The Open IPTV Forum Status & Future Directions – An Overview

Nilo Mitra, nmitra@oipf.tv
President, Open IPTV Forum

Abstract

As descriptions of the technical activities of the Open IPTV Forum (OIPF) have been presented at past "Web & TV" workshops, this paper continues that trend by addressing one of the identified workshop topics, namely "International TV standards and web standards convergence", by providing an overview of the accomplishments of the Open IPTV Forum in the past half year and providing some future directions and areas of collaboration.

Introduction

The last 6 months have been a period of intense activity for the OIPF, addressing both new technical features as well as creating the environment that will allow the testing, certification and deployment of the OIPF specifications in consumer devices and service provider networks. Of these specifications, the Open IPTV Forum's work on browser extensions to support IPTV services – the Declarative Application Environment (DAE) – was addressed in some detail in past W3C Web & TV workshops. It is gratifying to see this technology used by several other organizations, such as the HbbTV Consortium and the UK Digital TV Group as a part of their solutions, thereby accelerating the commercial deployment of this technology in retail consumer devices and in services.

New release

In mid 2011, the OIPF published an update to Release 2 of the OIPF Solution specifications. Release 2 includes an evolution of functionality across many areas of the Release 1 Solution specifications, with notable enhancements of major functional areas. Some noteworthy services and features that are specified in Release 2 include:

- HTTP Adaptive Streaming of live and on-demand content, derived from 3GPP's Adaptive HTTP Streaming specification
- Metadata and signaling procedures for emergency alert services
- SIP support for Multi-media Communication Services
- Support for Retransmission and Fast Channel Change, based on the DVB specifications
- Network-based time-shift and network-based Personal Video Recording
- Personalized content channel service
- Content bookmarking
- Session/service continuity through transfer or handover between devices
- Trickplay and playout controls/restrictions
- Sharing of content between users

- Enablers to purchase digital media items associated with content
- Support of the W3C Widgets specification within the OIPF declarative application environment
- Use of mobile devices for remote control, based on the support of the DLNA remote control remote user interface
- Better integration with CI+ based conditional access systems
- SAML-based single sign-on

The services and features offered in Release 2 are described more fully in this document. The specifications are freely available at: http://www.oipf.tv/Release_2.html

Following the development and publication of these specifications, the OIPF is defining usage Profiles and Interoperability Testing Specifications.

Merging of bmcoforum's activities into OIPF

In January 2011 the OIPF and the **bmco**forum (Broadcast Mobile Convergence Forum) announced plans to join forces, merging the activities of the **bmco**forum into the OIPF. This move is significant as it reinforces the need for comprehensive integration of mobile devices with fixed-line IPTV services.

Multi-screen approaches including TVs, PCs, mobile devices and other screens are a market reality for TV and media consumption, and as more mobile devices are integrated with IPTV they will bring an increasing level of interactivity and flexibility. Personalized linear and on-demand content services will be delivered into multi-screen environments both in the home and for consumers on the move. In addition, as mentioned in the Release 2 features above, mobile devices will be used not only for watching TV, but also as service control points, allowing selection and control of personal content services.

The merger is expected to optimize the use of our combined resources and efforts as the resulting single entity has broad representation and influence across the fixed and mobile broadband industries, as the two bodies have each established a leading position in their respective spheres of activity.

Certification

To create further confidence in its specifications leading to deployment in service provider networks using retail consumer devices, the OIPF has been developing the structure for a Certification Program, based on existing Test Specifications developed for products that implement the IPTV Solution specifications. Currently under development, the Certification Program is essential for checking the compliance of products that implement the OIPF specifications. In May 2011 the OIPF announced the next phase in establishing certification activities, and issued an RFP for Test Tools to solicit responses from industry participants who may have an interest in providing them. The Certification Program itself will involve the use of Test Centers, which will provide a formal test execution environment for vendors with products which they wish to certify.

Future directions

Going forward, the OIPF has defined a more market-relevant, time-to-market constrained approach to developing new features. It is expected that in the next year there will be highly targeted "feature packages" (defined as a collection of related requirements and the necessary specifications to achieve a particular function or set of closely-related functions) in the area of:

- Support for 3D TV
- Deployment of IPTV services over IPv6 enabled networks and end devices
- Support for multiple DRM/content protection solutions via downloadable components
- Enhancements to the DAE to cover areas such as support of advanced graphics, additional fonts, and innovative end user input devices
- Integration of IPTV services with mobile devices and services, which is a continuation of the **bmco**forum's work

W3C collaboration

The use of the HTML5 video/audio elements as the common method of embedding media remains, of course, everyone's long term goal, but several features – all topics of active discussion in the Web and TV Interest group – are essential if this technology is to be used in commercial deployments of paid content.

As was pointed out at the Berlin Web & TV workshop, the OIPF's DAE APIs are part of a complete integrated system definition which includes codecs, system formats, metadata and DRM including the integration between these and HTML / JavaScript. It would be desirable if any W3C work on APIs to access TV enabling features and their integration with codecs, system formats, metadata and DRM could build on these specifications (and test specifications / materials) rather than duplicating it. At a minimum, these should be studied to better understand the requirements needed by commercial TV systems and deployments.

It would also be helpful if clear boundaries could be defined in W3C standards where other standard forums could extend W3C specifications in areas necessary for a particular domain but for which W3C may not have the appropriate representation of domain expertise.