

Publication Name	Cable Quest
Edition	National
Date	December 2014
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## Connected TV brings convergence to Homes

In this one to one interview, with Cable Quest, Shyam Ananthnarayan, VP Marketing Product Engineering Business, Tata Elxsi clears the mist over Connected TV

**Q:** What is a connected TV and how does it differ from conventional TV?

**S.A.:** A smart TV, sometimes referred to as connected TV or hybrid TV, is a television set with integrated Internet and Web 2.0 features, and is an example of technological convergence between computers and television sets and set-top boxes. Connected TVs are designed to provide a more immersive experience for television viewers by delivering interactive features such as Web browsing, social networking, video-on-demand and video streaming in addition to regular television content.

The software that runs smart TVs can be preloaded into the device, or updated or installed on demand through an app store, in a similar manner to how the Internet, Web, and software applications are integrated in modern smartphones. The technology that enables smart TVs is also incorporated in devices such as set-top boxes, digital media players, Blu-ray players, game consoles, digital signage hotel television systems, and other network connected interactive devices that utilize television type display outputs. These devices allow viewers to search, find and play videos, movies, photos and other content from the Web, on a cable TV channel, on a satellite TV channel, or on a local storage drive.

**Conventional TVs:** Unlike smart TVs, conventional TV do not have technology of connecting to internet and mainly works with support of cable connection/set up boxes, or with support of

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DVD/Blue Ray players. The screen and processing circuitry is mainly optimized for broadcast television pictures. When it comes to cost per diagonal inch of screen surface, conventional TVs are the most expensive video products in the market. Also,

conventional TVs in particular have been known to have problems with burn-in. This occurs when a static image appears on the screen for a long enough period of time that it becomes permanently etched into the image.

**Q:** For a consumer what new experience can he get from connected TV and how it impacts content distribution.

**S.A.:** Connected TVs can seamlessly merge the content consumption through a single platform, giving consumers almost unlimited choice and easy access to a vast range of video content that can be watched through the main screen by individual viewers or a shared audience.

Consumer viewing of TV programming and movies over the Internet is growing, according to a new survey conducted by Accenture. The survey found that 25 percent of respondents indicated they intend to purchase a connected TV in the next 12 months. And, another 11 percent intend to replace an existing connected television, while 12 percent plan to purchase a tablet, expanding the market of addressable screens even further. The demand for more devices and more online content, as well as consumers' willingness to pay for better access to content, is reshaping the media and entertainment landscape. This rapid digital expansion is fostering a new era of personalised TV experiences with the number of video-centric connected devices predicted to surpass the world's population by 2017.

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**Impact of content distribution:** Market players continue to differentiate their offers by providing premium content, often on an exclusive basis. Despite the challenges, the volume of premium content, including live sporting events and blockbuster movies continues to grow and generate significant revenue for operators and content providers. At the same time, OTT (Over-the-top content) video service providers are also acquiring key content to boost their services and increasingly complement – if not challenge – traditional distribution. Policy makers broadly recognise that while exclusive distribution deals have formed the basis for content producers to amortise their investments, they may also restrict the possibilities of third parties to provide such content to their audiences and these restrictions may constitute barriers to entry for new players.



OTT (Over-the-top content) players have gone from strength to strength by providing a breadth of high-quality and exclusive content, some of it self-produced, of comparable calibre to that offered by pay-TV providers.

**Q:** What is the scope of connected TV in India, keeping in mind that all TV connections will be digital.

**S.A.:** Today, India is home to one of the world's most exciting television markets. With TV sets in 167 million households (second only to China) and a government plan in place to increase the number of internet users from 94 million (out of a population of 1.2 billion) in 2011 to 175 million by 2017 and 600 million by 2020, the prospects for growth are enormous.

Strategy Analytics" forecasts that the Asia-Pacific market, driven by India and China, will account for 42% of all connected television sales by 2016, with the penetration in India reaching 14%. In addition, pay TV's annual revenues in India are expected to increase from \$5.1 billion in 2012 to \$8.3 billion in 2016. Similarly, revenues from India's Bollywood film industry, producing close to one thousand movies annually, should rise from \$3 billion in 2012 to \$4.5 billion in 2016.

Adoption of smart TVs in India is debatable and a lot of consumers are just buying the smart TV sets because they are the best ones in the shop, rather than specifically because they have this internet portal attached. Connected TV is now becoming a mainstream concept – and both consumers and the industry are becoming more aware of the impact it will have on the future of television in India. Higher levels of technology convergence and proliferation of mobile computing platforms would make Connected TV the centre of interactivity and the communication hub for the Indian homes. Cloud computing will also play a major role in accelerating the pace of connected devices to the TV.

Today, if we look at the television industry globally and in India, one

can see that televisions are becoming 'smarter' even as the displays get flatter. We have seen various era of television from white & black to colour TV, rise of cable television, the emergence of digital television and high definition television.

To maximise the benefits of connected TVs, fast broadband speeds are necessary. This is still a challenge in India and therefore becomes a barrier to full adoptions. As per Akamai Internet survey report, India remained the country with the lowest level of high broadband adoption among qualifying countries, at 0.3% and average connection speeds ranged to just 1.4 Mbps. How this will be resolved (government legislation, service provider, private investors) is still not clear.

**Q:** Recently a DTH company launched a hybrid TV with integrated STB but it failed to take off. Do you think India will see a paradigm shift TV viewing in the near future?

**S.A.:** The phased progress in digitization has been the stepping stone for the industry's growth and success, thereby bringing about a paradigm shift in key indicators, particularly within the domains of TV and film sectors.

**Rollout of set top boxes:** Despite the implementation and policy bottlenecks, digitisation of cable television distribution made significant progress in Phase I metros as well as in Phase II cities. Collection of CAF (customer application form) and customer verification is almost complete in Phase I cities (apart from Chennai) and MSOs (multi-system operator) are moving towards starting gross billing. With an estimated 20 million C&S households (Cable & Satellite) in Phase II cities, 17 million subscribers were required to be digitised during Phase II. The extent of STB roll-out achieved across different Phase II cities has been different. However, industry discussions indicate that on an overall basis, 90 per cent of C&S households (including DTH households) are estimated to have been digitised across Phase II cities.

