



Status of IPTV Business and Regulation across Europe

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Outline

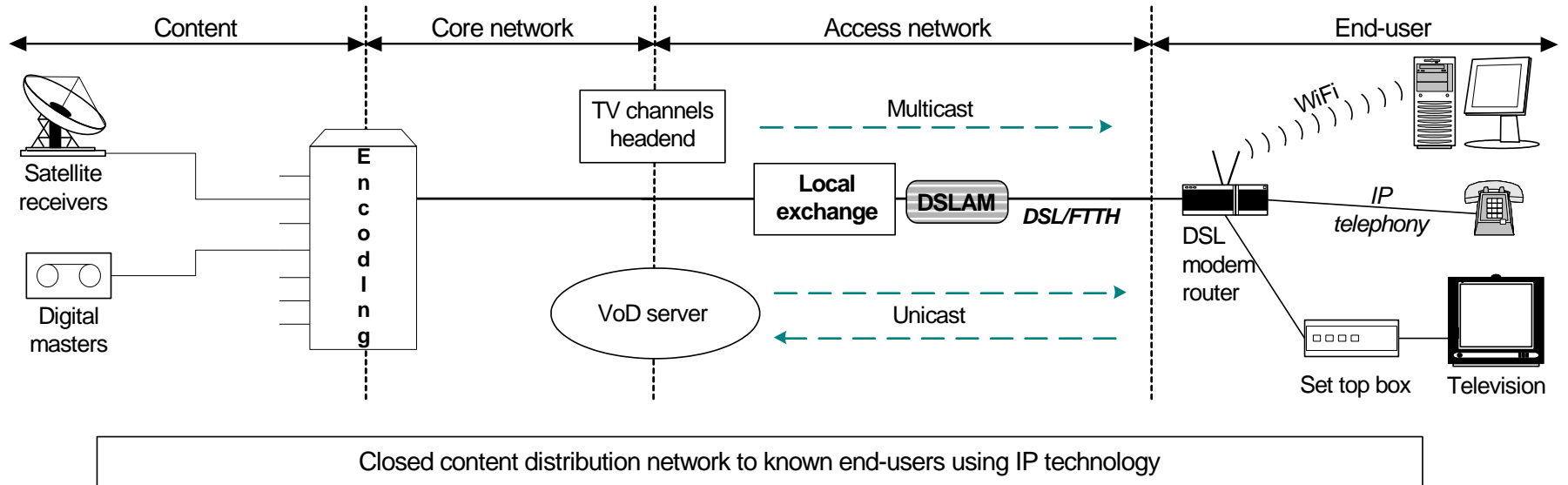
- What is IPTV?
- Broadband penetration in Europe
- IPTV take-up in Europe
- Case study of IPTV services in France
- Regulatory issues for IPTV
 - Telecommunications
 - Broadcasting / Content



Outline

- This presentation covers IPTV services over fixed broadband connections
- It does not cover Mobile TV services over wireless networks to handheld devices (e.g. DVB-H, or 3G)

What is IPTV?



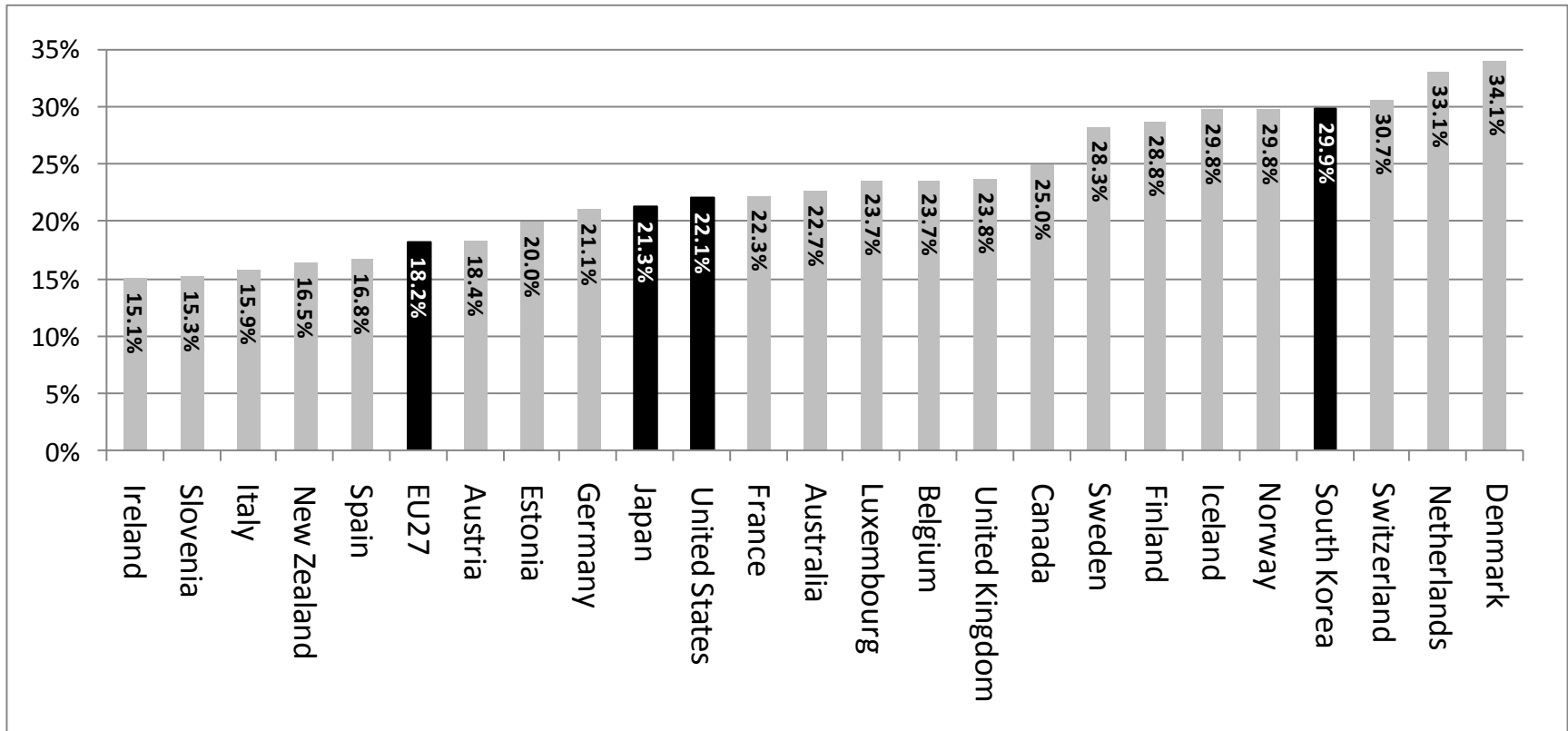
- IPTV services are viewed over a fixed broadband connection (DSL or FTTH) on a TV set
- They are closed end-to-end content distribution networks similar to Cable TV networks
- Not the same as video streaming over public Internet viewed on a PC (e.g. BBC iPlayer)



IPTV vs. Web TV

	IPTV	Internet video streaming
Footprint	Local (limited to operator coverage)	Potentially worldwide
Users	Known customers with known IP addresses and known locations	Any users (generally unknown)
Video quality	Controlled QoS Broadcast TV quality, launch of HD services	Best effort quality, QoS not guaranteed
Connection bandwidth	At least 4 Mbps	
Video format	MPEG-2, MPEG-4 Part 2, MPEG-4 Part 10 (AVC), Microsoft VC1	Windows Media Player, Real Player, Flash and others
Receiver device	Set-top box with TV display	PC
Resolution	Full TV display	
Reliability	Stable	Subject to contention
Security	Users are authenticated and protected	
Copyright	Content is protected	Often unprotected
Other services	EPG, PVR (local or network), DTT tuner	
Customer relationship	Yes, onsite installation and customer support	Generally no

International Broadband Penetration Rates July 2007 (OECD)



- ADSL/ADSL2+ over copper local loops accounts for >80% broadband lines in Europe
- Cable broadband is strong in a few European countries



Top IPTV Providers in Europe

Operator	IPTV service name	Country	IPTV subscribers End 2007
France Telecom	Orange TV	France	1.1m
Free	Freebox	France	?
Neuf Cegetel	Neuf Box	France	750K
Telefonica	Imagenio	Spain	470K (end Sept. 2007)
Belgacom	Belgacom TV	Belgium	305K
BT	BT Vision	UK	150K
Deutsche Telekom	T-Home	Germany	116K

- Source: Operators' published results, except for DT which is from press reports
- No IPTV subscriber numbers published by operators in Italy



IPTV Take-Up in Europe

	Total households	Total broadband lines End 2007	Total IPTV subscribers CI estimate End 2007	IPTV subscribers as % total households	IPTV subscribers as % total broadband lines
France	27.4m	14.8m	2m - 4.5m ?	7 - 16% ?	14 - 30% ?
Belgium	4.5m	2.7m	305K	7%	11%
Spain	15.4m	8.2m	500K	3%	6%
Italy	23.9m	10.1m	300K	1%	3%
UK	26.3m	15.6m	200K	< 1%	1%
Germany	39.2m	19.6m	200K	0.5%	1%

- IPTV has reached “mass market” scale in few European countries so far
- France – ARCEP says 4.5m subscriptions “eligible” to use IPTV services at end 2007, but probably overstates actual number



IPTV Offers in France

- Broadband + basic IPTV + Voice over Broadband calls for euro 30/month = WON 47,000/month
- Excludes subscription to premium channels and Video on Demand

	Free (Freebox)	France Telecom (Orange TV)	Neuf Cegetel (Neuf Box)
Price	euro 29.99/month	euro 29.90/month plus euro 16/month line rental, or euro 39.90/month without line rental (“naked DSL”)	euro 29.90/month
Broadband speed	Up to 22 Mbps / 1 Mbps	Up to 8 Mbps / 800 Kbps	Up to 20 Mbps / 1 Mbps
Basic IPTV package	100 TV channels	62 TV channels	50 TV channels
Voice over Broadband	Unlimited calls to fixed numbers in France + 70 countries	Unlimited calls to fixed numbers in France	Unlimited calls to fixed numbers in France + 50 countries
Extra fee for Set Top Box?	No	No fee for STB, but euro 3/month for “live box” modem/WiFi router	No



Reasons for IPTV Success in France

- Relatively low take-up of cable and satellite Pay-TV (see table below)
- Subscription to Canal+ premium channel packages (films and sport) available on all the major IPTV services
- Price of euro 30/month - Economics of Local Loop Unbundling supported by population concentration in Paris area and few other big cities

	Digital Cable subscribers	Digital Satellite subscribers	Total Digital Pay-TV subscribers CI estimate End 2007
France	1.4m (3.6m including analogue)	5.3m	6.7m
UK	3.3m (3.5m including analogue)	8.3m	11.6m



Regulatory Issues - Telecommunications

- Replicability
 - IPTV services currently provided over copper local loops using ADSL/ADSL 2+ in most cases
 - Local Loop Unbundling on regulated, cost-based terms has enabled competitive provision, as the case of France shows
 - What happens when incumbent telecom operators upgrade to Next Generation Access Networks and stop offering LLU?
 - Fibre-to-the-Cabinet + VDSL – Sub-Loop Unbundling will be uneconomic in most cases
 - Fibre-to-the-Home – GPON deployments do not allow unbundling of fibre loops
 - Access to ducts and internal cabling in apartment buildings
 - New wholesale products on NGA/NGN



Regulatory Issues – Broadcasting / Content

- Live TV channels
 - Broadcasting rules generally apply to those who have “editorial control” over the content (i.e. the broadcaster), not to the IPTV service provider who simply distributes the channels
 - IPTV provider may control the order TV channels are listed in Electronic Programme Guide
- Video on Demand
 - New rules in Europe on VoD services contained in Audiovisual Media Services Directive
 - These apply to IPTV providers
 - Examples: rules on advertising directed towards children, no advertising of tobacco, etc