

Interactive Digital TV Services in India

Rajendra Akerkar
Western Norway Research Institute
Sogndal, Norway
Telephone number: +47 91685607
E-mail: rak@vestforsk.no

ABSTRACT

Interactive digital television is a potential revolution in home entertainment, enabling the convergence of many types of media. The scope of application is as grand as one's imagination. Interactive digital TV (iTV) is a system where a digital television service is delivered using Internet Protocol (IP) over a network infrastructure, which includes delivery by a broadband connection. In this paper, we will discuss the status of iTV services in India. iTV services are still in the nascent stage in the country but are being seen as a potential threat to the existing cable and satellite services.

Keywords

Interactive digital TV, internet protocol, broadband, public sector telecom, private sector telecom

1. INTRODUCTION

Television in India has been in existence for almost four decades. For the first 18 years, it spread slowly and transmission was mainly in black & white. Television has come to the forefront only in the past 25 years. There were primarily two turning points: the first in the eighties when colour TV was introduced by nationalized broadcaster Doordarshan (DD). It then proceeded to install transmitters nationwide rapidly for terrestrial broadcasting. In this period no private enterprise was allowed to set up TV stations or to transmit TV signals. The second ignite came in the early nineties with the broadcast of satellite TV by foreign programmers like CNN followed by Star TV and a little later by domestic channels such as Zee TV into Indian homes. From the large metros satellite TV delivered via cable moved into smaller towns. In recent days, Internet Protocol Television (iTV) services are gradually becoming popular in India. Many well-know telecom operators have already launched iTV services in various parts of the country.

iTV refers to TV delivered through broadband, a technology that was earlier used to provide only internet access [1, 3]. The iTV services are still in the initial stage in the country but are being seen as a likely threat to the existing cable and satellite services.

Next section presents current scene in Indian market together with reasons for slow growth and advantages of iTV. In section 3, we will discuss the key service providers in iTV market.

2. CURRENT STATUS

The companies offering iTV services in Indian include public sector telecom giants MTNL, BSNL and HFCL, and private sector companies like Airtel. Presently offered in a few cities, the iTV services are delivered in collaboration with content delivery company like Aksh Optifibres and Goldstone.

In recent times, these content delivery companies provided iTV connection without a broadband connection to encourage the dissemination of iTV among the masses. It is for sure that several large telecom players will enter into the business exploring iTV as a new revenue opportunity from their existing markets.

In the beginning, the medium of entertainment was restricted to the usual Cable operators with limited content and low pricing. But the changing technological scenario and the digitization of broadcast industry has brought a wave of change in the entertainment sector. Customers are demanding more value added-content, with digital quality at cost-effective pricing. iTV faced a slow start as people were not aware about this new experience of watching television. Over a few months, it has spread to the other cities and is now gaining momentum. iTV is also growing in popularity in the urban and rural areas due to the content and pricing. iTV is now attracting more private entrants in the space.

At the moment, the market for iTV in India is at an emerging stage, with only a handful of operators having their presence. Also in India, we have lesser percentage of Internet users compared to other developed countries across the globe. At present, India has about 10,000 subscribers for iTV, but India is expected to be the fifth-largest iTV market by the year 2011 in the APAC region.

According to Frost and Sullivan [2], the Asia-Pacific region is likely to have over 27 million iTV subscribers by 2013, with China and India being the high-growth markets.

Any new technology takes time to reach its "point of inflection", after which it starts growing at a much faster rate. Even broadband adoption in India was very slow initially, but since 2007, it has really picked up steam. In case of iTV, with the government now giving go-ahead to broadcasters to share their channels with iTV providers, the deployment of Internet Protocol Television is all set to revolutionize and enhance television viewing experience in India. The slow but steady growth is already visible – we have observed more announcements on iTV launches in the last few months than in the last few years.

2.1 Reasons for slow growth

There are many reasons for slow growth of iTV services in India. To name a few, there is a lack of customer awareness about the benefits of the iTV service, low broadband penetration, slow Internet access speeds and costly set-top box. Most important reason why iTV never took off earlier in India was slow Internet connectivity. However, with faster broadband speed now there is every possibility that iTV will widespread soon. iTV uses a two-way broadcast signal sent through the service provider's backbone network and servers, allowing viewers to select content on demand, time shift and to take advantage of other interactive TV options. To take advantage of this, viewers will need a broadband connection and a set-top-box to send and receive requests. Traditional cable TV has the capacity to deliver hundreds of channels simultaneously to each subscriber. This creates limitations on the number of channels offered and can contribute to bandwidth shortages and quality degradation. iTV, by contrast, sends only one programme at a time.

2.2 Advantages of iTV

iTV delivery offers some advantages over cable and satellite TV providers. Unlike cable TV, iTV allows people to do a number of things. They can watch movies, play games, make telephone calls, and work on a computer and many more things, which are not possible on other platforms. In addition to these, one can do online shopping, e-learning and e-banking soon. These things have already been accepted and used by Internet and mobile users, and once iTV will capture the market, it will be widely accepted by everybody.

iTV will bring services not yet delivered such as on-demand video content, network-based DVRs, where the content is potentially stored on the network and streamed to the device wherever it might be. The so-called "long tail content" will be straight away available to consumers.

In addition, the content which is usually available in streaming media format on the Internet will be available for viewing on the television. iTV will also bring the integration of video streaming with conferencing capability, and interactive TV applications which will provide users with a much richer experience than they get today.

From the Indian consumer's perspective, iTV will allow the user to experience digital quality television with the added advantage of being a "pay per view" – service. Consumers can expect services such as Video on Demand, Video Conferencing and Interactive TV – pause, fast forward and rewind live TV or recorded content stored on the service provider's remote servers. Therefore, all parameters of comfort, cost and quality will be taken care of.

3. MAJOR PLAYERS

With the broadband penetration gaining momentum, iTV is set for a boom in India and is expected to be available in around 30 cities in the next two years. The subscribers of iTV range from residential users to government bodies to entertainment industry. iTV is currently commercially available in Pune, Mumbai, Bangalore and Kolkata and is now showing signs of gaining traction in the Indian market. Currently, iControl iTV is watched by MTNL subscribers in Delhi and Mumbai. It is also enjoyed by

BSNL subscribers in 20 cities of North India, i.e. in Rajasthan, Punjab, Haryana, Jammu, etc.

Interestingly, companies like eInfochips has services and solutions offering for all stages of Video broadcast chain, i.e. Creation, Transmission, Distribution, Testing, and Consumption. eInfochips is working with many global players in the value chain of iTV which includes semiconductor companies, equipment manufacturer both for broadcasting and customer node. eInfochips has design expertise of STB (set-top box), DVR/PVR, transcoding, automated solution for video quality verifications, AV container libraries, real-time content streaming stack, etc.

eInfochips recently announced availability of H.264 HD AVC and H.264 SVC and also launched High-definition (HD) reference board design based on Texas Instruments' DaVinci media processor last year. This will reduce TTM (time to market) for system/product manufactures and designers for HD-based solution.

In Indian market, Aksh Optifibre is the pioneer in iTV technology and enjoys highest subscriber base in this industry with MTNL and BSNL. These companies enjoy the last-mile connectivity factor over the other players entering this space and hence there is no question of other players entering this segment and posing a threat. There is enough for everyone in this segment.

Airtel is the new entrant in this segment, while Reliance and some other companies have delayed their launch for the time being. Besides being a leader in iTV in China, UTStarcom is also India's leading provider of iTV and broadband infrastructure in terms of scope of deployments and total commercially-deployed subscriber lines. For the last three years, they have taken various steps to promote growth and acceptance of iTV in the country. UTStarcom enables service providers to further monetize their existing broadband infrastructure by offering iTV and complementary value-added services that can be bundled with existing voice and data services to improve ARPU and reduce overall churn. Their end-to-end iTV system can be integrated into existing broadband networks to serve as the delivery platform for revenue generating applications such as IP video surveillance, video conferencing, distance learning, digital signage, interactive voting, hospitality applications, and advanced advertising.

Aksh iControl, India's first Internet Protocol TV (iTV) service, built on the end-to-end RollingStream iTV solution framework provided by UTStarcom, and being offered through BSNL and MTNL, allows end-users to pause, rewind and fast-forward, as well as record, live TV. However, in order to differentiate itself from other video services available in India – or even in other global markets – this interactive iTV offering will enable subscribers to message and talk with one another live through video communications tools on their television, as well as interact live with their favourite shows through polling and karaoke. iControl also offers a time shift feature that allows viewers the ability to view missed programming that was aired in the past week. The Video-on-Demand feature brings a library of more than 200 Hollywood, Bollywood and regional content by pressing only a few buttons on the TV remote. With another feature, CAS allows users to subscribe and de-subscribe a certain TV Channel or Channel group using just your TV remote and TV without any need of calling a call centre or suffering a long iTV delay or filling a form for the selection of channels. A-Tube is India's

primary innovative video yellow pages, which provides a variety of information ranging from lifestyle to video resume. A-Shop is the viewers' outlet to buy and sell various products in a virtual marketplace. Similarly, Bharti Airtel is also providing a lot of value-added and innovative services on its iTV platform.

4. SUMMARY

The response from iTV users has been positive in Indian market. However, to make iTV more popular, the service providers should lay stress on the quality of services and strengthen the customer care department, which is in a very poor state at present. Moreover, service providers need to look beyond instant revenue opportunities to understand the durable worth of iTV as a carrier distribution platform, over which several consumer communication and entertainment services can be offered concurrently.

5. REFERENCES

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