Expression of interest in participating in the Workshop

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Participant's interest

As a telecom solutions provider, Huawei also provides carriers from many countries with end-to-end, convergent IPTV solution and have been involved in many corresponding international SDOs (standard developed organization), such as ITU, OIPF and DVB. For more details, please see www.huawei.com.

So of course we are interested in any event about TV service technologies, especially in the aspects of application and transportation. Because of some new requirements raised by the end users and the carriers, we recently keep working on how to import the contents and services from web into TV screen. During the course, we find no standard with enough popularity about this topic to conform. So we are very interested in the web-on-TV workshop held by W3C and hope sincerely some standard solutions would be worked out ultimately, if the necessity is identified.

Point of View

We are convinced that the user experience is one of the top importanct factors.

As many of us know, there exist many more attractive contents and services in the PC world than that in the current TV world, so these contents and services should be properly made available in the TV screen. But considering the following differences between the two worlds:

- The screen size, i.e. the PC screen is often median size while the TV screen is often big size.
- The audience, i.e. the audience in front of PC screen is more skilled in human-machine interaction than that in front of TV screen.

- The bandwidth, i.e. the bandwidth between PC and website is less stable than that between STB and IPTV server.
- The peripherals, i.e. the peripherals (e.g. mouse and keyboard) of PC are richer than that of TV/STB.

we recommend that some special or bad user experiences in PC world should be specially avoided in TV world when these contents and services come into TV screen. For example, the long wait for buffering, the small resolution of the media content and the dense focuses which can be clicked easily by the mouse but not for a remote control, may be acceptable for the audience in front of PC screens but may not for that in front of TV screens.

This can be achieved, for example, by the following measures:

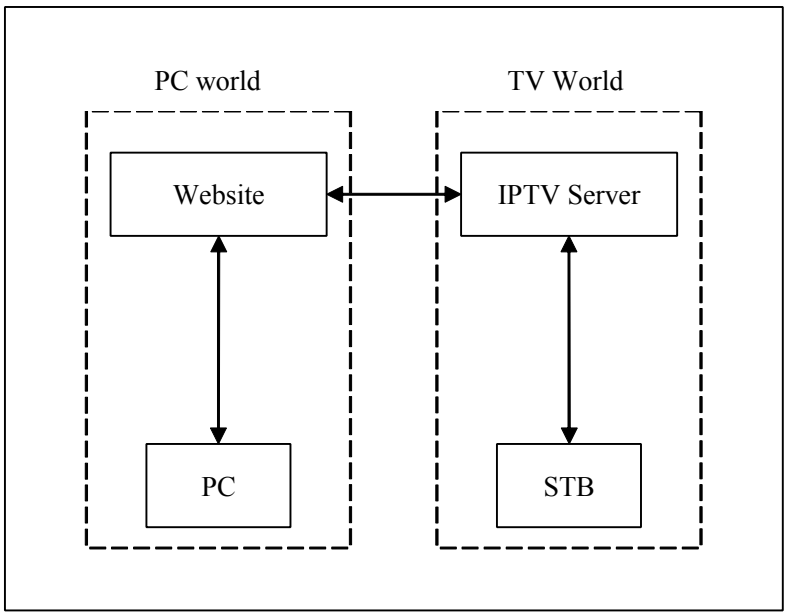
- The IPTV operator acts as a CDN like role, fetching and buffering the media content on behalf of the STB.
- The IPTV operator acts as an adapter like role, shaping the web page into the form that is proper for the TV screen.
- The website opens for the STB&TV a new portal where the density of focuses in the web pages is proper for the TV screen.

Furthermore, as is often emphasized by many SDOs, we also think that backward compatibility is very important. So we recommend that some solutions should be worked out to make the end users also accessible to the services and contents on the web using current STB&TV they own.

So in our point of view, some protocols among the STB, the IPTV server and the website server should be developed.

Example of interest

To make the contents and services provided by the Website available for STB / TV in existing IPTV system, we are interested in the solution illustrated by the following figure.



As indicated by the figure above, a certain association between Website and IPTV Server should be created in some way. For example:

1) The IPTV Server can forward the ‘search video’ request from STB to the Website, and then can forward the search result from Website to the STB.

2) The Website can forward the ‘video recommendation’ request from PC to the IPTV Server, and then the STB can visit the video on the Website which is recommended by PC.

3) The IPTV Server can fetch the content from Website for STB, and can then cache it, so that other STB can visit the same content in the same smooth way as the content served by the IPTV Server itself.

Based on the association illustrated above, we believe both the import of contents and services from Website to TV screen and the user experience can be guaranteed.

In general, we think that this solution has the following advantages:

1) The QoE of the end user visit the contents and services provided by the Website can be guaranteed.

2) The consistent user experience between the content and services provided by the IPTV Server itself and that by the Website, can be expected.

3) The existing IPTV system, especially the so widely spread STBs, can stay as it is now as much as possible and hence can protect the existing investment from telecom operator and the end users.