IPTV in the University Market - A Panel Discussion
INTRO TO TIVLI

- An Internet Television, or IPTV, solution
- Launched in 2011 at Harvard Innovation Lab at Harvard University (Boston, MA)
- Higher ed focused: several live campus partnerships today and growing
- Internet2 member since 2012
Students (18-24 demo) are engaged with online, social, apps, etc
- Students are no longer primarily watching TV programming on the tube
- They are increasingly watching programming online
- Campus users want TV content on all devices, at all times and everywhere

Maintaining coax is costly
- It’s a hassle to wire coax in new construction
- University IT has made existing infrastructure investments in the IP network

Tivli’s Solution: Locally hosted, unicast-based IPTV
IPTV ARCHITECTURE

- HD Cable and Over-The-Air
- Live TV and DVR (no STBs required)
- Browser based with no proprietary plug-ins
- 100% remote management and fits easily in a data center (2 racks for approx. 50 channels)
- Serves thousands of students
  - Both WiFi and wired networks
  - Authenticated and secured delivery
TIVLI ENCODING

Encoding Platform

Tivli's Encoding platform helps create a cost effective and operationally efficient IPTV solution.

Encoder

Encoders take input from capture cards and convert into multiple bitrate streams of H.264 video.

H.264 Multi-Bitrate Video Streams

Distribution Server

Distribution servers save and serve the video streams to Tivli users at an optimal bitrate based on network conditions.

High quality video streams are available on a variety of devices via the Tivli player.
Some of the content students watch online is legal (Netflix, Hulu, Youtube etc); but, these are a strain on network resources

- 31 percent of Hulu’s audience falls into the 18-34 age range; Netflix skews slightly younger, with 40 percent of users in the 18-34 age range - Nielsen¹

- “The university’s Internet pipeline is overflowing with media downloads, with the lion’s share coming from services like Netflix [28%]” - J. Brice Bible Chief Information Officer, Ohio University (which put a ban on Netflix)²

- "Probably 70 percent of our traffic is video of some form, either YouTube or Netflix," - Jack Suess, Chief Information Officer, University of Maryland-Baltimore County³

² http://www.ohio.edu/oit/news/ohio-internet-connection-overflows.cfm
Centralized Scenario
Tivli's distribution server is in one location on the campus backbone.

Distributed Scenario
Tivli's distribution server(s) are placed on different parts of the campus network.
WHAT ABOUT ILLEGAL CONTENT?

- The fastest growing area of piracy is Live TV - Google and PRS for Music
  - 39% of those who viewed TV content illegally online were in the 18-24 age bucket (highest share of any age group), yet only 23% of those who viewed the same content through legal websites fell in the youngest cohort - MediaPost
  - Live TV Gateways rely heavily on social and give young adults the user experience (online, social) that they crave

Tivli lets students watch on their own terms

- Excitement and buzz around the service continues to grow as we bring students exclusive features such as access to HBO and HBO GO as well as DVR.
- Mobile applications coming soon
DMCA REQUESTS: BEFORE & AFTER

- Even with video use is up, campuses are seeing DMCA requests are down
- Up to a 40% decrease month-over-month in requests after the launch of Tivli
THE FUTURE OF TELEVISION - NOW

• OTA, Basic Cable, Premium Cable, and university generated channels to residence halls and dept outlets
• Live and DVR Offerings with no STBs required
• Local head-end and authentication integration
• Remotely managed and fully supported

• Tivli Net+ - Expected Fall 2013 (w/ InCommon Authentication)
• Learn more @ “Tivli Net+”, Wednesday 4/24 - 8:30am, Lee Room