

HTML5-based Web TV Industry Trends

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Abstract

The web service companies develop the App support technique of the HTML5 base in the smart media system and smart TV competitively while the Web platform of the HTML5 base is legislated with the next generation national standard. It is essential to the web kernel, which is the common library of the operating system including the file, window, resource and network management is provided in order to support the various app developments of the HTML5 base effectually. Additionally, the web application program can support UI/UX function of the desktop user using the web browser and JavaScript drive and administration, window management function, and etc. is needed.

Keywords: HTML5, smart TV, web platform, web kernel, UI/UX function

1. Introduction

HTML5 platform sleeps for the next generation web browser and the standardization is proceeded with as the open technique (ISO TC-W3C). However, the various function over PC cannot be supported with the HTML5 standard and the concern is concentrated on the HTML5-based extended function^{[1][2][3]}. The Web Kernel, that is the common library of OS including the file, window, resource and network management, etc., is essential in order to support the various application developments in the HTML5-based web browser effectually^{[4][5]}. The web kernel in the smart TV is shown in figure 1.

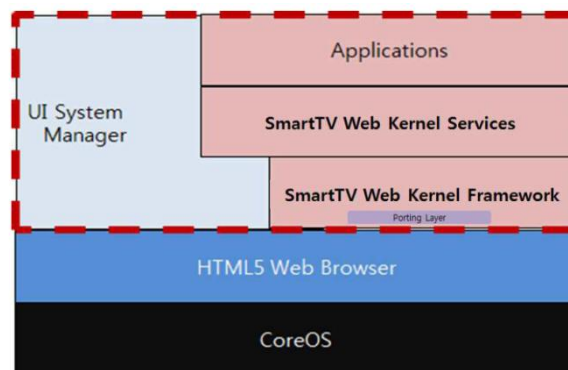


Figure 1. Web Kernel in the Smart TV

2. Global Trend of Technology Development

2.1. Technology Development Case

Global web desktop technology development case equal to the follows ^{[4][5][6]}.

- BOVINGDON developed the TARANTELLA web top equipped with TTA (Three Tiered Architecture) function.
- MS was no separate installation of program, the web-office which directly the web browser can edit the office function was launched.
- HP developed the solution which developed the JavaScript application framework for web OS and fits the web OS to the various platforms.

2.2. Prospect of Technique

HTML5 web platform can support the terminal which is various with one solution. Afterward, the web kernel technology of the HTML5 base in which the compatibility is guaranteed between the web browsers in order to meet the request of the business field is needed. And this can provide the common library reflecting the various requests. For this, the essential libraries need to be standardized.

3. Global Marketability Analysis

3.1. Smart TV Market Analysis

In 2011, the global smart TV sales recorded about 80million units. The point preferred called the entertainment media proves the smart TV marketability of the related enterprise ^{[7][8][9]}. In 2011, the global smart TV scale of a market is shown to the table 1.

Table 1. Global Smart TV Market Value

| Total sales [million units] | Smart TV of broadcasting company | Smart TV of venders | Total |
|--------------------------------|-------------------------------------|------------------------|-----------|
| | 2,307 | 80 | 2,387 |
| Revenues [₩10million] | 1,153,500 | 40,000 | 1,193,500 |

3.2. Subscriber Present of Global TV Broadcast

Global TV broadcast present situation of members major country is as follows.

- U.S. holds 140million TV broadcast subscriber in 2011. Among these, 25.42million digital broadcast-terrestrials, 59.02 million digital cable broadcastings, 6.42million IPTV broadcasting, 29.87million digital pay-per-view is subscribed. Particularly, it is analyzed that IPTV market rapidly growing up ^[10].
- Germany holds 38million TV broadcast subscriber in 2011. Among these, 55.26million digital broadcast-terrestrials, 60.47million digital cable broadcastings, 16.38million IPTV broadcasting, 13.92million digital pay-per-view is subscribed ^[10].
- Japan holds 47million TV broadcast subscriber in 2011. Among these, 67.29million digital broadcast-terrestrials, 53.82million digital cable broadcastings, 23.45million IPTV broadcasting, 59.22million digital pay-per-view is subscribed ^[10].

3.3. Global Smart TV Marketability Analysis

The pay-per-view broadcasters applying the smart TV shipment amount increasing rate of the annual average 21% to the smart TV total number of subscriber 2.307billion people and 2007~2010 year in 2011 with the global smart TV marketability analysis are as follows.

- In 2013, as to the TV type smart TV sales, 2017 expected as the smart TV supply completion time in 100.352million units is expected as 157.9058million units^{[10][11][12]}.
- In American market, the smart TV quantity of sales supporting internet is expected to increase over 80million units in 2014 and the smart for TV app store market is expected to grow to the market of the annual \$1.7billion scale^{[10][11][12]}.

4. Conclusion

It develops into the tendency that watching TV platform of the smart media system is integrated to the HTML5 base web platform while watching TV environment is digitized. According to this demand needs, it was not subordinate to the specific OS between the TV broadcast business (Terrestrial TV/IPTV/CATV/Satellite TV, etc.) and smart TV maker and HTML where there is the application compatibility 'HTML5-based smart TV platform national standard (TTAK.KO.07-0111)' was constituted (TTA, 2013. 3)^[13]. It is serviced around the TV manufacturer and TV broadcast content enterprise, etc. in which the governing power over a market is strong.

If the international publication standard man HTML5 technology settles down as the web TV platform, the huge investment costs will be required in replacing the broadcasting equipment and core software. Therefore, it is the point of time when the support from the government which satisfies the customer's demand needs and can maintain the balance of the related market is needed.

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