

# **The 1st Implementation Report on TV Programs on Hybrid Broadcasting System using HTML5 Browser**

## **Hybridcast 2014 Project**

Position paper for the fourth W3C Web and TV Workshop

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### **Abstract**

In W3C, we've been discussing convergence of TV and the Web, or various aspects of web technology application to the TV and broadcasting industry: streaming technologies such as MSE/EME, second screen scenarios, Media APIs, and testing. We think we've reached the point where feedbacks from real implementations of TV programs and services on a hybrid broadcasting environment using HTML5 are crucial for further discussion on these and new topics in this area. We would like to provide the Web and TV community with such information through the 1st implementation report on TV programs and services on a hybrid broadcasting system.

### **Backgrounds**

#### **Hybridcast**

Hybridcast is a hybrid TV system that uses HTML5 as an application service environment. The technical specification of Hybridcast version 1.0 was standardized by IPTV Forum Japan (IPTVFJ) in March 2013.

#### **Hybridcast 2014 Project**

Hybridcast 2014 Project is a feasibility study on TV programs and services on a hybrid broadcasting system in Japan. From January to March 2014, sixteen commercial broadcasters are airing, through their terrestrial broadcasting systems, experimental TV programs and services, which the general audience can watch and enjoy using existing Hybridcast TV sets in the market.

### **Importance of implementation feedback**

In W3C Web and TV IG, Web and Broadcasting BG, and other relevant

CGs/WGs, we've been discussing web technology application to the TV and broadcasting industry from various viewpoints: streaming technologies such as MSE/EME, second screen scenarios, Media APIs, and testing. We think we've reached the point where feedbacks from real implementation of TV programs and services are crucial for further discussion of these and new topics in this domain.

Hybridcast is the first hybrid broadcasting standard that has adopted HTML5. We would like to contribute the web community by providing feedbacks from Hybridcast 2014 Project on key data points:

- Service model and architecture
  - Real service models and architectures on a hybrid broadcasting environment
- Synchronization
  - Synchronization of broadcast video and browser animation on a Hybridcast TV set
  - Synchronization of broadcasting signal on a Hybridcast TV set and a companion application on a smartphone
- Audience engagement
  - Audience measurement: rating, number of TV sets in the market, number of interactive participants, etc.
- W3C Web API usage
  - Statistics on W3C Web API usage among these real Hybridcast TV applications
- Production tips
  - Production tips from the implementation experiences
- Monetizing
  - Advertising and other monetizing ideas

### **Five initial study models of Hybrid TV programs and services**

Among eighteen TV shows in the feasibility study, we've selected five shows as data sources of the report:

- Social TV  
An Interactive variety show with "JoinTV" (poll, quiz, etc.)  
Nippon Television Network Corporation
- Enhanced anime  
"Crayon Shin-chan" and a program independent information service  
TV Asahi Corporation
- Enhanced sports television  
"Football: all-Japan High School Women's Championship"

Tokyo Broadcasting System Television, Inc.

- 'TV game' program  
"Mission 001"  
TV TOKYO Corporation
  
- Interactive game show  
"Werewolf"  
Fuji Television Network, Inc.

We are preparing two different types of report: 1) a 5-minute video demo for each program to illustrate the show structure and the audience experience, and 2) slides that summarizes key data points of this feasibility study. The first one is likely to fit in demo spaces or sessions if you have, and the second one is likely to be suitable for presentation and open discussion with the floor.

### **Why this matters to the W3C workshop**

The final TV program of this feasibility study will be airing on March 7, 2014. We are currently analyzing the result of four TV programs and services that have already aired since January 2014 and will be concluding the result of this study soon after airing the final TV program. The workshop can be the first opportunity for the project to present the result. All project members who are planning to join the workshop, i.e. the contributors, would like to contribute the Web and TV community with these implementation feedbacks.