THE TV OF TOMORROW: OTT

OVER-THE-TOP

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OTT (Over-the-top) is the delivery of video, audio, and all other media over the Internet independent of a cable, satellite or over-the-air TV provider. OTT is transforming the way we watch TV, as more people choose services like Netflix or Hulu in place of traditional TV subscriptions.

Between 2008 and 2012, 3.74 million US TV subscribers canceled their subscriptions, and this trend is only expected to accelerate in the future. OTT has democratized the TV landscape, and introduced a new model of consuming content. Content producers can now sell directly to viewers, and viewers will only pay for content that they want instead of bundled channels. This kind of OTT model has attracted a number of players into the market, with an ever-growing number of devices that enable consumers to watch their OTT content on the big screen.

Source: ISI Group / Business Insider
Let’s examine the landscape of Web TV and how consumers currently engage in OTT experiences. Many devices today can be connected to both your big screen and the Internet. They break-down into three categories:

- Smart TVs from vendors like Samsung, Sony, and LG. Many TVs sold today are capable of connecting to the web, although surveys found that half of them are not connected.

- Media boxes like Apple TV and Roku - Their primary purpose is streaming of internet video, so they are definitely plugged in.

- Game consoles like the Xbox and Playstation - Though games are their primary purpose, their Web TV capabilities are widely used.

Despite the prevalence of these devices, the primary consumption for web video streaming still occurs on a PC (as evidenced by the data below from Netflix). We see a similar pattern from HuluPlus users.

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Source: Nielson, Newswire September 2013
For the majority of publishers, supporting all popular Web TV platforms is just too hard and too expensive. Each of the platforms is powered by a non-standard, often archaic programming language and developer integrated development environment (“IDE”). Samsung, LG and Sony all use some derivative of HTML5, paired with buggy software development kits (“SDKs”). Xbox and PS3 both use their native SDKs, requiring game developer skills to build media apps. Apple uses Objective-C and Roku uses Brightscript, a custom VBscript/ Javascript lookalike. Getting a streaming video to play is often challenging in itself, let alone providing advertising and analytics integrations.

Even if the required engineering skills are available to publishers, there is still the question of ROI: how many people will actually install my app and watch my content on any of these devices? And do the advertising/subscription/marketing gains stack up against the development efforts? Generally, only video-centric publishers that offer mainstream entertainment (i.e. Netflix) can answer this question with “yes”. Publishers who offer more niche content or do not primarily focus on video cannot justify the effort.

### ROADBLOCK 1: APP DEVELOPMENT

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<tr>
<td>APPLE TV</td>
<td>XML?</td>
<td>(NO PUBLIC DOCS)</td>
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<tr>
<td>ROKU</td>
<td>BRIGHTSCRIPT</td>
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For consumers, the biggest roadblock is user experience. Smart TVs are most often (and rightfully so) criticised for their clunky interfaces, but the UX issues run deeper than that. For starters, the multiple remote controls in today’s living rooms are a problem. Remotes get lost, are often difficult to understand and are not interoperable. They are also notoriously bad for text input, a requirement for Web TV. Think about searching for content or inserting login/payment credentials in this interface:

Roku User Interface

On desktop and mobile, content discovery is fast and rich. Search engines, social networks, emails/messages and hyperlinks all provide us with a vast selection of content to digest throughout the day. On Web TV platforms, there is usually only a rudimentary app store. While app stores work great for actively finding and installing a limited number of apps, they do not work for passively snacking on pieces of content. There is no way for social networks, search engines, website, and email clients to launch content on your TV.
This brings us to the TV casting model, whereby viewers utilize their mobile device to “cast” content to the big screen. Take Google’s Chromecast device, for example. This little $35 HDMI stick quite elegantly removes many of the roadblocks described above. It does so by relying on an innovative receiver/sender app model:

- Chromecast receivers are written in HTML/CSS/JavaScript, which makes development easy and straightforward. In general, if a receiver (a.k.a. webpage) works in Chrome, it works on Chromecast.

- Chromecast does not have a remote control. Instead, it relies on your laptop, phone or tablet to discover, launch apps, and play content. Using a standard called HDMI-CEC, it can even wake up your TV from standby. These apps are called senders.

Moreover, Chromecast’s use of your mobile device for input enables all kinds of interesting multiscreen interactions. For example, the Chromecast YouTube receiver allows attendees to collaboratively manage a Party Playlist from the YouTube app on their iOS and Android phones. The video is still coming from the Internet though, so the receiver will continue to play even if all the users close their mobile apps.

Apple TV’s Airplay is another example, albeit a less advanced one, of the TV casting model. Whereas Airplay provides a way to quickly play a video on the TV screen, it does not have any ability to provide rich logic (like branding or advertising) or interactivity (like playlists and quizzes). In a way, Chromecast is an evolution of Airplay, moving from a limited receiver to a smart one.
3. IMPACT TO TV ADVERTISING

The ability to “fling” content from mobile devices to the TV will significantly impact the TV advertising ecosystem. In the past, mobile devices were primarily used as a supplement to the TV experience. This represents a significant paradigm shift, as mobile devices have access to far greater audience data (for example, location, social interactions, online purchases, etc.) than a traditional TV box. With devices like Chromecast, viewers can now use their mobile phones to search and access content, allowing the mobile device to become the “primary screen” instead of the “second screen.”

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Rather than purchasing time slots during specific TV programs to reach their target demographic, advertisers can now utilize cookie data and other information readily available on mobile devices to create profiles of users who interacted with their ads. For example, JW Player’s implementation of Chromecast allows viewers to engage with the companion ads on their device while the actual content plays on the TV screen.

JW Player’s implementation of Chromecast allows viewers to engage with the companion ads on their device while the actual content plays on the TV screen (click to see demo).

Thus, the number of impressions, click-through rates, and other engagement metrics can be easily measured in real-time. Unlike the mass medium effect of traditional TV advertising, using interactive ads in the multi-screen experience will allow marketers to target based on an individual’s behavior. Marketers can also use this data for tactics like retargeting, effectively making TV advertising a channel for lead generation. It is important to note that while this data can be used to create a user profile, the user’s privacy is respected and he or she is never uniquely identified.
So what does this mean for the TV networks? In the current TV advertising model, the networks have proprietary access to viewership data (for example, Nielsen or other market research firms). As mobile devices become the medium for searching and accessing content, mobile platforms will also have access to viewer demographic data, disrupting the networks’ dominant position. What will happen remains to be seen, but this will likely result in changes to how TV advertising has been traditionally sold and priced.

**4. THE ROLE OF STANDARDS**

Users want a seamless OTT viewing experience as they move around their homes and the wider world. If you start watching a playlist of music videos on your PC at home, you should be able to continue watching them on your tablet on the subway, then cast them to your friend’s television when you arrive at her house-without any extra device configuration or software installation. The devices should magically “find” each other.

This scenario will only be possible if everyone involved - device makers, software vendors, publishers, CDNs, and so on adopts and adheres to formally designed standards.

Why? Because the likelihood of all the devices being from the same manufacturer (or even running the same software version) is very slim. You would be pretty annoyed if you arrived at your friend’s house and her TV only supported casting from tablets made by the same vendor. Increasingly, when it comes to interoperability, users don’t care who makes a device, they simply want everything to work. In the future, companies that use closed, proprietary technologies and devices as a means for locking consumers into their products and services will find it very hard to compete in the market.

Device discovery/registration, casting, media formats, encryption, and adaptive streaming protocols are just a few areas where standards will be critical. It is encouraging to see collaboration in these areas taking shape. The biggest names in OTT are participating in the DASH Industry Forum, registering in the DIAL registry, and participating in the W3C Web & TV Interest Group. This trend is likely to continue as we move towards a unified system of standards, driving the increasing use and adoption of OTT devices and services.
JW Player supports Google Chromecast, allowing publishers to easily enable video playback and advertising on Chromecast devices. This includes multi-screen VAST-compliant advertising, which will enable publishers to show an ad on a user’s TV while presenting clickable information about that ad on the user’s mobile device. If you are interested in learning more about JW Player’s integration with Chromecast, please contact mkting@jwplayer.com! You can also see a live demo of the JW Player Chromecast integration here.

How Does Chromecast Work With JW Player?

1. JW Player Sender Connects To JW Player Receiver App
2. Receiver App Requests Video From Cloud
3. JW Player In Receiver App Plays Video
4. Receiver Communicates Back To Sender

*Google Chromecast and the Google Chrome logo are registered trademarks of Google Inc.*