ITU-T

International Telecommunication Union
International Multimedia Telecommunications Consortium

IPTV market trends

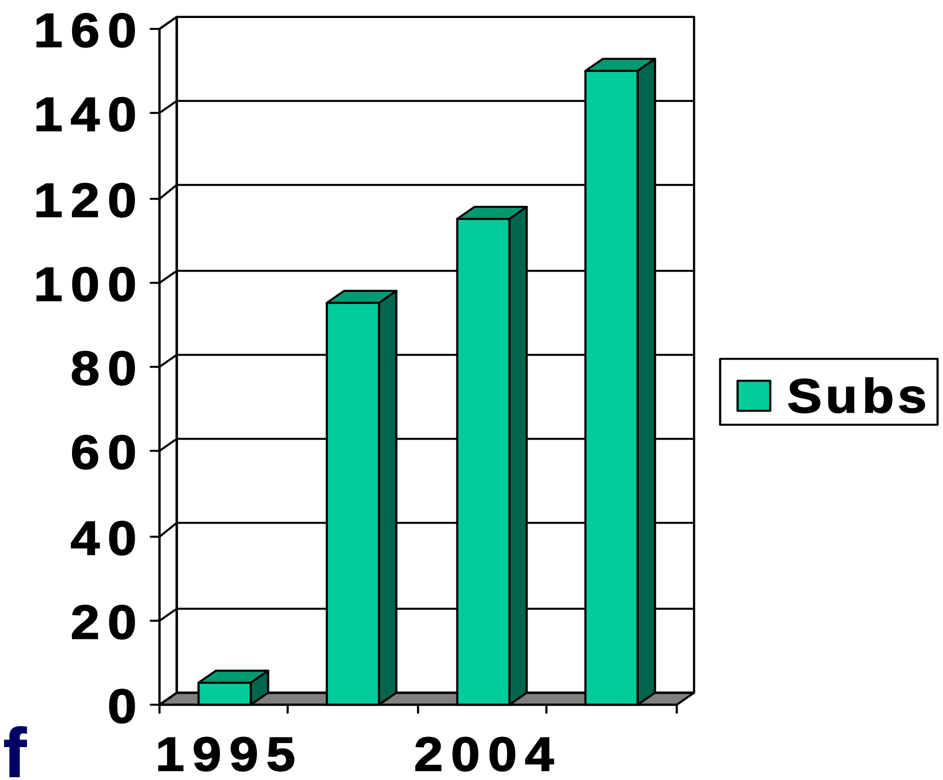
Noel Matthews – TANDBERGTV

Joint ITU-T Workshop and IMTC Forum 2006 “H.323, SIP: is H.325 next?“
San Diego, 9-11 May 2006

TV over last 10 years

ITU-T

- Increase in digital TV platforms
  - 1995 = 5
  - 2000 = 100
  - 2005 = 230
- STB prices decreased
  - 1995 = $300+
  - 2005 = $50-
- **Worldwide adoption of digital standards**
  - DVB and ATSC



Continuous changes

ITU-T

Consumed

- Digital TV growing and replacing analog
- Time shifted viewing goes mainstream (VOD & PVR)
- Interactivity spreading based on a proven business model

Acquired and delivered

- Produce once, deliver many
- IP everywhere!
- Driving new delivery models for contribution and DTH delivery
- HDTV spreading worldwide

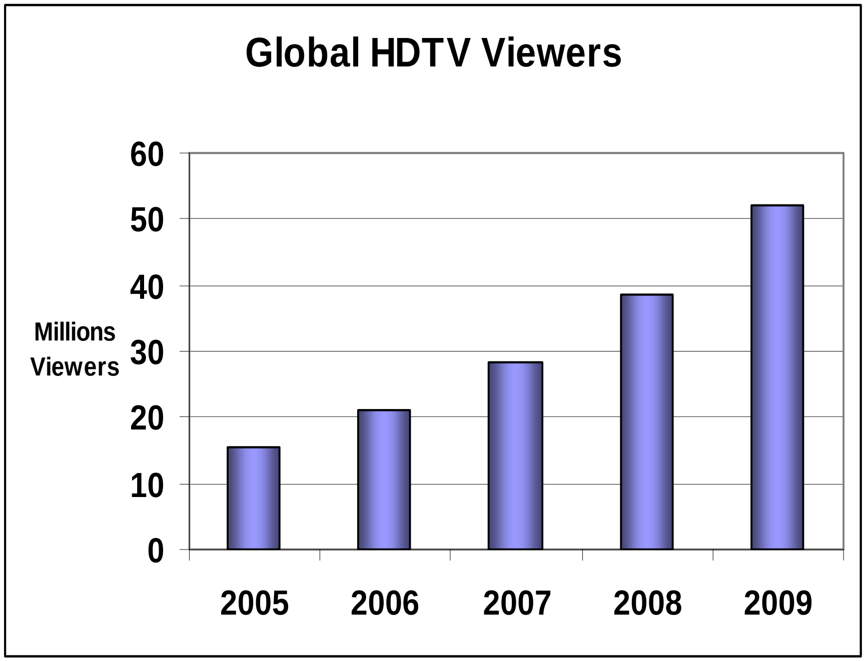
Monetized

- New revenue models exploit new technology & changing viewer habits

High Definition TV

ITU-T

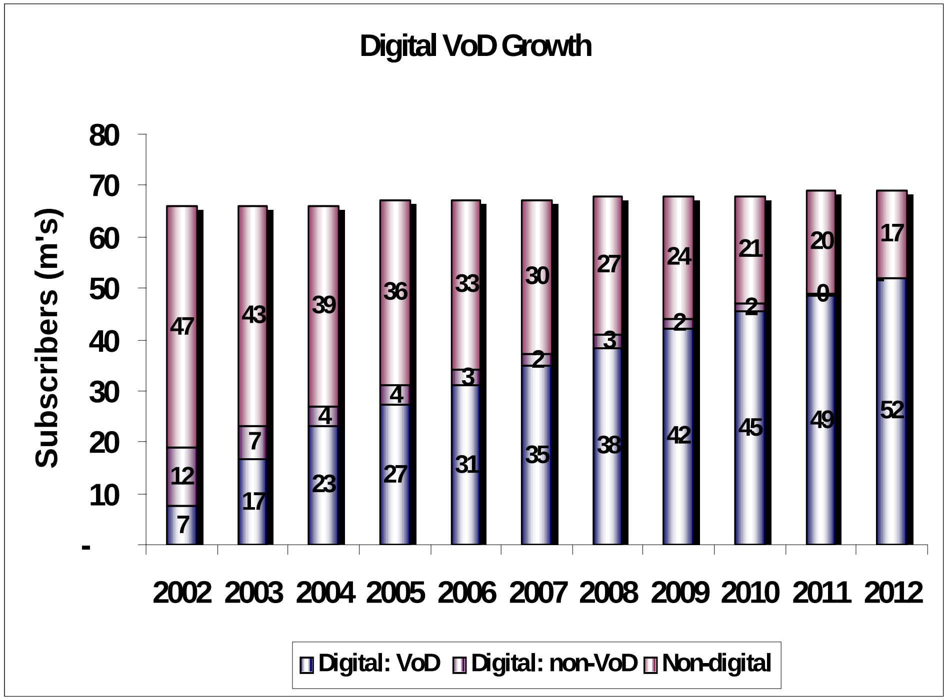
- HD is already a mass market in the USA
  - 15M HDTV Broadcast Viewers by the end of 2005 – MPEG2
  - HD cable boxes up 170% in 2005
  - Direct TV = 1,650 channels by 2007 – H.264
- APAC is already there
  - Australia and Japan
  - PCCW launching HD over DSL
- H.264 HD services happening in Europe
  - 14m HD homes receiving HDTV by 2009



Source: In-Stat Mar 05

On demand content

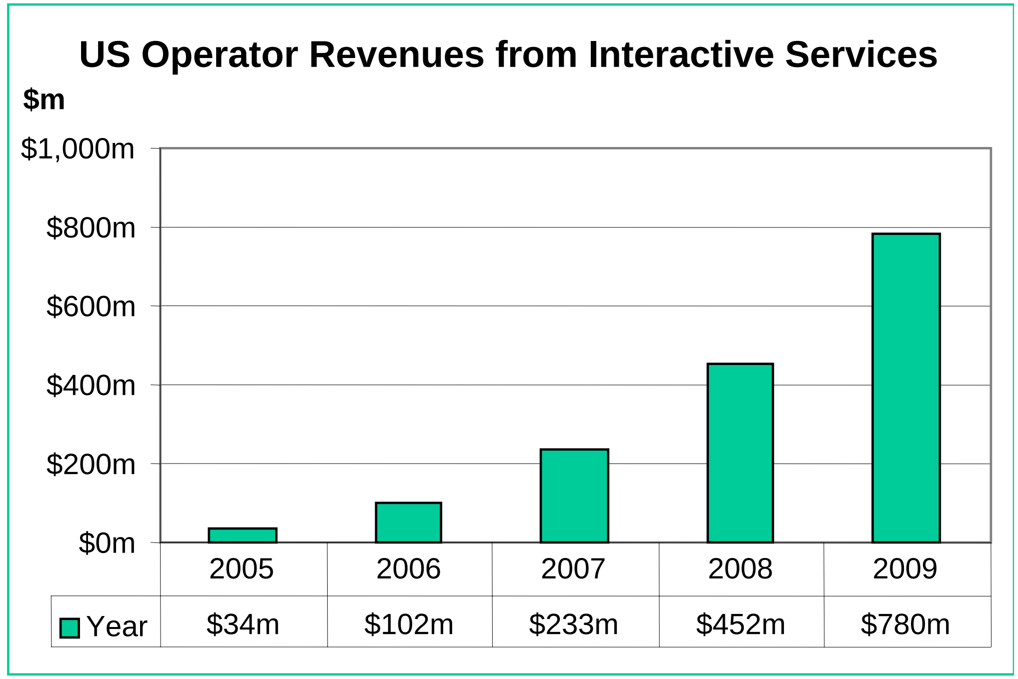
- 10% of today's television is time shifted
  - 2010 – 50% of television will be viewed on the PVR
- Video on demand will drive cable and IPTV growth
  - Comcast on Demand:
    - 2003: 1,400 titles with 21M views/month
    - 2005: 3,400 titles with 107M views/month
    - 2007: 50,000+ titles!



ITU-T

Interactive Television

- Service providers need to differentiate
- Interactive allows delivery of specific content FOR the consumer
  - No longer just the push model of broadcast TV
  - Logical extension of on demand content
- Interactive is the future of Television
  - Red button applications in UK
  - Over 20,000 hours of iTV in USA last year



Source : Kagan 2005

ITU-T

Broadband TV

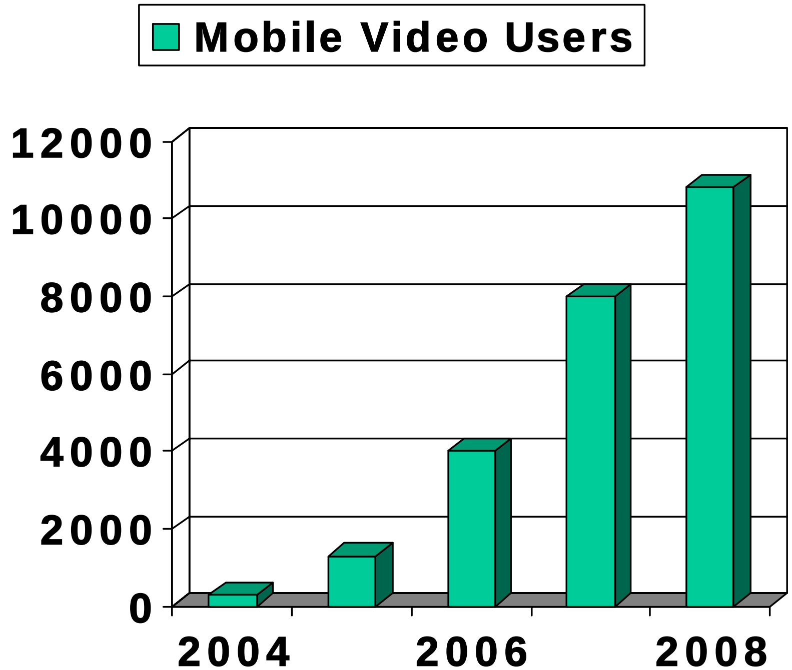
- Broadband networks allow delivery of TV directly to the home
  - Direct connection between the content owner and the consumer
  - No platform operator!
  - Forrester estimating 2006 broadband TV advertising revenues of $200 M
- **MTV Overdrive** broadband site delivered 13 million video streams from the Video Music Awards, **during or after** the show ran on cable networks.

- Already there
  - SKY movies
  - MTV Overdrive
  - VH1 VSpot,
  - Nickelodeon,
  - CNN Pipeline
  - Comedy Central,
  - Country Music Television),
  - ESPN,

ITU-T

Mobile video

- Mobile will have a significant impact on the TV industry
  - For both the creation and delivery of content
- 2005 market for mobile content was £600m
- By 2008 there will be 10.8 million mobile video users
  - 2004 revenue $29M
  - 2008 revenue $1.4B
- O2 UK trial
  - 3 hours per week average and 23 minutes per viewing session
  - 36% used it at home!



ITU-T

IPTV

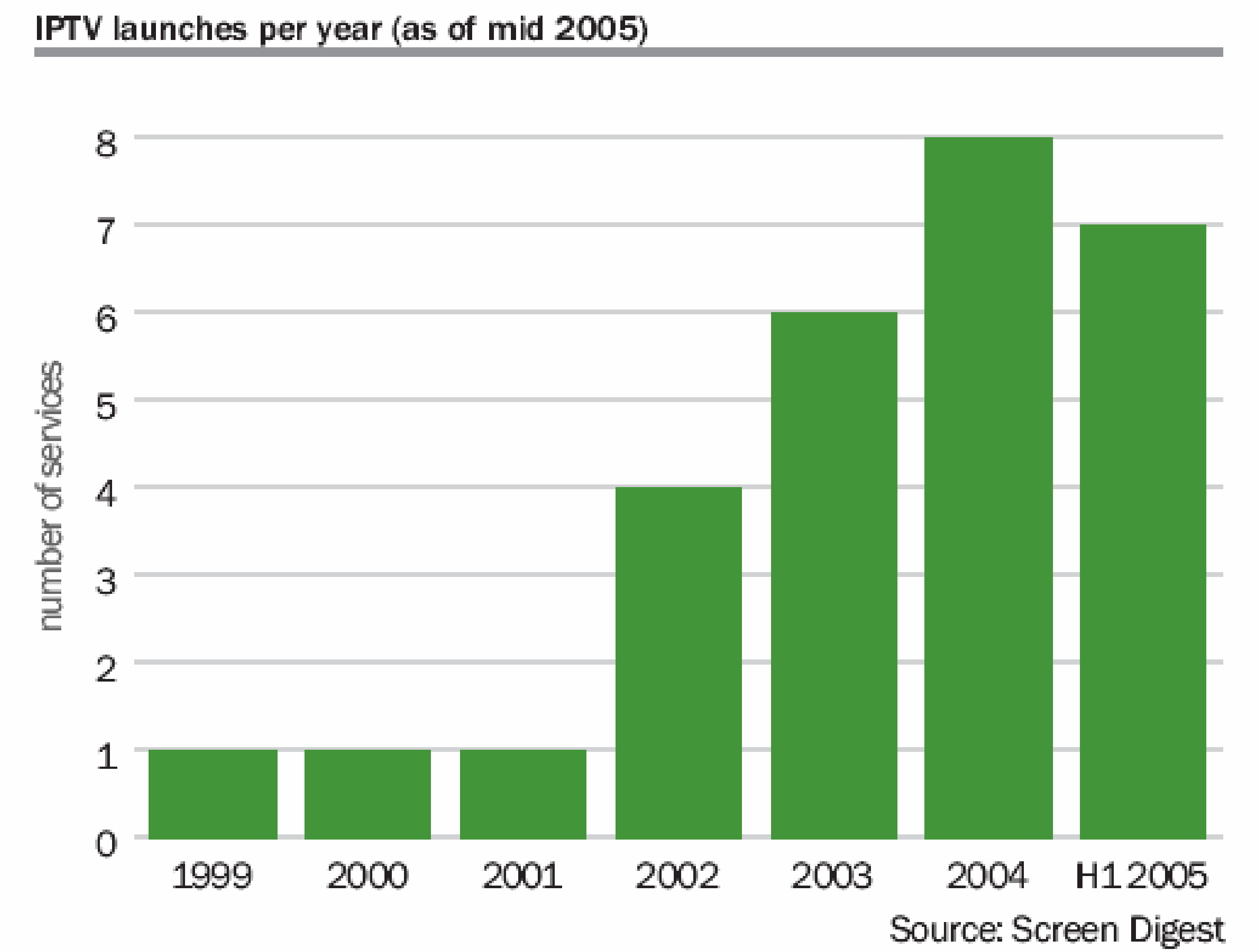
- Telcos, ISPs and utility companies are engaging in IPTV
  - Defensive strategies
- 2005 - Real success stories
  - Imaginio (Telefonica Spain)
  - Jazztelia TV (Jazztel)
  - Belgacom (Belgacom)
  - Fastweb TV (Fastweb)
  - MaLigneTV (France Telecom)
  - Lyse Bredbånd TV (Lyse)
  - NOW Broadband TV (PCCW)
  - Dubai Internet City (Dubai)

European IPTV market

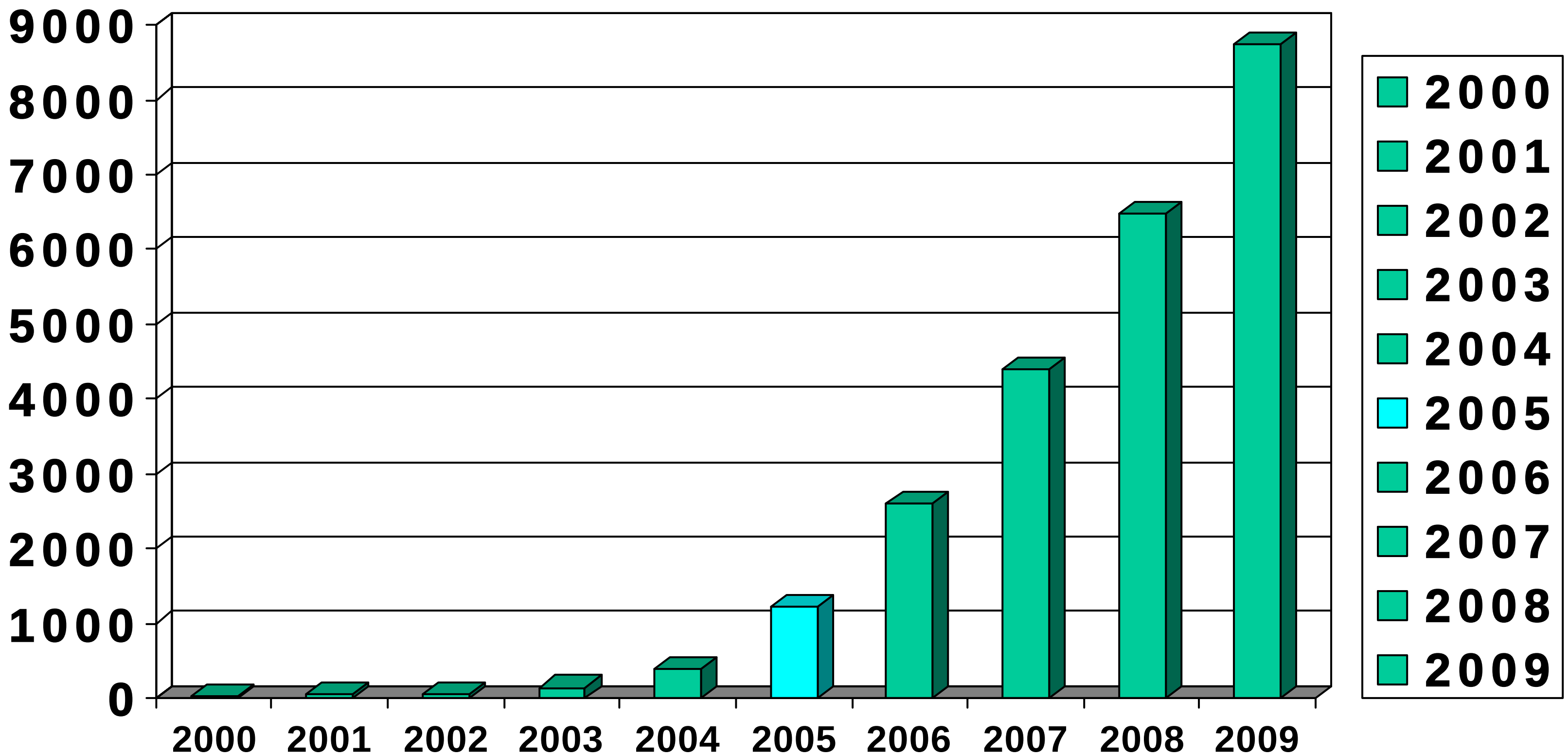
ITU-T

- 700k subscribers by end of 2005
  - France = 281,000 (Free + Maligne)
  - Italy = 190,000 (Fastweb)
  - Spain = 58,000
- IPTV penetration
  - Norway = 1.5%
  - France = 1.1%
  - Italy = 0.86%
- Forecast = 9m by end of 2009
  - France = 2.4m
  - Italy = 1.5m
  - UK = 1m

European IPTV launches



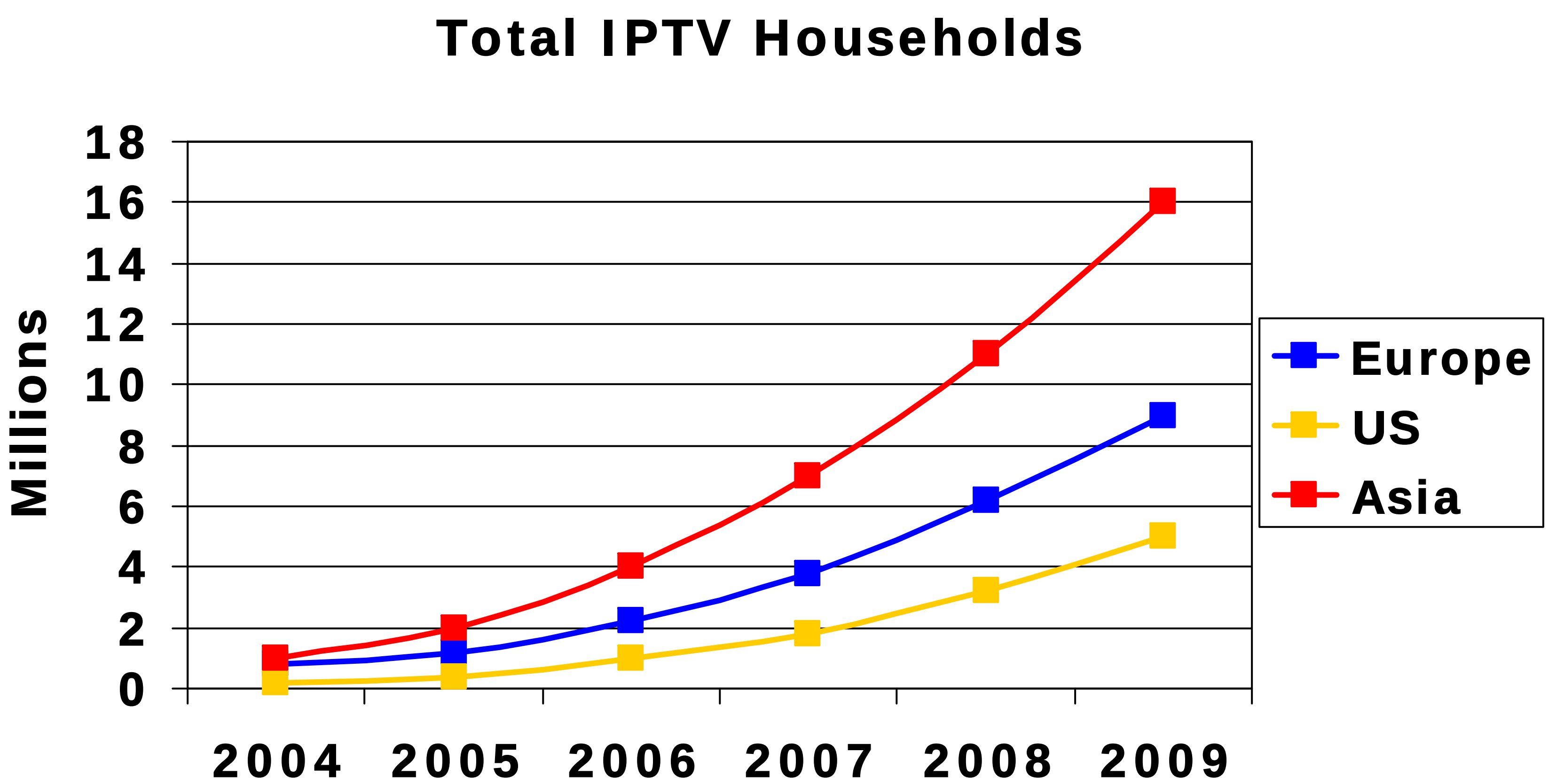
European IPTV Subscriber Growth



Source: External research Nov’05

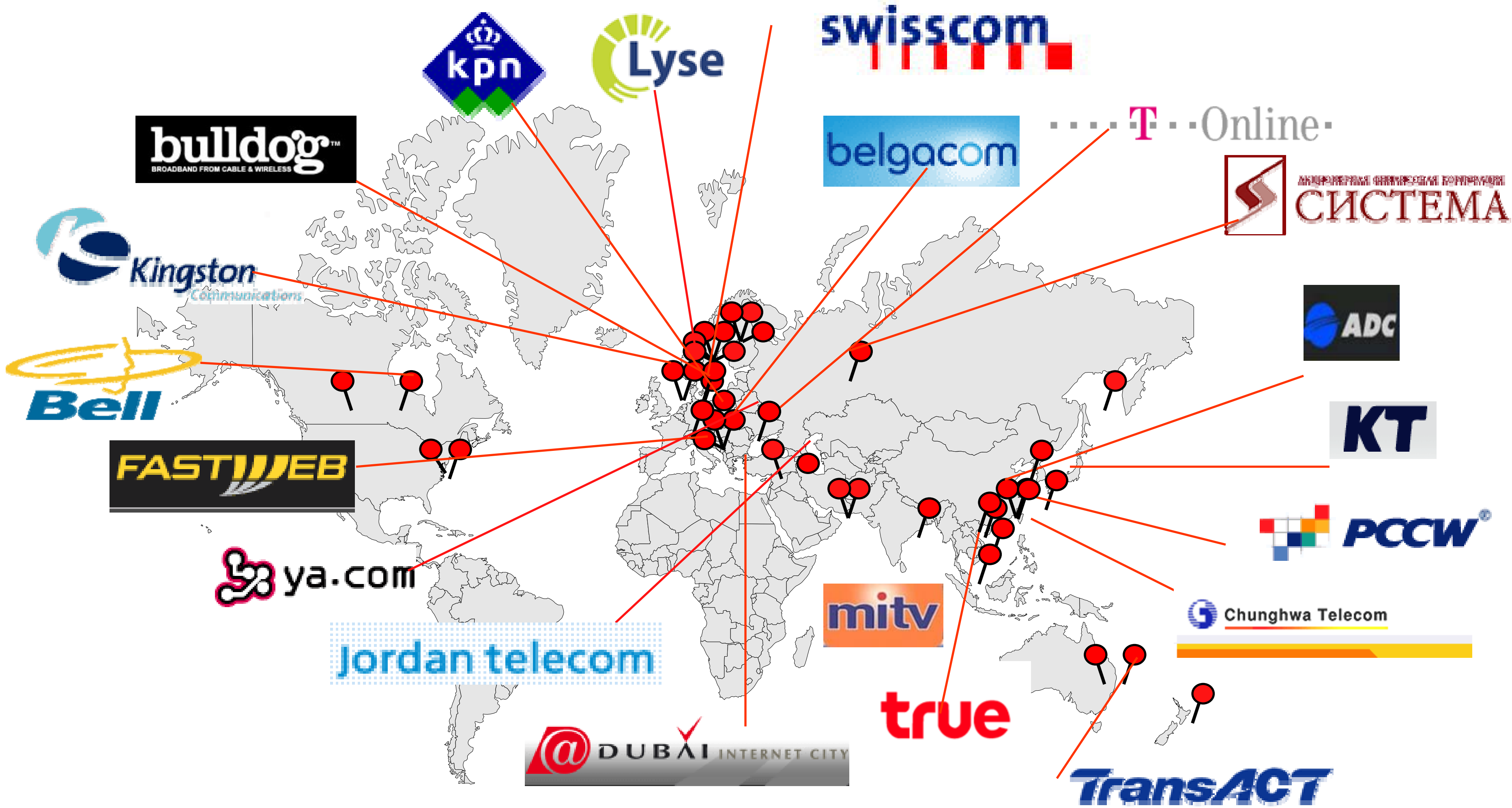
ITU-T

Market Trends by Region



ITU-T

IPTV reality - 2005



ITU-T

IPTV market offerings

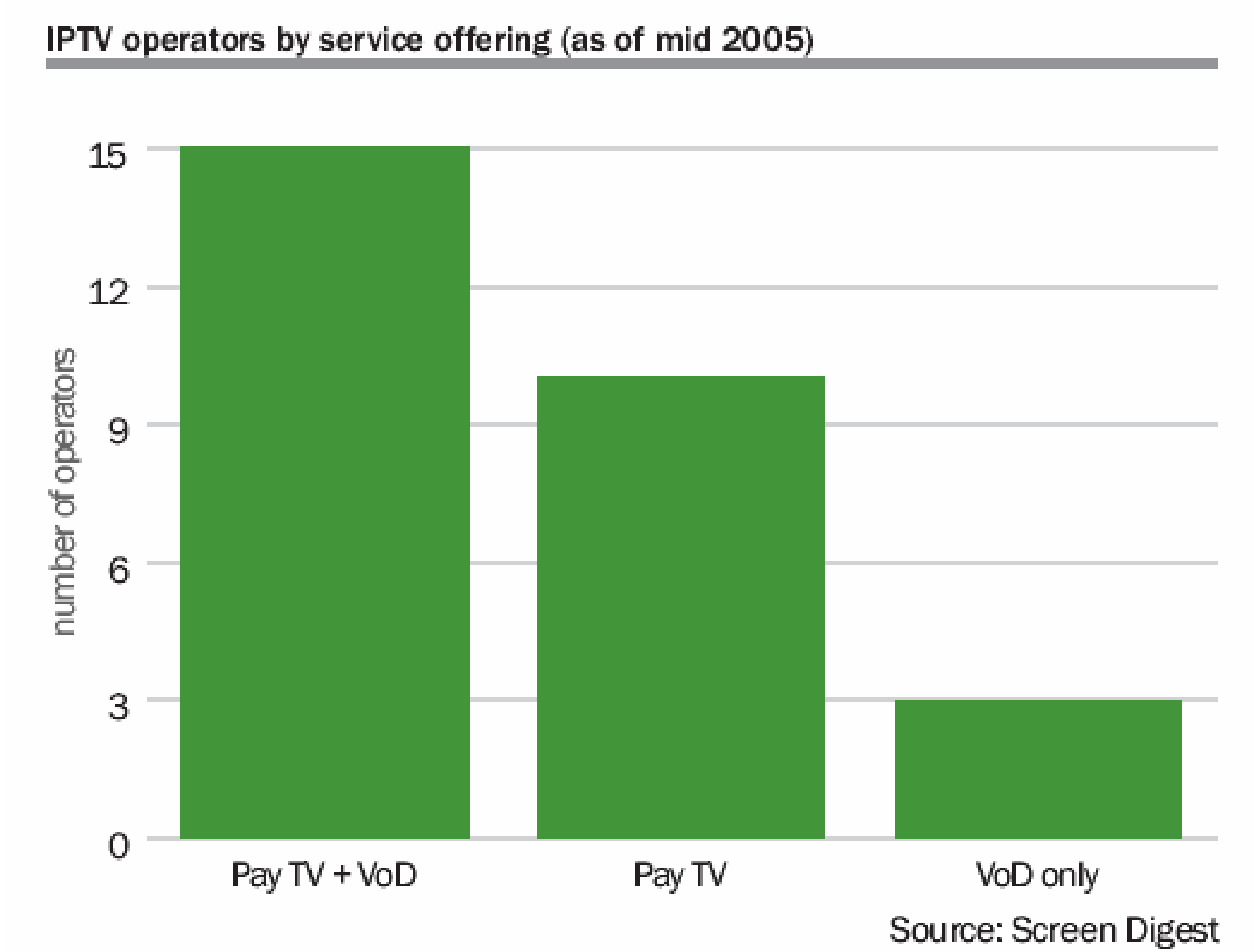
- H.264 is the key enabling technology for DSL
  - SD = 1.5 Mbit/s
  - HD = 6 – 8 Mbit/s
  - Hybrid TV services

- But "me2TV" is not enough
  - Very competitive market
  - Telcos need to capitalise on inherent 2-way IP network
- Content on demand – including video
  - Everything is an asset
  - On demand and push models

- Enhanced TV experience

ITU-T

IPTV service offering

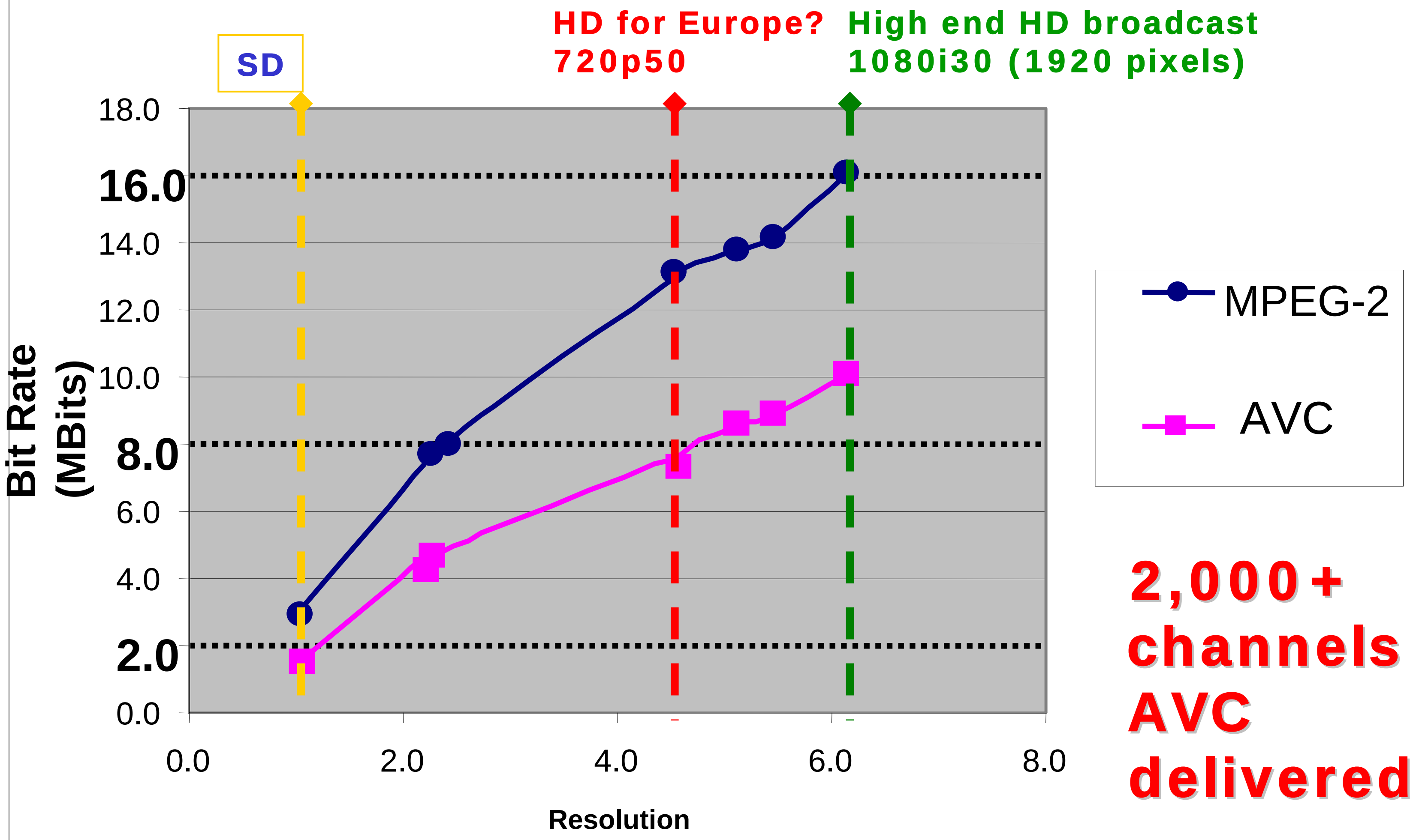


Challenges for IPTV

- Network
  - Improved access technologies for higher rate DSL
  - True end to end QoS – in to the home network
  - Intelligent network resource allocation (BRAS)
- IPTV Service provision
  - Picture quality on DSL (Advanced video coding)
  - Advanced "Content on demand" services (Network PVR)

AVC – bit rates for HD and SD

ITU-T



2,000+ channels AVC delivered!

Challenges - VoD and advertising

- IPTV operators must run Ondemand services
- On demand changes the revenue model
  - Linear advertising no longer works
- Dynamic on demand ad insertion enables revenue generation
  - For free and premium content.
- As VoD volumes build so does the attractiveness to the advertising world
- Targeting on demographic/geographic basis now possible
  - Particularly in an IP network

ITU-T

Intelligent Ad Placement Decisions

Media Types
- iTV
- DVR
- RFI

Tech Info

Tech Information
- Software
- iTV availability
- DVR, other hardware info

Targeting Engines
- Geographic
- Demographic
- Psychographic

Tag Information
- Local Dealers
- Proximity Mapping

Site Info

Site Customer Info
- Zip Codes Served
- RFI privacy masking

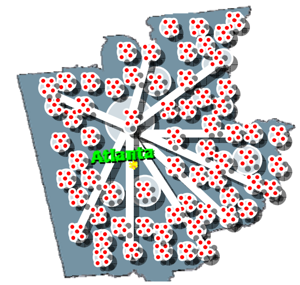
Placement Rules
- Genre/Type
- Avail Rules
- Brand Associations

Title Info

Title Information
- Metadata
- Avails

Placement Decisions

Long Form Ads



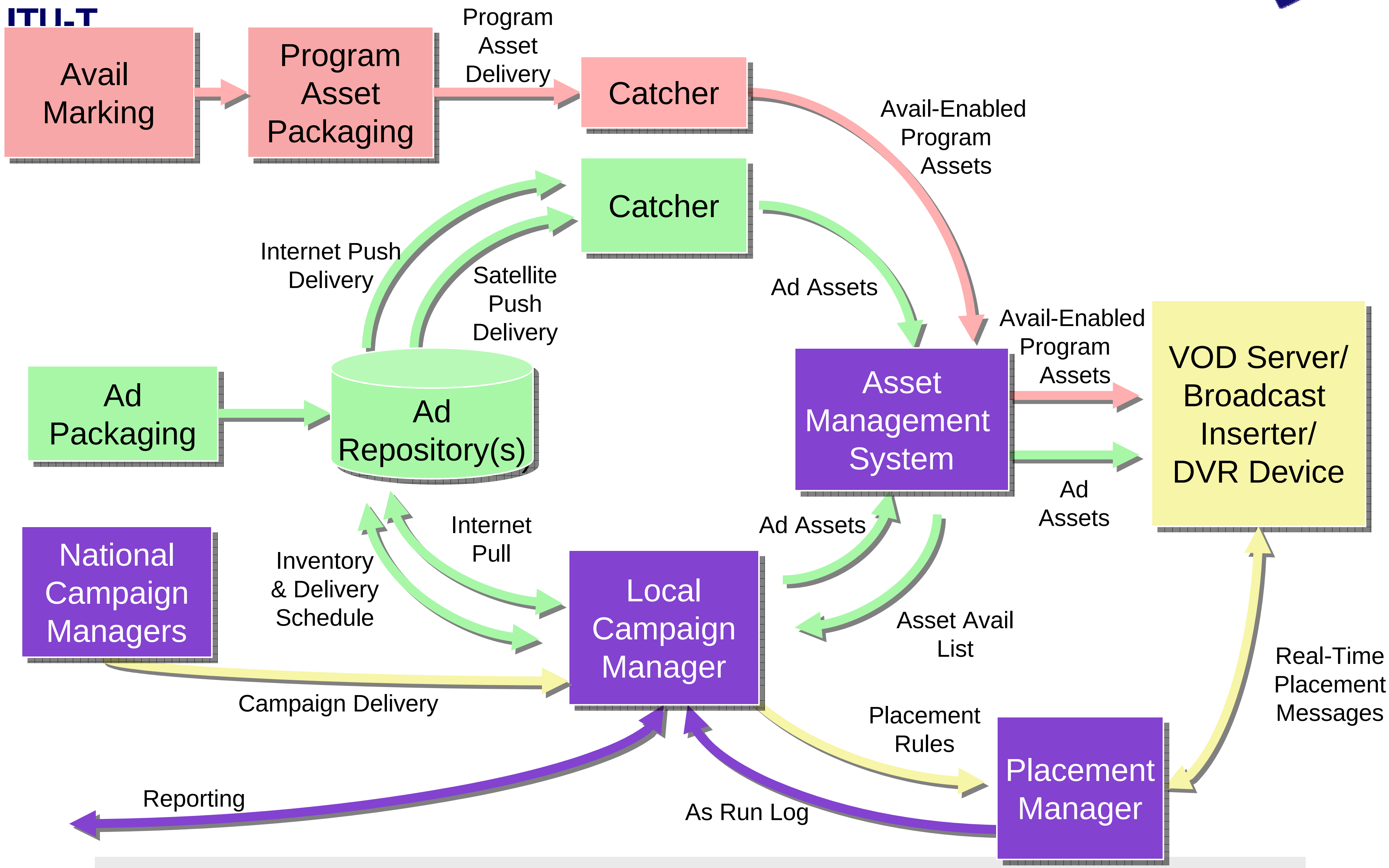
Neighborhood Tagging

Dynamic Streams

iTV

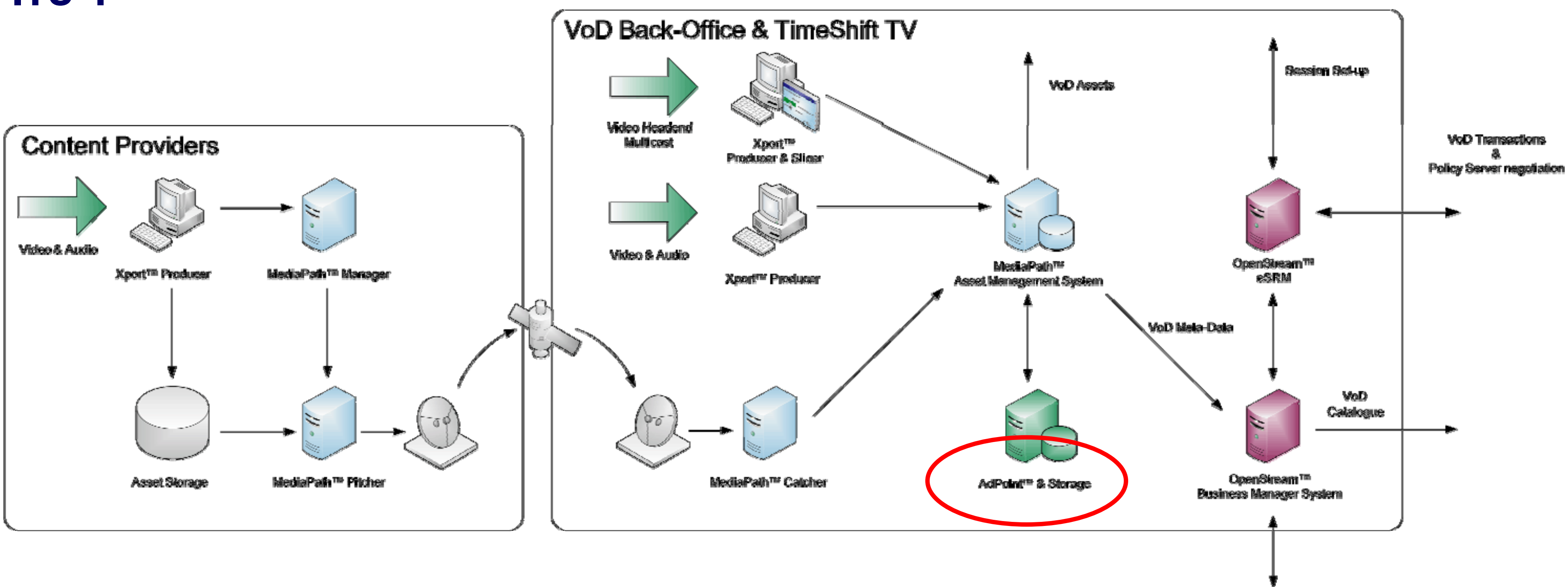
DVR Ad placement

VOD / DVR Ad Placement architecture



ITU-T

On demand content in the network

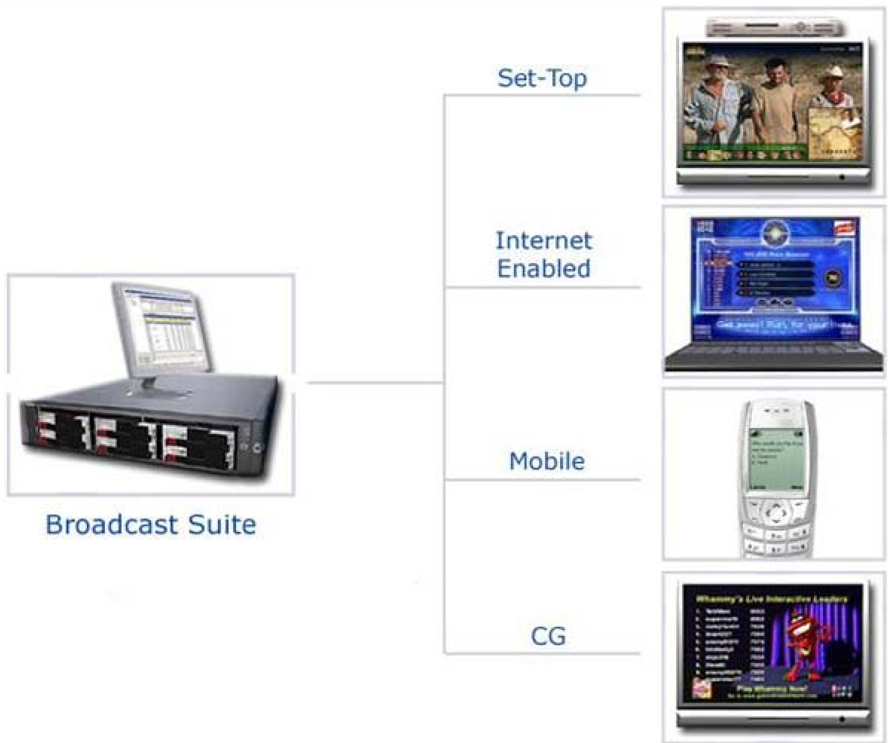


- Open architecture for greater flexibility
- Distributed architecture across the network
- Content encrypted throughout the entire network
- Content ingest process must be streamlined
- Produce once, know where it is and deliver many time!
- Timeshift TV brings technical and legal challenges!

Multi platform delivery

ITU-T

- Consumers will expect content delivery to a range of devices
- Platform operators want common infrastructure
- Many challenges
- Technical:
  - Format for many devices
  - Content work flow and storage for multiple formats
- Production:
  - Content does not look the same on different devices
  - Wide screen shots
  - Contrast ratios
- Role of standards?



Open standards

- Digital TV's success is directly related to open standards
- Core to the success of IPTV is non-proprietary, standard based delivery architecture
  - Published, open APIs
  - no vendor lock-in
- In particular:
  - Open interfaces/API for content management
  - International Metadata standards for IPTV and cable

Summary

- The future is not just delivery of content to the viewer but for the consumer
  - When, what and where the consumer wants it
- Revenue models will change
  - VoD vs linear
  - There will be winners and losers
- IPTV is happening and will become an important player in the content delivery market
  - But not just "me2tv"
  - Build flexible networks and play to their strengths