



Digital Broadcasting: New Services and Beyond

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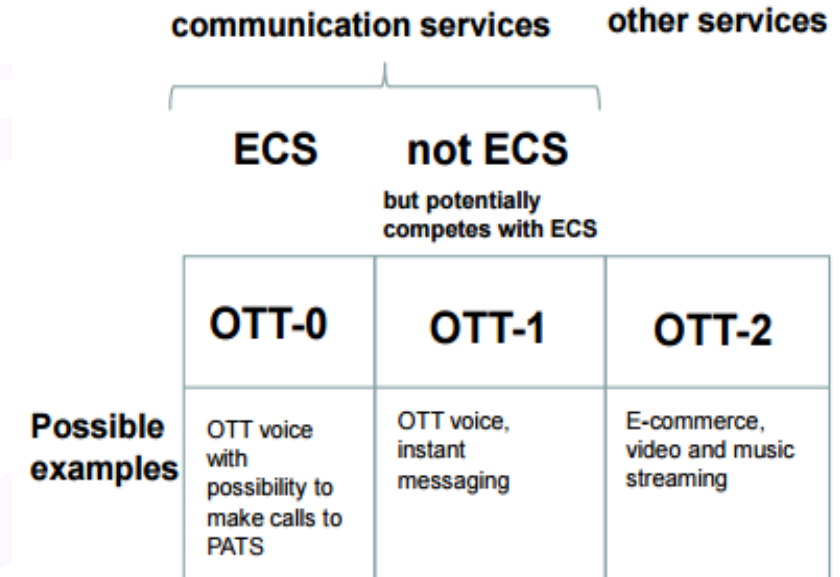




OTT – Regulatory Classification

BEREC / European Regulatory Praxis

- BEREC Report on OTT services, in January 2016 classified OTT's as:
 - OTT-0: an OTT service that qualifies as an ECS (Electronic Communications Service);
 - OTT-1: an OTT service that is not an ECS but potentially competes with an ECS;
 - OTT-2: other OTT services
- Netflix
- YouTube



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OTT - Butterfly Effects

Small Companies with Big Influence/Revenue



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OTT – Telecoms vs. Free Internet

Telecom Universe

- Heavily regulated industry
- Telco based standards (ITU)
- Limited/ slowing growth
- High pre-investment required
- Significant employer
- Moving towards IP
- Traditional business models

OTT| Communication Universe

- Limited/ no regulation
- Internet based standards (IETF)
- Rapid growth
- Low, scalable investment
- Limited direct employment
- IP based
- Disruptive models (free, freemium, ad based etc)





5G Broadcasting

- Convergence of the infrastructure: logical and physical
- IP-based services
- What is the future of DVB-T systems
- Can 5G mobile systems replace the DVB-T solution?
- HD, 4K or higher – CQI 16 more Resource Blocks allocations means more time and frequency resource allocated for multimedia services with the last mile in mmWave bands of 30 GHz





Conclusion

- Future Directions of Internet – Regulated or Not?
- IPv6; all IP-based
- Regulatory framework for ISPs as well as Telco
- 5G as a Backbone for future Broadcasting services





Thank you for Your Attention

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