

IPTV and its functionalities

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Introduction

IPTV stands for internet protocol television. Any person who watched a clip online has experienced a form of IPTV. So, IPTV is a system that delivers enhanced video applications over a managed or dedicated network via Internet Protocol to the consumers who are registered subscribers for this system through a broadband connection. Because of the service and content quality issues, IPTV usually delivered by managed network rather than public internet.

IPTV uses an internet protocol over broadband connection and very often this service has been provided in parallel with the internet connection of the subscriber, supplied by an operator dealing with broadband. This is done by using the same infrastructure but apparently over a dedicated bandwidth allocation. Hence it can be described as a system in which a digital television service is provided to subscribing consumers over a broadband connection using the Internet Protocol.

IPTV is a system of delivering video entertainment that has the following characteristics:

1. Significant part of system can be used for delivering voice and data as well.
2. The technology allows the video content to be time shifted at the consumers' discretion
3. The technology allows the consumer to choose a now traditional media vehicle to view content. This is of course in addition to the television.
4. Uses digital technology for coding, transmission of information.
5. Supports push as well as pull modes of content delivery.
6. Supports broadcast as well as switched broadcast (multicast or unicast).
7. The service provider owns or controls the network from its facilities to the consumers' home. This network is separate from (and connected to) the public internet.
8. The technology is based on or is being migrated towards IP protocol

IPTV and its Future Development

In order to compete against cable's triple play, telecommunication companies (telcos) started offering TV programming through their high speed Internet connection. This makes it possible for telcos to offer the quadruple play, which is a combination of wireless phone, Internet, land-line phone and TV programming.

Who Offers IPTV?

Verizon was the first telco to offer IPTV when it launched service in Keller Texas in Sept. 2005. Verizon's service starts at \$39.95 a month. They plan on expanding into the 29 states where Verizon services are provided.

Other telcos are taking Verizon's lead. AT&T joined the market in 2006 by offering U-Verse, which is TV and Yahoo! Internet access for \$74 a month. Currently, the U-Verse service is only offered in San Antonio and Houston, Texas. AT&T plans on expanding in 2007 and hopes to reach 19 million household by the end of 2008.

How is IPTV Displayed?

IPTV can be viewed in several ways. A computer may be used to reassemble protocol packets and convert them into a television signal that can be recognized by standard television set. Another option is the set top box, commonly used by cable companies. The set top box (STB) would be used in place of a computer and would do the same job a computer does.

Wireless Communication

Currently, none of the large telcos offer wireless IPTV. However, Ruckus Wireless, a wireless multimedia company based in California, has struck deals with several regional telcos to offer IPTV wirelessly. Ruckus has deals in place to provide wireless IPTV service in China and Ireland but has only recently signed deals with companies with in the United States.

Differences between Cable and Satellite

There are several differences between traditional television programming, such as cable and satellite providers, and IPTV. At the moment, the biggest difference and the difference that may affect consumer decisions the most is the availability of HDTV programming. Cable companies are now offering several packages with HDTV programming. IPTV is not yet able to provide HDTV programming. Also, because IPTV is offered over the internet quality may be poor if the connection is not strong.

Advantages of IPTV

Other than wireless communication, another advantage of IPTV is that if the customer has quadruple play (internet, television, telephone, mobile phone service) with the same company, the cell phone can be used to schedule the recording of a program. Excluding cell phone service and having only three services with a company is referred to as triple play.

Disadvantages of IPTV

There are some limitations to IPTV. According to Wikipedia, because IPTV is based on the Internet Protocol, it is sensitive to packet loss and delays if the IPTV connection is not fast enough and it also does not support HDTV at the moment. AT&T is currently experimenting with HDTV and its U-Verse service in the Houston area according to Cable Industry Insider.