV", and the features are viewed as an integration of TV and the Internet (Grebb, 2001). Both interactive TV and enhanced TV can change the TV medium from a passive, low-involvement medium to an active, high-involvement medium that encourages viewers to purchase and respond on impulse (home shopping and polls) and seek immediate media content gratifications (video content on demand).

Methodology

Content analysis was employed to study the differences between the web sites of broadcast and cable networks. The study underwent two stages of content analysis. The first stage was a quantitative analysis of the specific programs featured on the networks' web sites. The second stage was a qualitative content analysis selected from the quantitative analysis sample. In the quantitative stage, the sample consisted of a census of all eight U.S. broadcast TV networks (ABC, CBS, NBC, PBS, FOX, WB, UPN and PAX) and the 15 cable networks randomly selected from the top 50 basic cable network list in Cablevision magazine (See a description of each network in the appendix). The unit of analysis was the specific program web page of the entire web site.

Coders received a special training session on the coding scheme and learned web site usability and web site design before doing the study. As it is very time consuming and easy to cause fatigue to code multiple web sites, each coder was asked to code three sites only: two broadcast network and one cable network. All the broadcast networks' web sites were coded by a pair of coders to calculate inter-coder reliability. Using the Holsti's (1969) coder reliability formula, the reliability coefficient is 0.82, which is acceptable, given the large quantity of information to be coded and the amount of interpretation required in the coding (Wimmer & Dominick, 1997).

Results

Quantitative Analysis

A total of 95 web pages (13 web pages for overall network, 82 web pages for individual programs) were analyzed from the eight broadcast and 15 cable networks' web sites. About 47% were broadcast network programs and 53% were cable network programs. As shown in Table 1, among all specific network program web pages, news programs (32.9%) and drama series (26.8%) were program genres most commonly featured by the networks. Broadcast networks and cable networks differed significantly in the types of programs they featured on their web sites. Broadcast networks were much more likely to feature their game shows, comedies, and daytime soaps than their cable counterparts. Cable networks were much more likely to feature their news and documentary programs. Program genres such as sports and dramas received similar amounts of emphasis on both broadcast and cable networks' web sites.

Take in Table I

In terms of specific enhanced TV features used on the web sites, broadcast networks and cable networks share more similarities than differences in programming based and information-based features (Table 2). On fan-based features, broadcast networks were more likely to provide video clip archives and a list of upcoming guests for their programs than cable networks. They were also more likely to conduct polls and surveys of their web site visitors. The types of products being offered were more likely to be merchandise about the TV shows than their cable counterparts.

Take in Table II

Cable networks were likely to provide visitors with quizzes and trivia games than broadcast networks. They were also more likely to carry third-party links on their web sites and show a visible e-mail link to their webmaster. Among those cable networks that sell products on their web sites, most of the products were for the network, not individual programs. They were also more likely than their broadcast counterparts to sell advertisers' products on their web sites.

When we further analyzed the specific enhanced TV features used by the program type, we found very heavy use of fan-based enhanced TV features, such as episode synopsis, TV star gossip and chat room, by daytime soaps and dramas (Table 3). The strong loyal following of these program genres probably explains the use of fan-based features. Actually daytime soaps even outperformed all other program genres in the specific game-based features of quiz and trivia. The long history of daytime soaps allows fans to engage in answering quizzes and knowledge of the shows. Dramas were the program genre that most heavily used programming-based enhanced TV features such as program preview and TV schedule. In addition, they were also seen by the networks as the money-generator. Dramas have the highest likelihood of TV commerce presence. More than half of those dramas (54.5%) featured on the web site have either purchase forms or shopping carts. The typical high loyalty of drama viewers probably leads TV executives to believe that they are the high-value fans that will buy products about the show or from its advertisers.

Take in Table III

Not surprisingly, news and magazine programs were much more likely to have information-based features than other program genres. More than half (55.6%) had third

party links and about 40% of the programs' web sites have background information about the shows. News and weather information were quite common in these types of programs. They also encouraged feedback from visitors with the highest proportion of web pages that provide visible e-mail links to the networks.

Sports programs had the highest occurrence of video clip archive (43%) available to the visitors. A TV schedule listing when the sports event would be shown was a very common feature for sports programs (71.4%). The fan-based features were not that strong in sports program web sites, but the networks attempted to lure the sports fans by giving them quizzes and trivia about the games and the players (57.1%) and providing them plenty of statistics and scores to facilitate their viewing (57.1%). Networks also try to capitalize on the sports fans' interest with TV commerce features (42.9%) and opinion polls and surveys (42.9%) .

Even within commercial broadcast networks which have general audience appeals, they are quite dissimilar in their use of enhanced TV features. As shown in Table 4, ABC's web site contained the most variety of enhanced TV features. NBC and UPN, which have much younger audience demographics than ABC, were very into fan-based features. All their featured programs on the Web had episode synopsis. UPN was also big on its TV schedule with all of its shows supported with a TV schedule. Three-quarters of the shows featured on the web sites were supported with program preview, background information, video clip archives and TV stars/gossips. PAX, with Christian family-oriented programming, is the newcomer to the broadcast network arena. It placed the most emphasis on introducing its programs with the use of program preview (100%)

and TV star/gossips (80%). Its TV commerce is show-based (80%) rather than network based.

Web site usability and interactivity are being evaluated on an overall network basis, not by specific program. In terms of web site usability rating based on Nielsen's (1999) nine usability principles, broadcast networks scored lower than cable networks in general. Cable networks were significantly better than broadcast networks in providing an easy to print page layout for visitors and in maximizing the screen for viewing content (Table 5).

Take in Table V

Broadcast networks and cable networks did not have significant difference in their use of interactive features (Table 6). Overall, they did a good job in providing sufficient internal links and creating an enjoyable playful environment for visitors. But the sites failed to entice participation from their visitors (low interest in submitting comments in future) and could only fairly attract visitors to visit them again.

Take in Table VI

Qualitative Analysis

Five networks were chosen for the qualitative analysis: 1) ABC, PBS, MTV, CNBC, and LIFETIME. ABC was chosen because its web site has been deemed the most successful by the industry and was well-received in the market (Miller, 2001). PBS is the only non-commercial broadcast network and its public service orientation may yield a very different picture on the use of the Web. MTV was chosen because of its youth-oriented demographics and specialized programming in music. CNBC was chosen because it was one of the most male visitor dominant web sites (63%) according to July

2001's Jupiter Media Metrix (*Broadcasting & Cable*, 2001). LIFETIME was selected because it was the most female visitor dominant web site (67%) according to July 2001's Jupiter Media Metrix (*Broadcasting & Cable*, 2001).

ABC's web site had three main features: 1) news, 2) sports and 3) enhanced TV. Under enhanced TV, visitors can either enjoy the "Who Wants To Be A Millionaire," show or a 2-minute drill of Sunday Night Football and Monday Night Football, interact with the telecast through play-along games, polls and chats. ABC reported in its web site that approximately 18 million viewers have experienced the Enhanced TV production of "Who Wants To Be A Millionaire" since its debut March 28, 2000, with an average connect time of 41 minutes. Although the ABC site did not have a specific link to its daytime soap operas on its home page, a visitor could find all details about each show with an exclusive photo gallery and video recaps by clicking the daytime section. The shopping section featured the jewelry worn by the main characters in ABC's "All My Children," satisfying the artifact collecting needs of the show's fans. The "20/20" news magazine's interview outtakes, and Monday Night Football statistics were also attractive features. Even non-ABC viewers will still find the site appealing with movie reviews and showbiz news.

PBS's site was organized into programs A-Z, TV schedule, shop and station finder. Newcomers will have few problems in navigating the site or understanding its content. They can search by the subject matter of the show without any knowledge on the line-up of the network. PBS fans were also being entertained with several featured shows. They could purchase videotapes of PBS shows such as "Frontline" on the web

site. Public Broadcasting Radio was also featured on the web site, making the TV network's site an alternative delivery medium for its radio network.

MTV's web site featured music videos, radio, photos, sweepstakes, charts, different bands and took video requests online. If one is not a regular viewer of MTV, it may be difficult to comprehend what is being listed because the site is organized by MTV shows, in addition to its musical band listing. If one does not know what the shows are about, one can easily get lost on the site. However, if one is a fan of the network, then the various features such as "Lance Bass' answers TRL Fan e-mail", MTV messenger, newsletters, message boards, and polls would offer a lot of fun. The full length video and concert webcasts selling on demand can fulfill the needs of MTV fans who could not get enough from the network, while the network can gain extra revenue.

If one does not know CNBC is a cable TV network and visits its web site, one may think he/she is just visiting another financial news web site. The large number of male users for this site may be due to the fact that more men are interested in investing and money matters than women. The site is very focused on financial news with stock exchange quotes upfront and business news at the top of its page. CNBC's TV program information is put at the bottom of the page and easily can be overlooked. Providing information service to visitors seems to be more important than promoting the network itself as shown on the site. Main featured sections of the site are "my money", "investing", "banking", "planning", and "taxes". Anyone can visit the site without watching the network and obtain useful financial information.

Lifetime's web site is more like a web site for women than a web site for a TV network. The home page's title is "Lifetime Online: Where Women Click". It poses

itself as a portal for its core women audience. It has many links on women's issues in addition to the network such as health, career and money, relationships, home and family, and horoscope. It featured common topics found in women's magazines such as "How far should you go on a first date?" Visitors can personalize the web page with "My Lifetime" and join the Lifetime community with its message boards, chatrooms, and public affairs. Throughout its web site, Lifetime shows its commitment toward breast cancer prevention, stopping violence and caring for kids. Lifetime also used its "Lifetime recommends" section to sell Lifetime videos and books that interest women. For fans of the network, they can join Lifetime online and receive a newsletter about the network or specific shows such as *Golden Girls*. Detailed information of almost every show of the network was available, with headliners for today's featured programs.

Enhanced TV Strategy Models

Based on the above quantitative and qualitative analysis of the web sites, three enhanced TV strategy models can be developed:

1. The "welcome all" model -- The network provides a one site fits all type of approach which tries to offer services to both viewers and non-viewers in addition to promoting the existing programs. In this model, almost all programs of the network are being featured on the web site. Both non-viewers and viewers of the network can understand the content on the web site. TV commerce presence is moderate and serves as a pleasant additional revenue source for the network.
2. The "fans-friendly" (in-depth) model -- The network tries to please loyal viewers (fans) with very sophisticated enhanced TV features that focus on converting current viewers to fans. Little or no attention is given to non-viewers of the

networks. Non-viewers will have a hard time understanding the web site's content or using its features. Only a few of the networks' programs are being covered on the web site. TV commerce presence is most conspicuous in this model. These sites are the most interactive, but usability is not high because many features may require special software installation and broadband access. This model is most likely to be used by niche networks with very targeted demographics.

3. The "hello" model -- The web site assumes visitors have no knowledge on the network's programs. The visitor can participate in almost all areas that are offered on the web site. The usability of these sites is the highest among the three networks. The site may not be interactive in its full sense, but it still provides a pleasurable experience to the visitor. The hello model is used for extending the reach of the network, and hopefully also enticing visitors to become viewers of its TV programs. TV commerce features may or may not be used in this model depending on the maturity of the network. If it already has some core supporters, then products related to the networks can be sold and promoted through the web site. If the network is relatively new, then the relationship between the viewer and the network is not strong enough to engage in business transactions. This model is more likely to be used by emerging broadcast networks or cable networks with broad audience appeal but focused content such as the Weather Channel.

The main distinctions of the three models are the scope of its target audience and the strategic function of the web sites to the network. Figure 1

illustrates the relationship among the three models in audience definitions. In the "welcome all" model, the audience of the site is the broadest including those who have never watched the network to the most seasoned fans of the network. It requires the site to provide very rich content to entertain its current viewers, and also a good introduction of the network to light- or non-viewers to lure them into watching its programs if they are attracted to a show featured on the site. A lot of resources from the network will be necessary to satisfy and sustain the diverse interest of the visitors because the network cannot focus on a few flagship programs and ignore the other content features. Only established broad-audience based networks may successfully operate in this model on a continuing basis. Our analysis shows that almost all broadcast networks and several established broad audience appeal basic cable networks are using this model.

Take in Figure 1

The "fans friendly" model is most appropriate for established niche cable networks. The networks can realize its fans' support of its TV commerce on the web site in various ways such as video on demand and purchase of the network's or the show's merchandise. The cost of maintaining the web site per visitor is still high with sophisticated features, but the cost may yield a big pay off if these fans can truly become buyers, not just viewers of the network. Traditional advertising still plays a role in this model, but gradually, TV commerce will become the main source of revenue for the online operation.

The "hello" model is more an investment for the future than an immediate return on profit. As shown in the study, most of the hello model users are new

and upcoming broadcast or cable networks. Some of them, such as Lifetime, can already command a considerable follower size that enables business transactions on their web sites. Nonetheless, the items being sold are limited to the program content rather than auxiliary items such as clothing or jewelry. Most of the others are not yet ready and they are more an information service for the general public (e.g., CNBC, The Weather Channel, and Food), or a showcase of the network to potential viewers (e.g., PAX, SCI-FI). Advertising can be an important source of revenue for the site as audience maximization is what the site is striving for. But the amount of advertising should be maintained at a level acceptable to visitors.

Network executives should evaluate their own strengths and weaknesses in choosing the appropriate enhanced TV strategies. Making money for the networks while making viewers happy is not an easy task. Some networks are more successful than others in achieving this goal. Some program genres such as sports and dramas can be easily tied to merchandise purchase but others, such as news, are more difficult to link to a product without being accused of commercial bias. The choice of the strategy has significant implications on the resource commitment to the web site and the revenue source for the network. Networks should also be aware of the backlash of overselling products on their web sites because it visitors may see them as “degrading” instead of “enhancing” the viewing experience. The core product of the TV networks is its program content. The audience is accustomed to the placement of commercials in commercial breaks. TV networks’ reputation as an authoritative and objective source of information and entertainment may be jeopardized if all the content is tied to

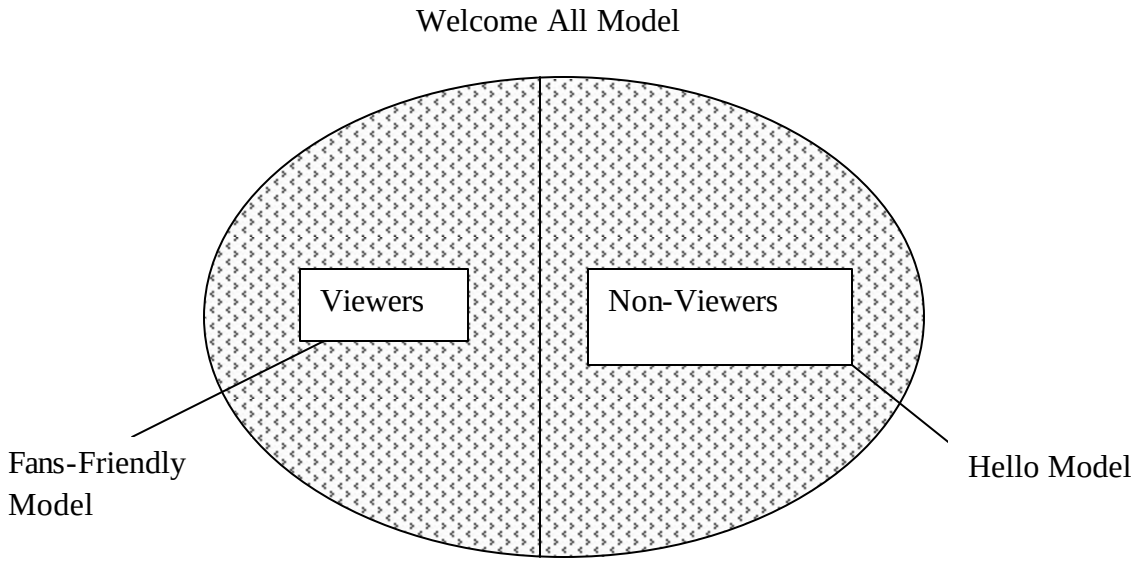
commercial interest. As this is still an infant stage of TV commerce, how far consumers will accept the new role of television networks as direct marketer/retailer is unknown. But this study has shown that almost one-third of broadcast and cable networks have taken the first step to embrace this brave new world of TV commerce.

One may wonder if the enhanced television models proposed in this article can be applied to industries other than television. Indeed, the models can be applied to companies with physical offline presence (i.e., non dot-com companies). For example, an automobile manufacturer can select one of the three models proposed based on their target audience scope. Each strategy model can enhance the product/service consumption experience of the consumer through the use of web site features. Nevertheless, because non-media industries generally do not have dual sources of revenue (advertising/sponsorship and direct payment), the discussion about revenue sources for these sites may not be applicable to non-media industries.

Finally, if enhanced TV is to become the "interactive TV" for TV networks on the Web, the interactivity benefits to the consumer need to be conveyed. Consequently, TV networks need to design their web site with high usability. Too much emphasis on TV commerce and gimmicks may make enhanced TV a maze of storefronts and information bits that annoy or confuse TV viewers rather than enhancing their experience. An appropriate use of enhanced TV features on the Web can be a potent competitor to the pay-for-service interactive TV services offered by cable TV companies. Not only is enhanced TV

continuing the legacy of the “free” broadcast TV service, also it does not require additional hardware such as cable’s interactive set-top boxes. By capitalizing on wide access to the Internet medium, TV networks may reap the benefits of enhanced TV much faster than interactive TV.

Figure 1
Three Models of Enhanced TV Strategy



Hello Model	Fans- Friendly Model	Welcome All Model
LIFETIME	MTV	ABC
CNBC	A & E	PBS
Weather	VH1	CBS
CNN	WB	NBC
Food		FOX
UPN		Disney
PAX		TBS
History		TNT
SCI-FI		USA

Table I

Comparison of Program Type Featured in Broadcast and Cable Networks Web Sites

Program Type	Broadcast (n=40)	Cable (n=42)	Total (n=82)
Sports	7.5%	9.5%	8.5%
Game Shows*	17.5%	2.4%	9.8%
Comedies*	15%	4.8%	9.8%
Daytime Soaps*	7.5%	0	3.7%
Dramas	27.5%	26.2%	26.8%
News/Documentaries*	15%	50%	32.9%
Other	10%	7.1%	8.5%
Total	100%	100%	100%

* Significant difference at $p < 0.01$

Table II

Enhanced TV features used by Broadcast and Cable TV Networks

Enhanced TV Features	Broadcast Network programs	Cable Network programs	Total
Fan-based			
Episode Synopsis	40%	35.7%	37.8%
TV Star/Gossip	57.5%	54.8%	56.1%
Chatroom	48.8%	51.2%	35.4%
Video Clip Archive	40%	21.4%	30.5%
List of upcoming guests	12.5%	4.8%	8.5%
Game-based			
Quiz/Trivia	20%	33.3%	26.8%
Sweepstakes	7.5%	4.8%	6.1%
Play-along/Games	15%	11.9%	13.4%
Programming-based			
Program preview	52.5%	57.1%	54.9%
TV schedule	55%	57.1%	56.1%
Original programs for Web	15%	7.1%	11%
Simulcast	2.4%	4.8%	3.7%
Information-based			
Background	22.5%	21.4%	22%
News/Weather	5%	11.9%	8.5%
3rd party links	30%	40.5%	35.4%
Statistics/Scores	7.5%	14%	11%
Transcripts	15%	2.4%	8.5%
TV Commerce/Feedback			
Polls/surveys	20%	11.9%	15.9%
E-mail link	22.5%	45.2%	34.1%
Purchase form/shopping cart	30%	31%	30.5%
a) network memorabilia	13.2%	19%	16.3%
b) show memorabilia	28.9%	9.8%	19%
c) products featured	2.6%	2.4%	2.5%
d) Advertiser's products	2.6%	7.1%	5%

Table III

Enhanced TV features used by Program Types

Enhanced TV Features	Sports	Game Shows	Comedies	Daytime soaps	Dramas	News/Magazines	Other
Fan-based							
Episode Synopsis	14.3%	25%	37.5%	66.7%	63.6%	25.9%	28.6%
TV Star/Gossip	42.9%	50%	62.5%	66.7%	77.3%	33.3%	85.7%
Chatroom	0%	25%	12.5%	66.7%	63.6%	33.3%	14.7%
Video Clip Archive	42.9%	12.5%	37.5%	33.3%	31.8%	29.6%	28.6%
List of upcoming guests	14.3%	25%	12.5%	33.3%	0	7.4%	0
Game-based							
Quiz/Trivia	57.1%	12.5%	12.5%	66.7%	36.4%	18.5%	14.3%
Sweepstakes	0	12.5%	25%	0	4.5%	3.7%	0
Play-along/Games	14.3%	25%	12.5%	33.3%	18.2%	3.7%	14.3%
Programming-based							
Program preview	28.6%	62.5%	50%	33.3%	68.2%	48.1%	71.4%
TV schedule	71.4%	50%	37.5%	66.7%	68.2%	48.1%	57.1%
Original programs for Web	14.3%	12.5%	25%	0	4.5%	14.8%	0%
Simulcast	14.3%	0%	0%	0%	4.5%	3.7%	0%
Information-based							
Background	0%	0%	0%	0%	0%	40.7%	0%
News/Weather	0%	0%	12.5%#	0%	0%	22.5%	0%
3rd party links	28.6%	25%	12.5%	33.3%	13.6%	55.6%	71.4%
Statistics/Scores	57.1%	0	0%	0	0	11%	14.3%
Transcripts	0	12.5%	12.5%#	0	9.1%	3.7%	28.6%
TV Commerce/Feedback							
Polls/surveys	42.9%	0%	25.0%	33.3%	9.1%	11.1%	28.6%
e-mail link	0%	12.5%	12.5%	33.3%	40.9%	48.1%	42.9%
Purchase form/shopping cart	42.9%	12.5%	37.5%	0	54.5%	11.1%	42.9%
a) network memorabilia	0	0	12.5%	0	36.4%	3.7%	60%
b) show memorabilia	28.6%	12.5%	25%	0	28.6%	3.7%	60%
c) products featured	0	0	0	0	0	3.7%	20%
d) Advertiser's products	42.9%	0	0	0	0	0	20%

#The news/weather feature in comedy genre was on A & E's Monty Python show
#The transcript feature in the comedy genre was on ABC's Bill Maher's Politically Incorrect show.

Table IV

Enhanced TV Feature Usage by Commercial Broadcast Networks

Enhanced TV Features	ABC	CBS	FOX	NBC	PAX	UPN	WB
Fan-based							
Epsiode Synopsis	11.1%	16.7%	16.7%	100%	60%	100%	44.4%
TV Star/Gossip	33.3%	33.3%	66.7%	66.7%	80%	75%	55.6%
Chatroom	66.7%	0	50%	66.7%	60%	0	55.6%
Video Clip Archive	33.3%	50%	50%	33.3%	0	75%	22.2%
List of upcoming guests	0	0	16.7%	66.7%	0	25%	11.1%
Game-based							
Quiz/Trivia	44.7%	16.7%	33.3%	66.7%	0	0	11.1%
Sweepstakes	11.1%	0	0	33.3%	0	25%	11.1%
Play-along/Games	33.3%	0	16.7%	0	20%	0	44.4%
Programming-based							
Program preview	0	33.3%	66.7%	66.7%	100%	75%	55.6%
TV schedule	11.1%	50%	33.3%	66.7%	40%	100%	77.8%
Original programs for Web	11.1%	33.3%	0	0	0	0	33.3%
Simulcast	11.1%	0	0	33.3%	0	0	0
Information-based							
Background	11.1%	16.7%	16.7%	33.3%	0%	75%	44.4%
News/Weather	11.1%	33.3%	0	33.3%	0	0	0
3rd party link	22.2%	16.7%	0	33.3%	20%	0	66.7%
Statistics/Scores	11.1%	16.7%	16.7%	0	0	25%	0
Transcripts	11.1%	0	50%	0	0	0	0
TV Commerce/Feedback							
Polls/surveys	33.3%	16.7%	0	33.3%	0	0	33.3%
e-mail link	0	0	50%	100%	20%	0	33.3%
Purchase form/shopping cart	33.3%	16.7%	50%	33.3%	80%	0	33.3%
a) network memorabilia	11.1%	16.7%	33.3%	33.3%	0	0	33.3%
b) show memorabilia	22.2%	0	33.3%	33.3%	80%	0	33.3%
c) products featured	0	0	0	0	0	0	11.1%
d) Advertiser's products	0	0	0	0	0	0	0

Table V

Site Usability Rating (Nielsen, 1999)

	Broadcast Network	Cable Network
Content – maximize the screen for content*	3.3	4.7
Simplicity	3.4	4.0
Accommodate different browsers	4.1	4.6
Provide context – company logos and links to home page	4.6	4.5
Resolution independent	4.4	4.5
One year behind the latest technology	3.6	3.7
Fast and predictable response time	4.3	4.5
Meaningful first screen	4.4	4.4
Printable page *	3.8	4.8
Total	36.6	39.5

Rating in 5-point scale: 5 very compliant to the principle, 1 totally not compliant to the principle

*Significant difference at $p < 0.05$

Table VI

Site Interactivity Rating

	Broadcast	Cable
Creates an enjoyable playful environment	4.0	3.8
Gives me a lot of choice	4.1	3.8
Sufficient number of internal links	4.1	4.6
Sufficient number of outbound links	3.7	3.5
Many devices to collect information about me	3.0	2.3
Submit my comments in future	2.4	1.4
Will visit the web site again	3.3	2.3
Total	26.3	22.1

Rating in 5 point scale: 5 strongly agree to the statement, 1 strongly disagree to the statement.

Appendix 1

TV Networks Analyzed in this study

Cable TV Networks	Broadcast TV Networks
1. A & E – Arts and Entertainment	1. ABC- General
2. Comedy Central - Comedies	2. CBS - General
3. CNN - News	3. NBC - General
1. CNBC – Financial News	4. PBS – Information/Education
2. Disney – Children's Programs	5. Fox – General/Young audience
6. Food – Cuisine and Food Preparation	6. WB - General/Young audience
7. History – History documentaries	7. UPN – General/Young audience
8. Lifetime – Women	8. PAX – Christian/Family audience
9. MTV – Music and programs for young adults	
10. SCI-FI – Science Fiction	
11. TBS – General appeal superstation	
12. TNT - General appeal programs	
13. USA – General appeal and movies	
14. VH1 – Music videos	
15. Weather - Weather	

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