

Internet TV

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Internet TV is emerging as an important and distinctive video platform in addition to cable, DBS, home video, broadcasting, and mobile wireless.

Typically viewed on PCs, Internet TV content can also be viewed on a TV set given appropriate in-home PC-to-TV connections. Intel's new Viiv technology is intended to support this while also making viewing on the PC more TV-like. In addition, downloaded video podcasts can be viewed on Apple video iPods.

By definition, Internet TV is transmitted over the public Internet. By comparison, the other TV modes – whether cable, DBS, Internet Protocol TV (IPTV), or mobicasts to video-equipped cellphones – are managed over dedicated networks. Distribution via the public Internet allows tremendous growth and variety of available content, but it's also constraining in terms of technical performance and ease of use.

QoS. Internet TV has been made possible by widespread deployment of broadband cable & DSL Internet access. However, even with broadband access, there is limited bandwidth relative to that available to cable on-demand video or standard cable or DBS video services, resulting in convenience and picture quality trade-offs. For example, downloading a movie from Movielink – the movie studios' jointly-owned Internet TV service -- takes 30-90 minutes. Although viewing can start within 2-10 minutes, it is subject to interruption if the download buffer runs out due to transmission glitches. Streaming of Internet TV requires less waiting; however, to compensate for limited transmission bandwidth, streamed video typically supports lower resolution than on a standard (let alone high definition) TV, which in turn generally limits the usable display to a small window on the PC screen.

If they choose, cable operators and telcos can allocate additional network capacity and manage quality-of-service (QoS) for the broadband access link. BellSouth and AT&T are seeking to charge Internet service

providers for guaranteed bandwidth with the implication that their Internet TV transmissions will suffer unless such payments are made. Alternatively, cable operators or telcos might QoS-manage their own Internet TV services while carrying non-affiliated services on a best-efforts basis. It is unclear whether such concepts will be seen as complying with regulatory and political requirements for non-discriminatory Internet access.

Content. To date, most Internet TV content comprises short video clips, movie and TV series trailers, archived TV programming episodes, pirated movies and TV shows. A recent flurry of new Internet TV distribution deals has expanded content options and highlights the potential of this new video platform. Nevertheless, an Internet TV enterprise is unlikely to obtain video content on more favorable terms than established home video or cable distributors. Even the studios' own Movielink does not offer movies prior to their cable pay TV windows.

Potential business models for Internet TV include ad-supported, free to attract web-portal traffic, pay-per-selection, and/or subscription packages. This is the season for trials and experiments. Examples include:

- Preview video clips & trailers downloaded from Apple to video iPods, free.
- Vintage TV series on AOL ("In2TV"), 14,000 shows packaged in 6-8 genre "channels," Ad supported. Subscriptions possible in the future.
- Comcast.Net, news & entertainment video clips, free to cable broadband subscribers.
- Current TV series downloaded to video iPods, @ \$1.99
- Movies and TV programs downloaded from Movielink for rental or purchase, including vintage as well as PPV-window selections, for \$3 rental to \$10 purchase.
- "Vongo" movie downloads from Starz, new PPV movies @\$4, library movies @\$10/month
- Google Video Store, \$2 for CBS episodes, \$4 for NBA games, \$2 for music videos
- Yahoo Go TV, trailers and music videos, pricing TBD.