Mobile Television

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Abstract

Mobile Television refers to constant TV being provided to terminals and not video downloads. Mobile TV is already being offered on existing cellular infrastructures in unicast mode. But unicast is not optimized to deliver the same content to many users at the same time, and this prevents mass-market deployment. Broadcast networks are necessary for mass access to mainstream TV channels through mobile devices. These broadcast technologies would effectively expand the universe for television by allowing it to become no longer just a stationary activity, but one that lets consumers view while on the go.

Like most new technologies, there are several different standards or systems for broadcast mobile TV around the world. These include three primary open standards Digital Video Broadcasting for handheld (DVB-H), Digital multimedia Broadcasting (DMB) and Integrated Services Digital Broadcasting (ISDB-T) developed by industry associations with contributions from multiple players in the mobile TV marketplace and the proprietary MediaFLO technology developed by Qualcomm. DVB-H stands out as an open standard specified by ETSI but it needs new networks to be built and spectrum allocated. DMB networks have been commercially launched in South Korea but the main disadvantage for DMB is that world's biggest manufacturer of handset, Nokia, supports DVB-H. ISDB-T has been restricted to Japan only. The single biggest disadvantage of MediaFLO is its proprietary nature (hence concentrated royalty fees) which means it is unlikely to be adopted by most operators. Also Qualcomm has applied a vertically integrated business model for Media FLO.

The Mobile TV value chain is an evolution from the existing broadcast TV services value chain and the Mobile Data value chain. Telecom service providers have a choice of owning the complete value chain as in the case of 3 Italia or act as a customer base only as in the case of Verizon with Qualcomm. The commercial launches, consumer surveys and data from various trials have shown that there is considerable demand for mobile TV worldwide. The usage pattern for mobile TV is considerably different from the home TV viewing and this will encourage new advertising models. The operators should mainly concentrate on short episodes of programs called mobisodes, news and sports programming.

Mobile TV offers an opportunity for the telecom service provider to differentiate itself from others. Providing Interactive mobile TV services also provides an increase in revenue from other data services being provided by the operator such as SMS. For the equipment vendors mobile TV is yet another source of high revenue as new networks for providing mobile TV services will have to be built. The handset equipment manufacturers also gain from the rising demand of this service as more terminals will be sold with an increasing number of subscribers. The handset cost will also reduce once the service becomes popular and is adopted by many users. Mobile TV is likely to be driven by the youth in the age group of 20-40 years.

A great deal of the good spectrum to be used for mobile TV worldwide is currently being used for analog television hence these bandwidth in these frequencies will not be freed until we have the digital switchover. These switchovers are not harmonized hence some countries will see an earlier adoption of mobile TV in this spectrum than others. In Canada the CRTC has exempted the mobile TV services from the Canadian content broadcasting regulations. This will help the growth of mobile TV as more popular programs from US can now be broadcast on this service. Over the next year or so, Industry Canada is expected to follow a similar process as the U.S. in developing commercial operations in the 700 MHz spectrum.

The results of the survey conducted by CWTA show that the behavior of the Canadian mobile users shows potential for Mobile TV deployments in Canada. A rough calculation based on certain assumptions shows that a DVB-H service if provided for the Greater Toronto area could be amortized over 5 years with an IRR of 17.5%.