InMedia

The Need for an Open Video Platform Ecosystem

Kurt Michel, Vice President, Marketing, SeaChange International, argues that the OTT infrastructure needs an open platform solution...

The video provider industry today presents many opportunities to build new, more engaging relationships with viewers, along with the greater monetisation potential that comes with them.

The more a provider learns about their viewers, the better they can position and recommend content and offers for them. Technological innovation has been the primary thrust behind OTT, and it continues to drive the industry forward, opening new possibilities for deeper engagement, especially with the introduction of AI and machine learning. But even as the possibilities continue to grow, it is becoming clear that there's a huge difference between what's technically possible, and what is realistically implementable.

To fully realise the potential of today's video platforms, the continually increasing complexity at the technology, business and social level must be addressed.

Pry It Open?

Let's look first at the technical complexity. Video platforms today are primarily purpose-built from the ground up. They may be built on cloud infrastructure, on-premise, or some in-between hybrid. They may leverage common technologies, and some common processing elements - but for the most part they are all islands onto themselves - closed, proprietary systems. Netflix, Amazon and Comcast X1 have built some of the most advanced platforms, but they are closed. Yes, X1 is built on RDK at the set top box level, but behind that, these platforms are black boxes. The same can be said of the OVP platforms.

I would argue that the OTT content processing, control, and management infrastructure behind the delivery networks looks a lot like the nascent PC market, when Amiga, Apple II, Commodore, and others were available, and computer hobbyists picked their favourites. Each required its own dedicated software development, and programs written for one could not be run on another without significant software rewrites.

To further develop this PC market analogy, consider that the market evolved by developing a set of common tools which could abstract the hardware from the application software. These common tools were collected into something called an operating system (OS). Two primary consumer OS's emerged; the closed Apple MacOS and the relatively open Windows/Intel (Wintel). With Wintel, the same software could run on machines with many different hardware configurations from many different manufacturers because Windows provided a base level of capabilities (tools) that developers could build on. The market for a given software application was much broader, reducing the overhead of having to rewrite a program for multiple different platforms. The competitive PC market drove innovation and cost reduction, in both hardware and software. The consumer was the winner.

As an industry, do we think that the current closed video platform architectures are optimising our ability to provide new features and capabilities, at the lowest cost possible for consumers? Are we content to continue building on the closed system model? Or would a more open infrastructure model unleash the benefits of greater scale, faster innovation, faster deployment, and lower cost?

What is Missing?

Our industry lacks the common set of tools that can act as the "OS" for video platforms. We're missing the cohesive building blocks, the things every provider needs. While this has been done for the Set Top Box (STB) with RDK and Android TV, it has not been done at the infrastructure level.

We can break the building blocks into two groups: 1) Control and management functions, and 2) video content (data plane) processing. I tend to see the data plane processing elements focused on increasing throughput and reducing cost. The PC industry analogue would be the hardware - memory, processor, video cards, LAN cards, and the like. I tend to see the control and management functions as primarily software that is involved in feature and service creation, with value-added services built on top of them. The PC analogue would be Windows.

For a video service provider, what would some of the foundation Control and Management building blocks (the OS-like functions) be? Some suggestions would be content management, viewer session management, monetisation management (ad- or subscription-based) and viewer presentation management (often called the UX/UI), along with underlying metadata handling.

As viewers come to expect greater personalisation (better recommendations, more relevant advertising, *etc.*) metadata becomes increasingly important. A single title which once may have needed 50 metadata tags may now require thousands, to support richer searching. Each viewer in a home may require a unique profile, viewing history, and session-specific tagging. With these blocks, and the underlying network-specific data processing elements, a video service can be built. I would take this a step further and say that this layer could and should be network agnostic. Whether the subscriber is on an IPTV network, or OTT managed or unmanaged, it shouldn't matter. Just as Windows added new capabilities to the "basic" feature set over time, these blocks could be enhanced to support greater personalisation through the addition of AI and machine learning technologies - as long as the required metadata management capability is available.

Pulling It Together

Well-developed control and management tools with published APIs can provide the critical data glue that unleashes a dynamic industry ecosystem. Only an open platform solution based on common core building blocks can provide the industry with the agility to meet and exceed viewer expectations, as well as our own market growth requirements.

For the health and advancement of the industry - and to deliver the best viewer/subscriber experience possible - a move toward a common, open, API-based, OS-type platform would provide a fertile environment for innovation and efficiency, while offering the viewer greater value. ■

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> **Kurt Michel**