Interactive television has finally arrived! But, interactive TV is not happening on the primary television screen as many in the industry once expected it would—interactivity is happening on “second screens”, and it is being fueled by the growth of social media. We are in the very early days of a phenomenon that many in the media and technology sector expect to profoundly influence the future of television. To better understand the “second screen” ecosystem, how traditional industry players and new entrants hope to participate in it, and what challenges might arise as second screen business models evolve, we spoke to a variety of our contacts in the industry.

Everyone that we spoke to acknowledged that “second screen” applications (“apps”) and business models are in a nascent state of development, with a lot of experimentation taking place by numerous companies seeking to develop second screen strategies to stake out (or preserve) meaningful roles in the converged television landscape of the future.

What are “second screen” apps?
Second screen apps are downloadable applications that enable TV viewers (or “viewers” as some like to call them) to use their mobile devices, such as smart phones and tablets, to simultaneously connect to social media platforms and other interactive experiences that are related to the television programming they are watching on their primary TV screens. Second screen apps “enhance” the primary linear television viewing experience by enabling the audience to engage in synchronous interactive activities on their mobile devices. A second screen app might encourage users to instantly let Facebook friends know what they are watching right now, send or read related Twitter updates from program sponsors or others, access additional related content (eg, player statistics during a sporting event or biographical information about the stars of a series), play games that tie in to the program or its branding, participate in instant surveys, or receive targeted advertisements or promotions.

The prevalence of second screen use is much higher than one might imagine. Over a year ago, a Nielsen/Yahoo study revealed that 86% of mobile phone users access the internet on their handset while watching television, with 40% using social networking sites and 24% looking at content related to the TV program. More recently, a Nielsen study found that 70% of tablet users and 64% of smart phone owners use their devices while watching television daily or several times a week. A study of 1,300 people under the age of 25 in the United Kingdom reportedly found that 80% of respondents communicate with friends using a mobile device while watching TV, including 72% who use Twitter, Facebook or mobile applications to actively comment on shows as they are watching them. As these statistics indicate, there are a lot of people watching TV with second screens in their hands, and they are not just waiting for their mobile phones to ring! Not surprisingly, it is also evident that the prevalence of these viewing habits is even higher among younger audiences.

How does it work?
The technology underlying second screen applications and businesses is critical, because the quality of the experience is dependent upon the ability of the second screen apps to quickly and accurately identify what programming is being presented on the primary TV screen, and to simultaneously deliver related content or interactivity on the second screen device. As Stacy Jolna, CMO and a Co-founder of ConneTV explained to us, ConneTV has been developing their own algorithms to increase the “accuracy, relevancy and speed of synchronization.” The technological foundation for most second screen applications is some form of “automatic content recognition” or ACR. Some second screen apps involve “tagging” or “watermarking” the audio track of a television broadcast with meta-data that can be recognized by the app. Other ACR technologies work by “matching” the audio fingerprint of the program to reference databases, allowing the application to instantly recognize the television program and its associated meta-data to “enhance” the viewing experience by delivering related media to the second screen. Significantly, these types of audio content recognition systems do not require any alteration of the audio feed at the source, nor do they require the television set to communicate directly with the second screen.
“ACR technologies work by “matching” the audio fingerprint of the program being watched to reference databases”

“All of the networks are going after the connected viewer”

“Second screen apps help to create a sense of immediacy”

“Social TV apps ‘will push fans back to live, linear airings’…”

“The challenge is to get past cool and make money”

“The mobile space can take the privacy debate to a whole new level”
screen device using a shared Wi-Fi connection. Audible Magic has developed and patented ACR technology for recognizing content in applications, devices, and networks that is being used in the second screen world. According to Vance Ikezoye, the company’s CEO, Audible Magic’s second screen strategy is to be an ACR vendor, and license others to use its technology to reach end users. In this regard, Audible Magic’s business strategy reflects the widely shared view that at this stage of the game, it is hard to know what roles various participants in the television ecosystem will play as second screen TV business models evolve in the future.

Who lives in the second screen ecosystem?
There are many participants jockeying for position in the second screen world, including broadcasters, film studios, television manufacturers, advertisers, social networks, device makers, and technology companies. Christine Frank of Compass Advisers views the major players in the second screen world as being “content owners, distributors, app developers and advertisers.” In hailing the potential for second screen applications to increase viewer engagement with television programming, Stacy Jolna asserts that “everybody benefits – distributors, broadcasters, CE companies, content owners, and advertisers.” However, as Marcelino Ford-Livene of Intel Media notes, “All of the networks are going after the connected viewer, seeking to connect them with shows, and producers are seeking to connect viewers with their own second screen experience.” Sarah Bachman, the head of mobile strategy for Horizon Media, describes second screen applications as “an engagement tool” that can “really change the way consumers interact with brands, and marketers are beginning to see that.” The second screen environment can combine viewing, sharing, participation and embedded marketing to enable content owners, distributors and advertisers to achieve deeper engagement with consumers. In an environment where multiple participants are all trying to engage the same audience, using various technology solutions to deliver compelling content and functionality, the potential for intellectual property rights issues related to the use of copyrighted materials, trade marks and patented inventions are lurking beneath the surface. Of course, to some extent these concerns can be addressed through commercial arrangements such as Audible Magic’s licensing model, or ConneCTV’s strategic alliances with some of the largest local television station ownership groups in the U.S.

Renewing the value of live TV viewing vs. time shifting
Currently, live viewing is how a network makes the most money, because live audiences are the primary yard stick used by Nielsen and advertisers. However, time-shifted viewing has become a significant trend with the advent of TiVo and other digital video recording devices, with the number of people watching time-shifted television up nearly 20% from last year. Second screen apps help drive the audience to watch live, and not time-shift. As Christine Frank explained to us, second screen apps help to “create a sense of immediacy by establishing a real time, live event, social atmosphere” around television broadcasts. Many apps only work during the live broadcast, or are at least optimized for use during the live broadcast. Perhaps more importantly, the communal aspect of joining others in a simultaneous “social TV” experience using second screen devices and apps can only be achieved if participants are watching the same programming at the same time. Second screen apps developed for the recent telecasts of the Oscars and the Super Bowl allowed users to interact in real time with other fans with the goal of building community and motivating audiences to view the events during the live television broadcast, rather than recording them on a DVR for time-shifted viewing. This vital aspect of the second screen phenomenon is not lost on Stacy Jolna, who was an executive at TiVo in its early days. Stacy believes that social TV apps “will push fans back to live, linear airings, away from video on demand and time shifted viewing, especially for ‘water cooler’ shows like American Idol, The Voice and the Bachelor.”

How does second screen TV make money?
As Marcelino Ford-Livene told us, “the challenge is to get past cool and make money [from second screen apps].” The good news is that second screens apps are connected to a well-funded market place, in which tens of billions of dollars are being spent annually on television, digital and mobile advertising. Television advertising alone is currently estimated at
approximately $60 billion annually in the U.S. and is continuing to grow. Sarah Bachman believes that advertising on the second screen will complement, not replace, the ads that appear on the primary screen. Second screens have the potential to generate additional value for advertisers because they promote the viral spread of advertising messages and enable these impressions to be tracked and measured in new ways. To marketers, there is tremendous value associated with ads that lead consumers to tweet about a show or product. As Marcelino-Ford Livene puts it, “Viral promotion is critical to this generation, which is why social media analytics are highly valuable.” Accordingly, developing broadly accepted tools and metrics for measuring advertising effectiveness in the second screen world will become more important over time.

**Heightened concerns over user privacy**

A recent article in *The Atlantic* noted that “Companies’ ability to track people online has significantly outpaced the cultural norms and expectations of privacy... [This is] because what they can do is so, so different.” As Sarah Bachman observes, the potential for tracking people is even greater when we enter the world of mobile devices. She told us, “The mobile space can take the privacy debate to a whole new level.” Marcelino Ford-Livene also sees second screen applications as potentially fueling a “data mining bonanza.” As has been the case in browser-based targeted advertising initiatives, those seeking to harness the power of the user data that is being assembled and analyzed will need to pay close attention to the developing regulations, and social norms, around the gathering and use of consumer data. While younger people seem to have a relatively higher tolerance for “trading” information about themselves in exchange for receiving “free” services and content, along with more personally relevant advertising and promotions, government regulators and consumer advocates have been seeking to establish appropriate boundaries that must be observed. The industry participants who we spoke to about second screens generally acknowledged that significant legal issues involving privacy concerns and intellectual property rights are likely to be present as second screen technologies and business models continue to evolve.

1 We would like to thank the following individuals for taking the time to share their insights and perspectives regarding the second screen phenomenon with us: Sarah Bachman (Associate Director, Mobile Strategy, Horizon Media, Inc., an independent media services company), Marcelino Ford-Livene (General Manager Advanced Advertising and Affiliate Marketing, Intel Media), Christine Frank (Managing Director, Technology, Media and Telecommunications, Compass Advisers, an independent strategic advisory firm specializing in cross border transactions), Vance Ikemoze (CEO, Audible Magic), Stacy Johna (CMO and Co-founder, ConnectTV, a social TV network), and Dr. Laura M. Zenter for contributing to the research and writing of this article.


7 See, “Second Screens and Social TV”, infra.

8 Some consumer electronics and game console makers are using wi-fi based synchronization systems to deliver content to second screens, while others application developers are not focusing on synchronization at all. See, “Second Screens and Social TV”, infra.


10 In a recent Wall Street Journal article about second screens, Katherine Boehrt notes that “some aspects of these apps aren’t designed to work with pre-recorded shows”, see, “Using Another Screen to Interact With the TV”, The Wall Street Journal, December 21, 2011, http://online.wsj.com/article/SB1000142405297020487900457711o550202740674.html.

