

*Workshop on
“Harmonization on Web and IPTV technologies”*

**IPTV audience measurement
standardization for future IPTV**

Rev.1

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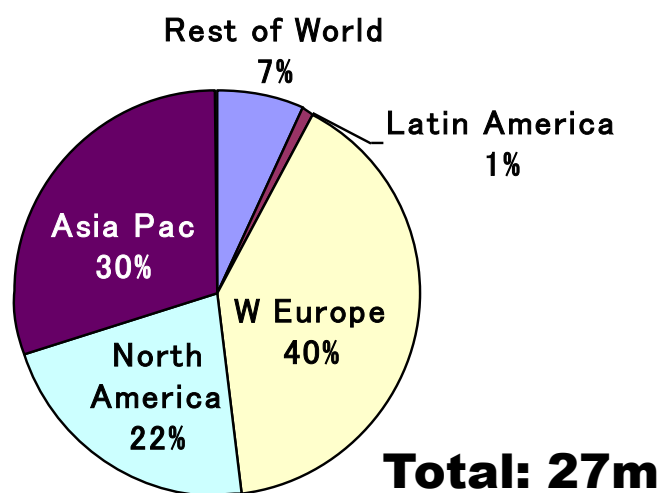
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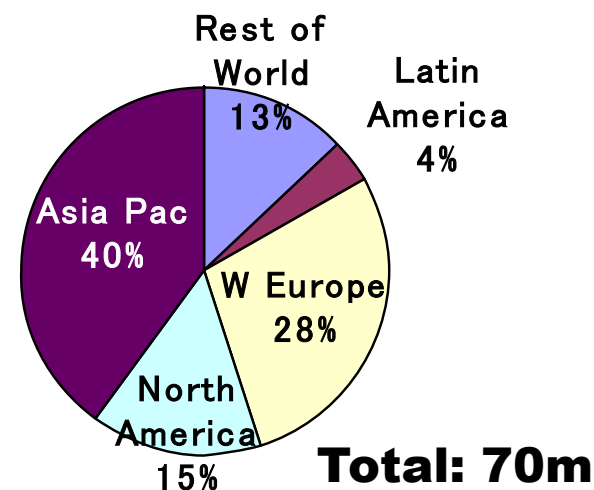
IPTV market overview

- IPTV has emerged as a hot topic within the global digital entertainment and telecommunications industries.
- Broadband and video compression technologies have matured to the point where it is now feasible to offer competitive and compelling IPTV services.
- The ratio of Latin America and Asia Pacific will be increasing.

IPTV Subscribers(2009)



Projected IPTV Subscribers (2014)

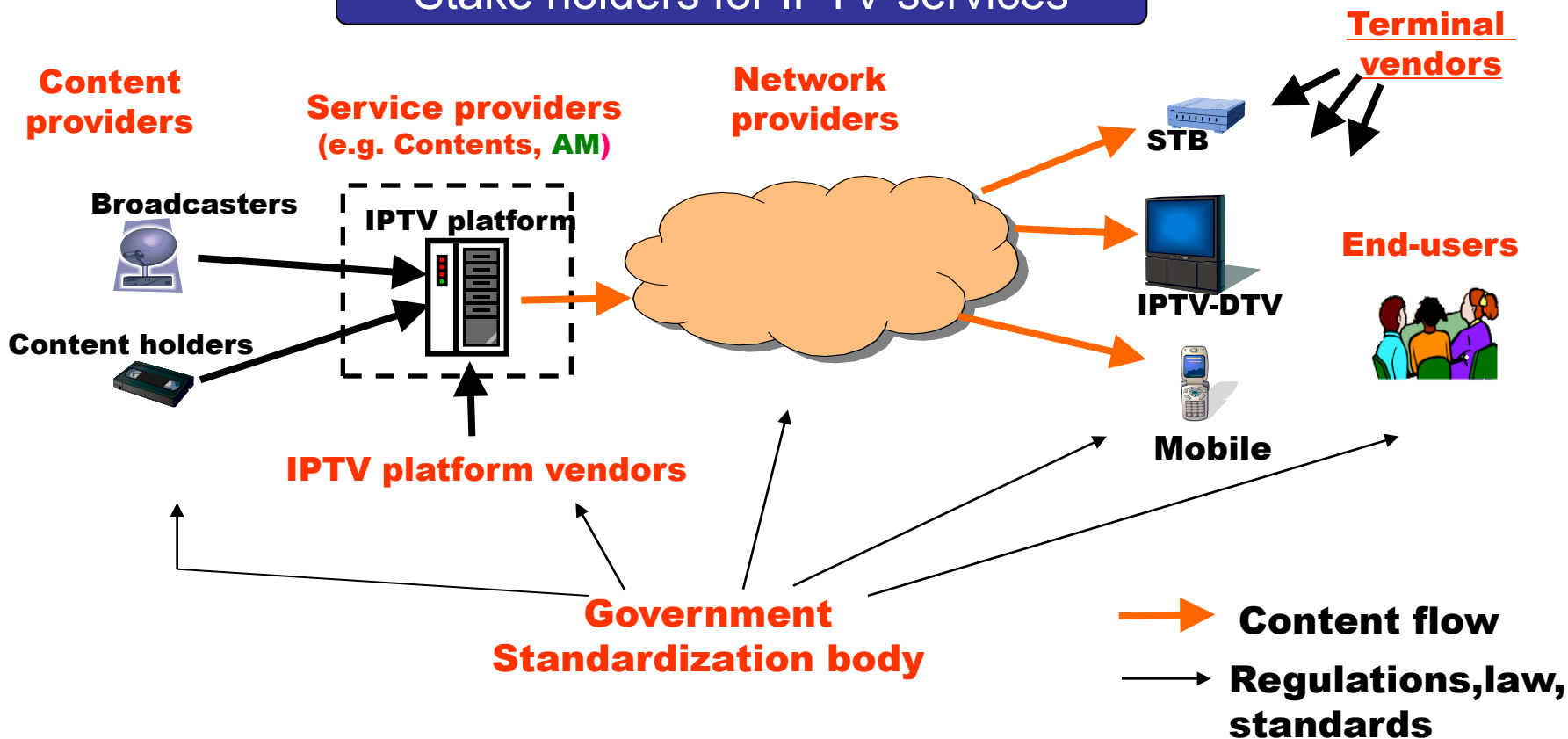


*Source: Informa Telecoms & Media "IPTV (5th edition)" 2009

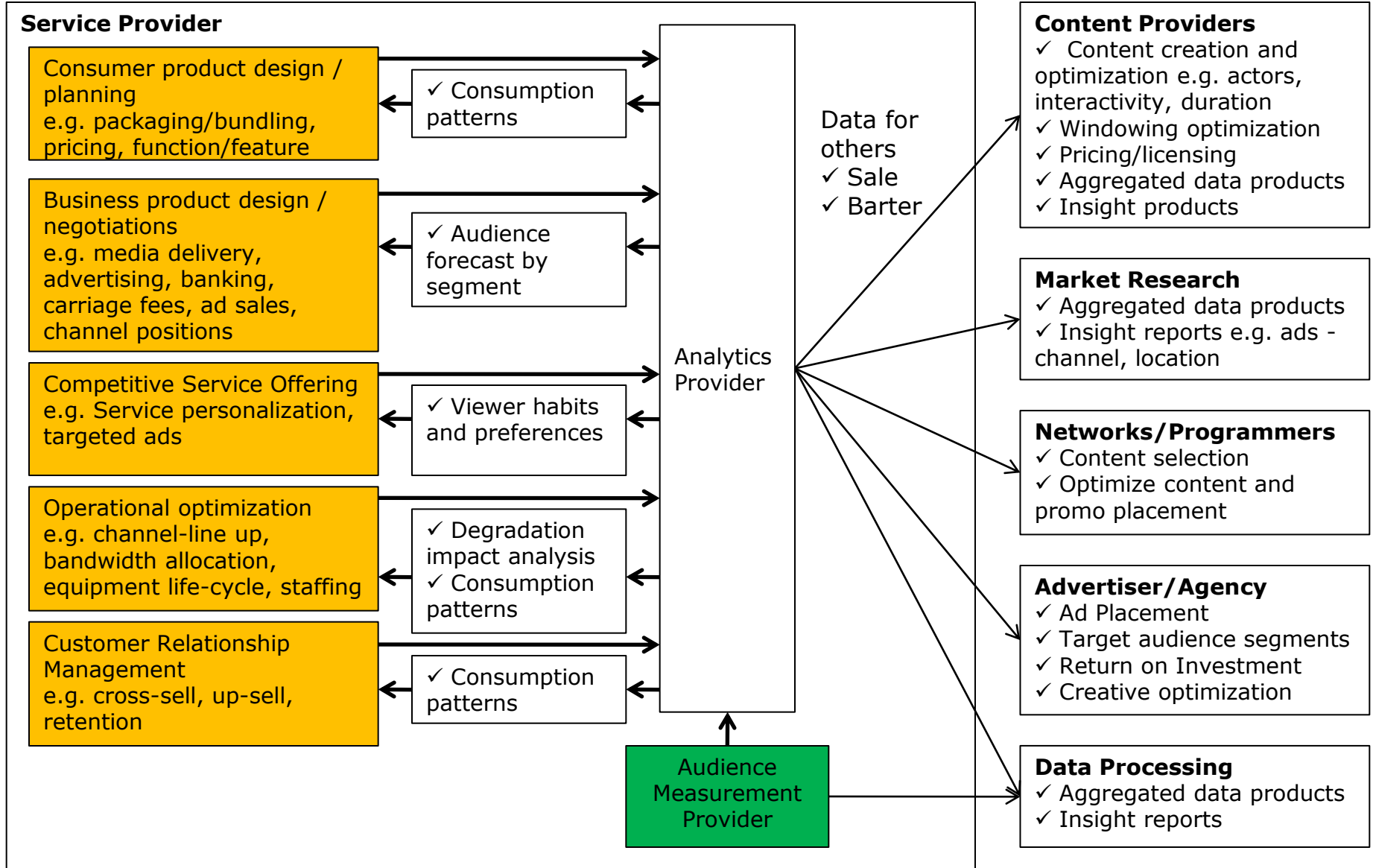
Current IPTV stake holders

- In order to provide IPTV service, not only IPTV service providers but also lots of other stake holders are concerning with IPTV services.
- Those stake holders are restricted by regulations, laws, and standards.
- Several stake holders are interested in audience measurement (AM).

Stake holders for IPTV services



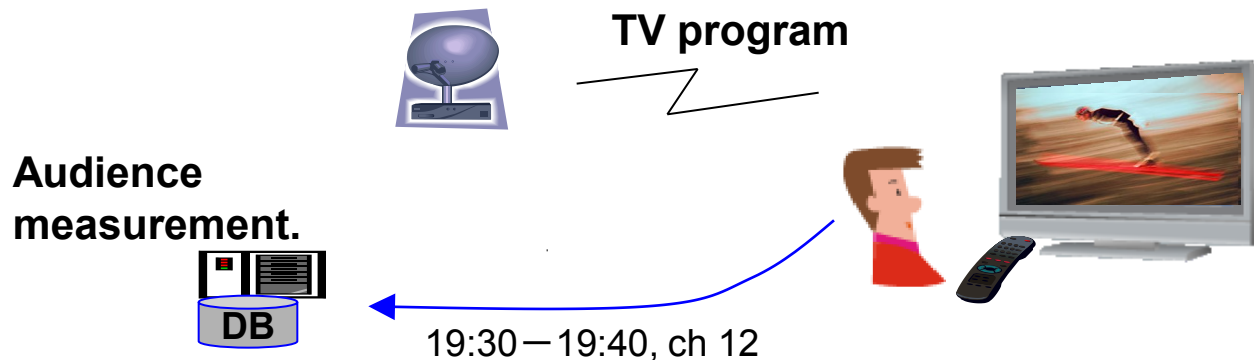
The Values of Audience Measurement to stake holders



What is audience measurement

■ Audience measurement definition

- Measuring how many people are in an audience, usually in relation to television viewership and radio listenership, but also newspaper and magazine readership, and increasingly, usage of websites and IPTV service.
- It often also includes demographic information (ex. age, gender) and sometimes psychographic information (ex. personality, values, attitude, interests, lifestyles) or IAO variables (for Interests, Activities, and Opinions), to help broadcasters and advertisers determine how segments of the audience are engaging with the content, rather than just how many.
- To realize audience measurement, privacy information must be protected perfectly.



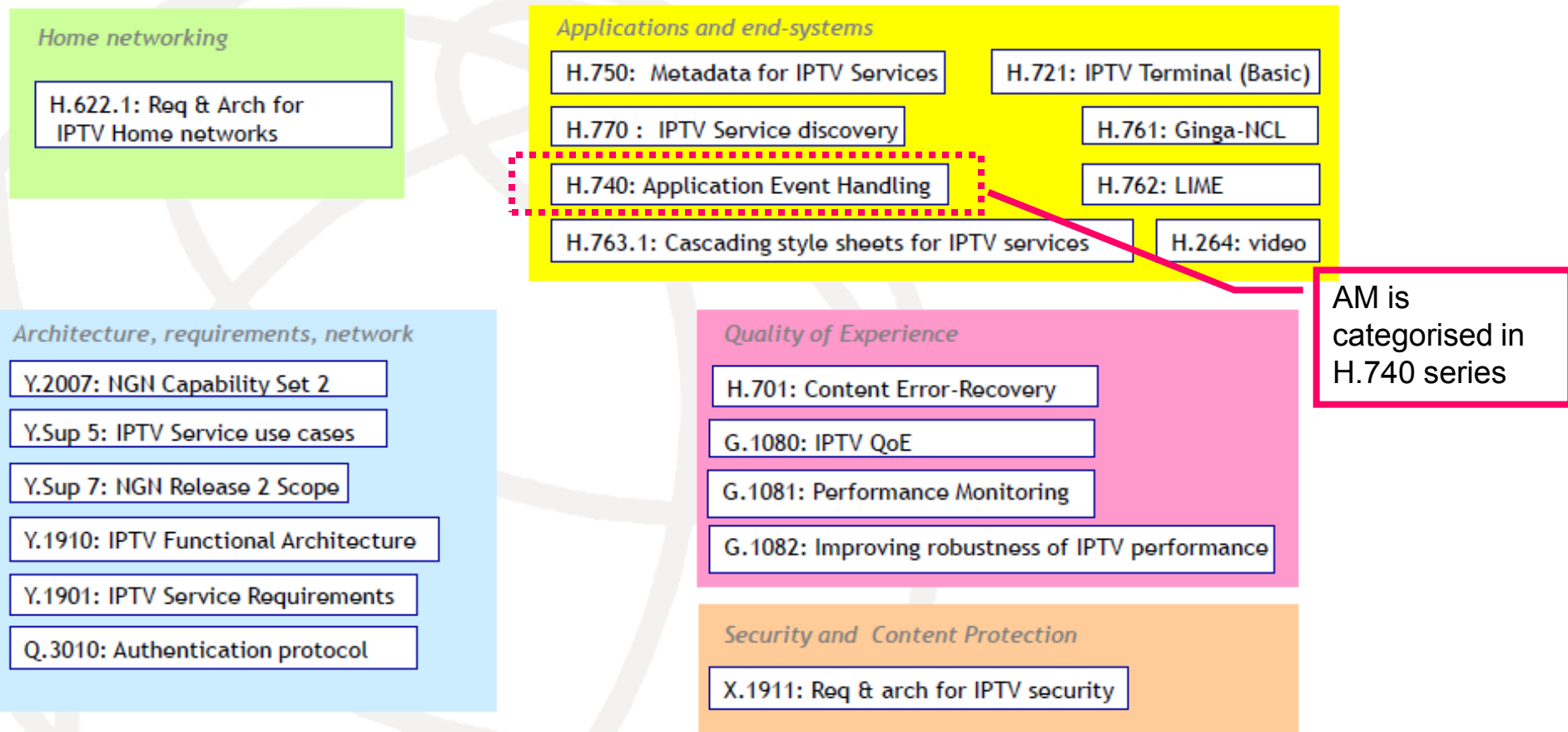
IPTV AM standards

- Position of IPTV AM
- Current standardization activities in IPTV-GSI
- Architecture, privacy and so on.

Standardization activity: IPTV Audience Measurement

- “Audience measurement in IPTV” is categorized in “Application and End System” (discussed in Q13/16)
- Several countries, including China, Korea, Japan, Canada, Singapore and USA, are now interested in this area for the future service in ITU-T.

Overview of ITU-T Recommendations for IPTV



Application event handling and audience Measurement

- “IPTV application event handling (H.740)” defines higher level concepts of application event handling.



Excerpts from ITU-T H.740

- H.740.amd.1 includes several scenario including audience measurement in IPTV(AM)

Audience measurement

Emergency communication

T-Commerce

Use of video sensor device

IPTV Audience Measurement draft recommendations

- “IPTV application event handling:audience measurement series (H.IPTV-AM.0,1,and2)” describes the requirements, functions supported by the IPTV terminal devices, HGW and so on.
- These will be useful for new IPTV service related with audience information.

H.740.amd.1 Application event handling

H.IPTV-AM.0 Audience measurement overview (H.74?)

H.IPTV-AM.1 AM for distributed content service (H.74?)

H.IPTV-AM.2 AM for interactive service (H.74?)

IPTV Audience Measurement standardization

■ The target services of AM standardization include not only distributed content service but also interactive services of IPTV.

H.IPTV-AM.1

■ Distributed content services

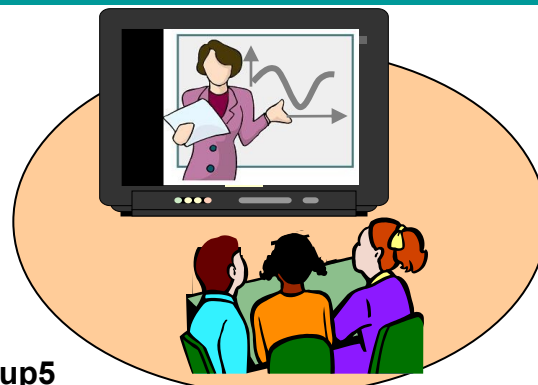
- Broadcast services
- On-demand services
- Advertising services
- Time-shifting and place-shifting services
- Supplementary content



H.IPTV-AM.2

■ Interactive services

- Information services
- Commerce services
- Entertainment services
- Learning services
- Medicine services
- Monitoring services
- Portal services
- Interactive advertising

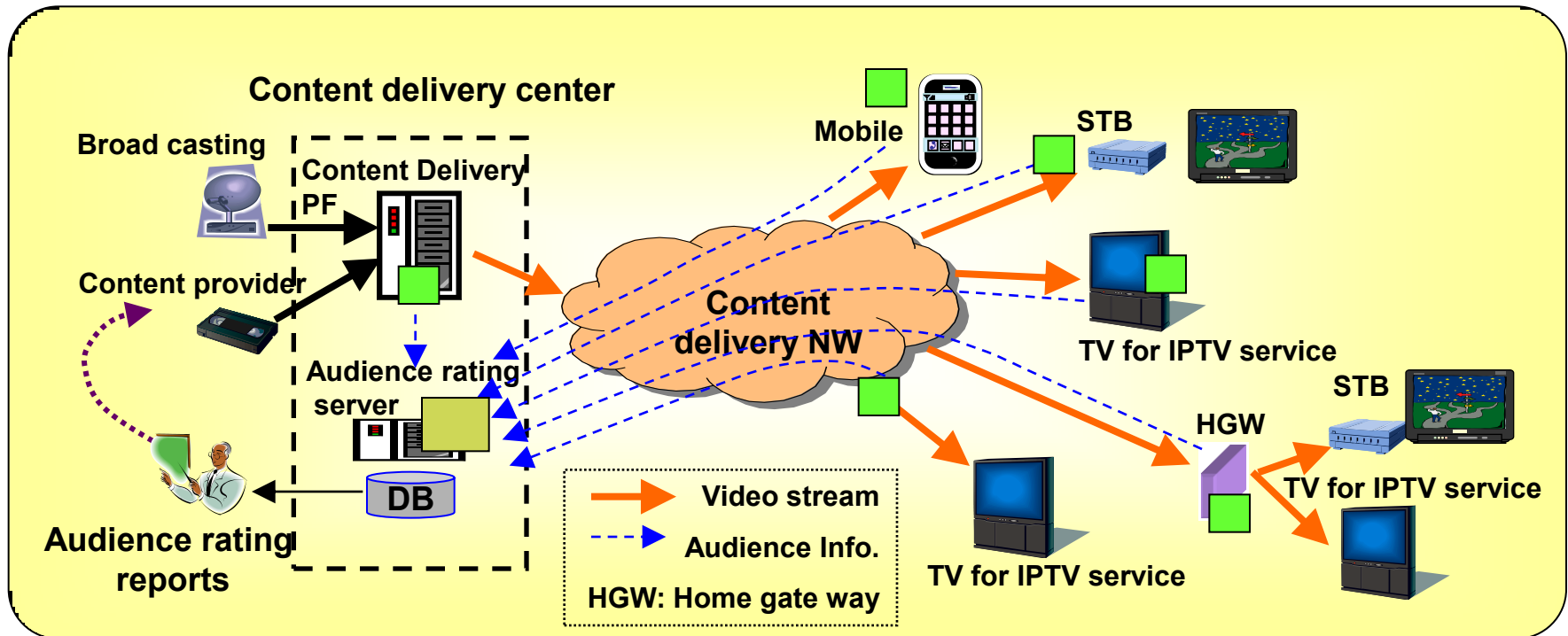


Excerpts from ITU-T Y.Sup5

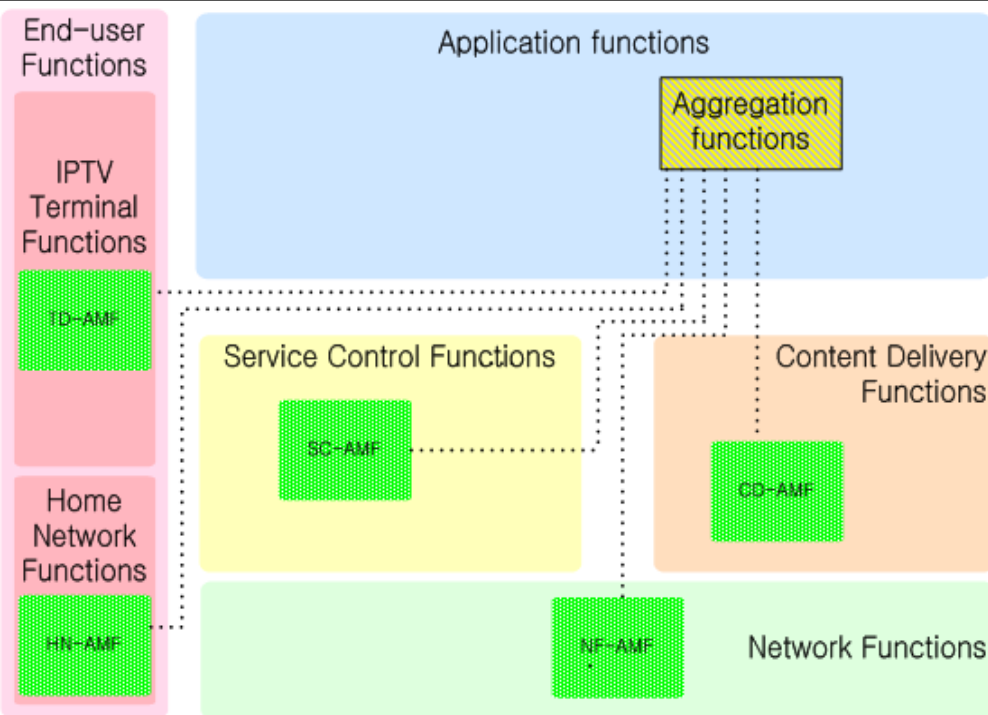
IPTV audience measurement function location

- IPTV audience measurement function can be installed in several points, such as terminals, HGW(homegateway)s, routers, and content delivery platforms.

Excerpts from ITU-T H.740



Architecture and Roadmap



- AM system has two components
- Aggregation Functions
- Multiple locations for Audience Measurement Functions (AMF)

Audience measurement functions within IPTV architecture

Services
Locations

Nov.'2011
↓

Phase 1	Phase 2	Phase 3
Linear	Non-Linear	Interactive
TD-AMF	NF-AMF CD-AMF	SC-AMF HN-AMF

Tentative AM Roadmap

*Source: Introduction to ITU-T Audience Measurement (AM), ITU-T,2011

Privacy Model for AM in IPTV

	Level 0 (default)	Level 1	Level 2	Level 3
User info permitted with for AM	None	Distinguishable user, no user information	Distinguishable user, and anonymous user information	Distinguishable user, anonymous user information, and identifiable subscriber or user information
Example data	No Measurement	Channel 5 was watched by anonymous user #12683304 on mobile device type "X"	Channel 5 was watched by anonymous <u>male</u> user #12683304 on mobile device type "X"	Channel 5 was watched on mobile device type "X" being used by <u>subscriber or user "John Smith" with email js@sp.net</u>

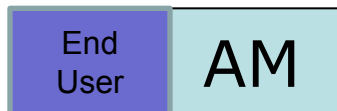
*Source: *Introduction to ITU-T Audience Measurement (AM), ITU-T, 2011*

Permission Modes

- User's policies are declared in a “**permit**” which includes a permission level
- Permits may also specify providers, services, devices and/or content classes

Permission Mode set during discovery

Internal Permission Mode



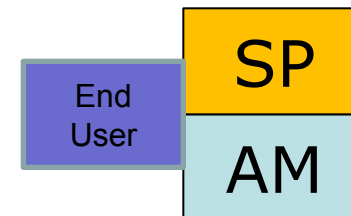
AM responsible for obtaining and using permits

External Permission Mode



SP responsible for obtaining and using permits

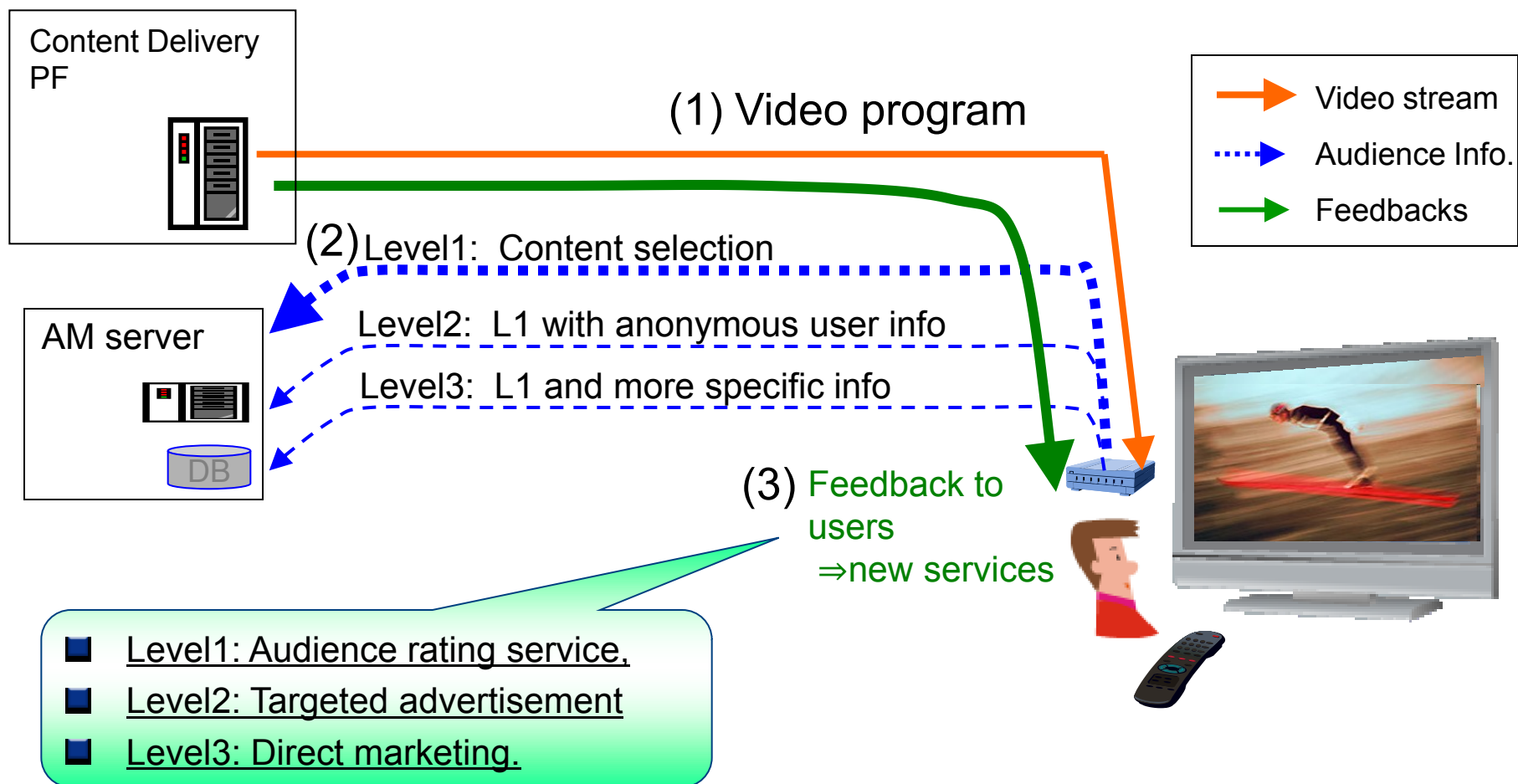
Hybrid Permission Mode



SP responsible for obtaining permits, AM responsible for using permits

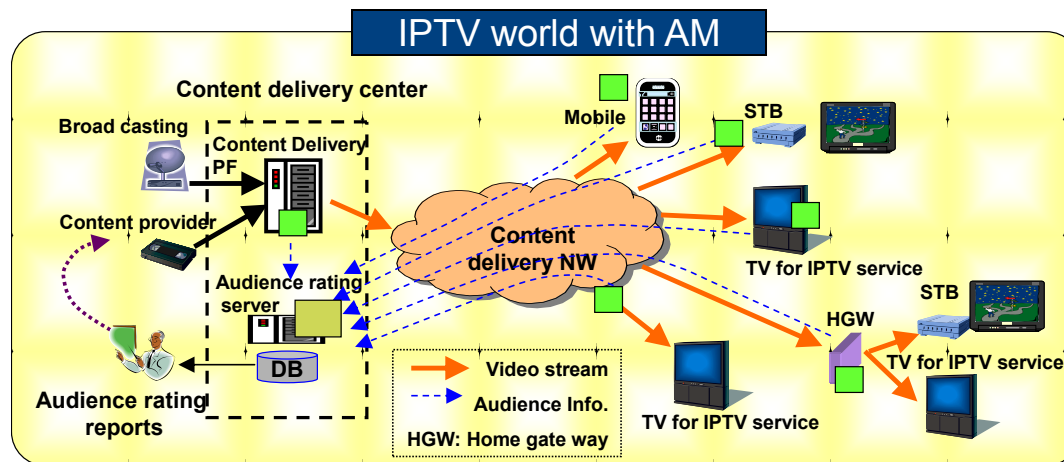
Three level profiling for IPTV AM and the derived services

■ By using of higher level of AM, end-users can get more useful services, but private information will be taken more carefully.



Conclusion

- IPTV service subscribers are increasing in the world.
- Several stake holders are interested in IPTV audience measurement(AM).
- IPTV AM are very hot topic in ITU-T IPTV-GSI.
- Several draft recommendations on AM are under discussion in Q13/16 in ITU-T IPTV-GSI and will be consent soon.
- These will bring you to the new IPTV services.



■ Thank you for your attention



Open up your dreams