Watermarking Heightens Viewer Engagement in TV, Movies, and Games

Savvy Marketers Learn How to Use the "Second Screen"— the Viewer's Laptop or Smartphone – to Hook Viewers with Related Features, Scene Details, Contests, and Offers. 40 Percent of TV Viewers Already Hooked

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If you've ever used a smartphone or tablet while watching television, you've got company: in a recent survey, 85 percent of smartphone users reported frequent "second-screen" behavior. Savvy businesses are eyeing this trend with interest; they've heard the reports that over 40 percent of TV viewers engage more deeply with a second screen, typically either a smartphone or laptop.

Businesses are capitalizing on the massive adoption of tablets by presenting viewers of a movie or live event with precisely synchronized offers on their second screen. The idea: why risk losing viewer attention to the movie on their television – the first screen – when you could keep viewers captive on the second screen by offering precisely synchronized offers relating to the movie: impulse purchases, contests, character bios and background, or scene descriptions. This continuous engagement of viewers with "offers" presents businesses with opportunities to build new revenue streams, increase the fan base, build greater loyalty, and improve ratings.

Second-screen success depends on engaging the consumer at exactly the right time and with the right offer—and that in turn depends on precise synchronization of the first and second screens. The first-generation approach to synchronization, called "fingerprinting" — achieved that goal but at the cost of synchronizing issues, expensive content management schemes, and lack of real-time responsiveness. But, again, necessity became the mother of invention, and watermarking came to the fore.

Next-gen Approach "Watermarks" Content for Easy Detection

Watermarking came about at the time when fingerprinting was reaching its stride — but also showing its limitations. Watermarking resolves the issues of fingerprinting by embedding data — inaudible to humans—in the sound track of the movie or event. Watermark detection software on the second-screen device analyzes the sound, finds the watermark, and can retrieve any information within it, such as a channel identifier, content identifier, and time codes. The detector in the second-screen application can precisely trigger offers or other content during critical moments of the broadcast regardless of audio volume or poor audio quality. Because watermarking embeds data in files rather than relying on the approach of fingerprinting — communications over public networks — it can support even live events with no risk of latency.

The watermark stays with the original content forever, even though it might no longer be used to trigger the same offer. That means that app developers can go back to the original content, years later, when a show goes into syndication or when it arrives on DVD or Blu-Ray, and create a new second-screen app

leveraging the already-watermarked file. Watermarking works flawlessly with DVR content, even months after the content has been recorded. Watermarking has a small "footprint" because beacons are inserted only periodically throughout the content. Thus, content can continue to sync as long as the viewer desires.

Ready for Real-time

Recent advances in watermarking technologies have made it appropriate even for live events, when the level of ambient noise is high. Developers can separate noise (or interference) from the intended audio content of the original file by using a second-screen application that employs advanced algorithms, through the use of what is called Wavelet® technology or Fast Fourier Transforms. The latest watermarking apps also eliminate false positives because they can distinguish an original song from cover group versions or other knock-offs.

However, the challenge of live events is that there's no time to edit files. Now, watermarking has evolved to a point where watermarks can be inserted during a broadcast. When app developers tie watermarks to a dynamic content management system, the watermarking app can serve relevant content to the second screen within moments. The app can even tailor content based on specific user characteristics and devices, to accommodate such features as the news crawl that accompanies a live match or newscast on the first screen. The experience for the DVR viewer is completely seamless.

Open for Business

The second screen is now open for business: developments in watermarking have eliminated the restrictions on reaching out and engaging consumers on the second screen. Watermarking got through its ramp-up phase just fine, and industry people are eagerly observing its growth potential. Here's one opinion from an industry watcher and pundit, Chuck Parker, of research firm The Intersection: "With 35 million tablets sold during the holiday season in 2012 and an estimated 40% of all television viewers now enhancing the experience with a 2nd screen, this is clearly the trend to watch for 2013."

Author Bio: Thomas Engdahl is a pioneer and early day entrepreneur of technologies ranging from telecommunications and cable to Internet-based content and video delivery. He has established, built and led technology companies to financial health by conceptualizing and executing strategic marketing and business development campaigns that consistently delivered strong revenue gains. His ability to raise capital, turn around struggling endeavors, and establish joint ventures and strategic partnerships has led to IPOs and profitable sales of a number of companies. Prior to Magic Ruby, Tom launched, operated and expanded many successful established businesses including: Radiance Technologies, Pathfire, Inc., Applied Digital Access (ADAX), and Alopa Networks. As a start-up entrepreneur, Engdahl has also built teams and successful businesses for Comcast and Arris International. In addition, Tom has held key positions at companies such as M/A-Com Linkabit, Northern Telecom, DSC Communications, and Pacific Bell. He holds six patents for telecommunications and video-cable products and has been active in setting standards in the M&E and telecom industries since 1984.