The Future of Video

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Video Business Development
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Agenda

- Cisco SP Video Overview – Technology, People and Investments
- Trends – Market Pressure and Change
- Video Cloud – Threat but the Destination?
- User Experience – The save – The Zon Use Case
CISCO SP VIDEO OVERVIEW

Technology, People and Investment
Existing Video Portfolio

**Production**
- Media Encoders
- Digital Signage
- IP Media NW

**Contribution**
- Receivers
- Linear Control Systems
- DCM-G IP Video Gateway
- IP Media NW

**Post Production**
- Data Center Platforms (Compute, Switching, Storage)

**Primary Distribution**
- Direct To Home
- Telco
- Cable
- Mobile

**Secondary Distribution**
- Headend

**Consumption**
- OTT
  - Home Network
    - IP STB
    - Video Gateway
  - Soft Clients
  - Cable & DSL Routers
  - Middleware
  - Content Security

**IP Media Core NW**
- CMS / Workflow
- Linear EPG
- Linear Control Systems
- SD/HD Encoders
- IP Video Processors
- Live & VOD Transcoders
- ABR Encapsulator
- Bulk Encryptor

**IP Video Core NW**
- IP & MPEG CDN
- Cable & IPTV Control
- USRM
- VDOC Solutions
- IP Video Aggregation
- Mobile Content Adaptation
- Data Center Platforms

- Digital STB
- IP STB
- Video Gateway
- Soft Clients
- Cable & DSL Routers
- Middleware
- Content Security
Unmatched Video Domain Knowledge

30+ Offices and R&D Centers

Over 5,500 Engineers dedicated to R&D
Together, We are a Trusted Partner Globally…

Not an exhaustive list
Cisco Video Strategy

Architectural Evolution
(Transform)

Existing
Cross-Segment
Biz
Home
SP

Markets

New

Big Bets
(New Business)

Accelerate
(New Growth)

Products

UC & WebEx
Phys. Security
SP Video
TelePresence
Digital Media

UC & WebEx
Phys. Security
SP Video
TelePresence
Digital Media

存在的市场

新产品

视频加速
(New Growth)

Reinvent Video
Collaboration and Communication
B2B and B2C
Cloud Services

智能+连接
Community

重构视频
协作和通信

大企业
部署

MediaNet
Network . Media Services . End Points/Applications

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Our “Big Bet” - Videoscape
Video Entertainment Market Transition

Infinite Content Sources

Managed and Unmanaged Networks

Managed and Unmanaged Devices

Unified, Personalized Experience

Multi-screen, Cloud Services

Consistent Experience Across Devices
Market Pressure and Change
Video SP CxO ‘Top of Mind’
Consistent themes from around the world…

• How do I accelerate service velocity to compete effectively with OTT?

• How do I make sure I can support the devices that consumers care about?

• How do I keep investing in my current infrastructure without creating stranded capital?

• How much of this should I be doing myself vs. relying on vendors/partners for?

• How do I make it through this transition without breaking my capital budget?

• Who has the right technology and solution to keep me in the game?
In the Network or in the Device?

- **Network Services**: Facilitates consumer use cases e.g. managed content sharing.

- **Local Storage**: Granular and scalable, overcomes some legal issues.

- **Remote UI**: Potentially improves ease of integration, abstraction of services simplifies support.

- **User Interface**: Offers an optimized User Experience, reduced dependency on network/central point of failure.

- **HE / Thin Clients**: Horizontal CE devices can be included in service offering.

- **Software**: Potentially improves ease of integration, abstraction of services simplifies support.

- **Thick Clients**: Tried and tested!

- **Broadcast**: CE devices compatible with ubiquitous internet access, potentially very efficient for on-demand services.

- **Distribution Medium**: Economically very efficient for video distribution, supports mixed economy of legacy and new receivers.

- **Gateway**: Reduces CAPEX by becoming the new home hub, service management through one main device.

- **Basic STB**: Reliable and low cost, "It does TV" really well.
Lots Going On…
### Change in amount of professional video watched – 2 yrs past

<table>
<thead>
<tr>
<th>Video Type</th>
<th>Decreased</th>
<th>Stayed the same</th>
<th>Increased</th>
<th>Net Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recorded television (PVR)</td>
<td>9%</td>
<td>30%</td>
<td>56%</td>
<td>47%</td>
</tr>
<tr>
<td>Streaming Internet video</td>
<td>9%</td>
<td>32%</td>
<td>55%</td>
<td>46%</td>
</tr>
<tr>
<td>Downloaded Internet video</td>
<td>13%</td>
<td>35%</td>
<td>47%</td>
<td>34%</td>
</tr>
<tr>
<td>Video on demand (VOD)</td>
<td>13%</td>
<td>39%</td>
<td>41%</td>
<td>28%</td>
</tr>
<tr>
<td>DVDs or Blu-ray discs</td>
<td>29%</td>
<td>39%</td>
<td>30%</td>
<td>1%</td>
</tr>
<tr>
<td>Live television</td>
<td>25%</td>
<td>45%</td>
<td>29%</td>
<td>4%</td>
</tr>
<tr>
<td>Movies in the cinema</td>
<td>28%</td>
<td>40%</td>
<td>29%</td>
<td>1%</td>
</tr>
</tbody>
</table>

- Streaming video net increase for Gen Y is 53% vs. 44% for PVR
- Downloaded video net increase for low income is 45% vs. 19% for high income

Q: How has the amount that you watch of the following kinds of professionally-produced video changed over the past two years?
Internet Video

Change in amount of professional video watched – 2 yrs future

- **Streaming Internet video**: 4% decrease, 44% stay the same, 36% increase (Net Change: 32%)
- **Downloaded Internet video**: 4% decrease, 45% stay the same, 31% increase (Net Change: 27%)
- **Recorded television (PVR)**: 6% decrease, 41% stay the same, 32% increase (Net Change: 26%)
- **Video on demand (VOD)**: 8% decrease, 44% stay the same, 24% increase (Net Change: 16%)
- **DVDs or Blu-ray discs**: 13% decrease, 56% stay the same, 22% increase (Net Change: 9%)
- **Movies in the cinema**: 13% decrease, 58% stay the same, 22% increase (Net Change: 9%)
- **Live television**: 16% decrease, 60% stay the same, 20% increase (Net Change: 4%)

Q: How will the amount that you watch of the following kinds of professionally-produced video change over the next two years?

- **Given the increase in use of Internet video, it should begin to challenge live television in a few years**
- **Movies in cinema appears to undergo a slight improvement in the future**

Source: Cisco IBSG Media Cloud Survey, 2012
Quality

% of consumers rating professional video experience above average or very good by type of delivery

- Downloaded Internet video: 20% (Above average), 13% (Very good), Total: 33%
- Streaming Internet video: 19% (Above average), 16% (Very good), Total: 35%
- Video on demand (VOD): 16% (Above average), 24% (Very good), Total: 40%
- Recorded television (PVR): 19% (Above average), 32% (Very good), Total: 51%
- Live television: 24% (Above average), 43% (Very good), Total: 67%
- DVDs or Blu-ray discs: 20% (Above average), 51% (Very good), Total: 71%
- Movies in the cinema: 18% (Above average), 54% (Very good), Total: 72%

Q: Overall, how would you rate your typical experience watching the following kinds of professionally-produced video?

Source: Cisco IBSG Media Cloud Survey, 2012

Sample Size = 600
Across all age groups, the vast majority of Internet video viewing occurs in the home.

Q: In which locations below do you watch Internet video (professionally-produced video)?

Source: Cisco IBSG Media Cloud Survey, 2012
Threat but Destination?
Cloud Competition

- Apple will soon enter subscription video market
- Similar to iPhone dynamic, content rights initially unnecessary
- Preferred model = device subsidy partnership with MSO (52” AppleTV - high end, margin)
- Or via DTA/ClearQAM addition to AppleTV box (Apple as VoD, premium, accelerate cord cutting)
- Amazon, Google fast followers with TVs, MSFT via XBox
- Each has primary business funded and accelerated cloud platform
- Feature velocity and cross device cohesion will outpace current subscription video incumbents
Market Alignment Towards Cloud

“For the first time in my life at Sky, we have fallen behind what consumers are demanding”
(BSkyB COO)

“Industry is using the cloud to move toward freeing itself of STBs” (TWC CEO)

“In future, whole MW stack would need to sit in the cloud and consumer devices would need to be kept simple”
(Liberty EU CTO)

“In the past year, we made 400 software updates to the X1 guide. We’re no longer doing a guide once every 18 months”
(Comcast CEO, following launch of X1 Cloud platform)
Managed Open Cloud APIs as an Evolution Enabler

API Aggregation, Adaptation, and Orchestration Layer
- Content Discovery/Acquisition
- EPG/PVR Services
- Companion Services
- Home Network
- Voice
- Email
- Calendar
- Media Share
- Registration
- Account/Profile Mgmt.
- Asset/Metadata Ingest
- Transcode
- Encryption
- Analytics
- Reporting

Cloud-rendered HTML UIs can be built using the cloud API and deployed alongside a legacy native EPG to enhance a low-end STB UX.

Legacy native UIs on IP-enabled STBs can be enhanced with cloud services for advanced metadata, multi-screen purchase, personalization, etc.

Enhanced Flash-driven EPGs deployed today can utilize cloud services by deploying against the API AAO. Previously deployed versions can be ported to the cloud API for future-proofing.

HTML5 widgets can be deployed as enhancements on HTML-capable platforms, utilizing the cloud API via web service calls or a JavaScript library.

When the HTML5 performance is satisfactory for a given enhanced EPG UI design, it can be deployed using the cloud API from day 1.

Deployed companion applications can be migrated to the cloud API for future-proofing. They can then be used alongside legacy EPGs that have cloud services access for an integrated legacy N-screen UX.

Companion applications for content providers (e.g. X-Factor, CNN, Disney) written in HTML can utilize the cloud API via web service calls or a JavaScript library. They can then be integrated into HTML-enabled hybrid applications or HTML5 companion experiences.

Fully HTML5-enabled companion experiences and future native applications will leverage this cloud API from day 1.

The API AAO will be adapted to support existing deployments of Cisco Videoscape, Media Suite, and NDS Unified Headend.

The API AAO can also be adapted to existing deployed or future Service Provider components, be they home-grown or 3rd party vendor components, even in non-video domains. Legacy protocols are supported via Back-office adapters.

New Videoscape component and system releases will be come pre-integrated with the API AAO layer.

AAO can be deployed locally in a Service Provider headend—or as the SP architecture evolves also in a private cloud.

AAO cluster APIs will be extended using versioning so previous applications can be supported as new API versions are rolled out. New and evolving standards will be adopted as appropriate.

The API AAO will be adapted to support existing deployments of Cisco Videoscape, Media Suite, and NDS Unified Headend.
## Advantages of a Cloud-Based Solutions

<table>
<thead>
<tr>
<th>Advantage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unified services</td>
<td>Based on approach to remove silos; Instant access to all content anywhere</td>
</tr>
<tr>
<td>Elasticity</td>
<td>Pay as you grow; Pay less when scaling down</td>
</tr>
<tr>
<td>Scalability</td>
<td>Unlimited user experience, based on trusted cloud performance tests</td>
</tr>
<tr>
<td>Closer integration with Web tech</td>
<td>Big data, better social network integration with TV, web micro-payments, true personalization</td>
</tr>
<tr>
<td>Community cloud</td>
<td>Leveraging existing development for new operators</td>
</tr>
<tr>
<td>Instantaneousness</td>
<td>Real time updates of service to accurately serve multi-screen management</td>
</tr>
<tr>
<td>Time To Market</td>
<td>API abstracted clients allow rapid change and A / B market testing</td>
</tr>
<tr>
<td>Lower CPE Costs</td>
<td>Shift functions and cost away from the home</td>
</tr>
</tbody>
</table>
USER EXPERIENCE

The save – The Zon Use Case
FEATURES
RECOMMENDATIONS
PERSONALIZATION
SOCIAL TV
SEARCH
Primeira Instalação

79 Canais Encontrados

1. RTP1
2. RTP2
3. SIC
4. TVI
5. SIC NOTÍCIAS
6. SIC MULHER
7. RTPN

Voltar para Qualidade do Sinal
“HÁ UMA LINHA QUE SEPARA O PASSADO DO FUTURO”

A nova IRIS by ZON Fibra tem um design simples e intuitivo para te dar uma experiência de televisão totalmente inovadora.
20% ARPU INCREASE
€46 > €55

CUSTOMER SATISFACTION
6.1 > 8.4

CUSTOMER CALLS
40% REDUCTION
65% INCREASE
ZON Total HH since 2010
95% USAGE RATE
70% EVERYDAY
91% SATISFACTION
Questions?
Consumers are shifting to better experiences
Competition from the Big Players is inevitable
Move to cloud will provide the platform to compete
User experience is a key to success in this new world
Thank you.