

Digital Television Regulation - Consultation Paper Jan 2015 - Ericsson Australia Submission





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Re: Digital Television Regulation- Consultation Paper - Jan 2015

Ericsson Australia welcomes the opportunity to respond to the Department of Communications.

Key Ericsson perspectives

In order for broadcasters to continue to deliver a high-quality viewing experience to consumers, Ericsson recommends that focus should be on sustaining service equivalence – in terms of number of services and the quality of experience – rather than purely focus on the quantum of spectrum available or the mechanics of delivery optimization. This is particularly important for broadcasters in order to remain competitive and relevant to their audiences as competitors move to High Definition (HD) and 4K content delivery in the future.

Convergence has allowed new or existing players to enter new or existing “home” markets and moreover to some degree reconfigure corresponding value chains by circumventing or bypassing some value chain activities and players (aka new business models). This has been a key source of new consumer value creation and differentiation. Ultimately, convergence has increased competition and rivalry in affected existing markets and created new markets by enabling new offerings/value propositions to emerge. But it has also led to collapses of incumbent businesses, markets and products. This is why convergence is so frequently coupled with creative destruction.

Ericsson believes that it is vitally important to separate regulation of services from the underlying content delivery mechanism in order to ensure that market distortions are not created that unfairly disadvantage some players or provide an unfair advantage to others. For example, today broadcasters are strictly regulated whereas over-the-top internet-based video services are virtually unregulated.

Ericsson strongly supports the creation of a clear migration path and framework to future broadcast standards in order to benefit from technology evolution and improvements over time. Additionally, a clear roadmap with associated timings should be developed to guide and encourage migration to more efficient broadcast technologies over time. For example, if an MPEG-4 standard was specified for Australia when this was first available around 9 years ago, today it would be possible to rapidly migrate to MPEG-4.



A pathway to next generation technologies such as DVB-T2 and HEVC should also be considered as part of an overall future roadmap for broadcasting. DVB-T2 could be implemented already today; however HEVC could take up to two years since there is a lag between standard-setting and the mandatory adoption of specific requirements for field-devices (TV, STB, etc.) to actual deployment.

About Ericsson

Ericsson is the world's leading provider of technology and services to telecom operators, and is the global market leader in IPTV, satellite and contribution & distribution compression. Ericsson is the leader in 2G, 3G and 4G mobile technologies as well as a founding member and coordinator of the 5G standardization initiative Mobile and wireless communications Enablers for the Twenty-twenty Information Society (METIS). Further, Ericsson provides support for operators that collectively serve over 2.5 billion subscribers and has the leading position in the telecoms managed services business domain.

The company's portfolio comprises of mobile and fixed infrastructure, telecom services, software, broadband and multimedia solutions (including IPTV and Mobile TV) for operators, enterprises and the media and broadcasting industry. Ericsson's vision for the future of TV is available in the online publication 'Media Vision 2020'¹, and provides an overview of where the TV and media industry is today, how we got here and also the landscape and trends that will shape consumer, technology and business models towards the year 2020.

As the world's leading network infrastructure and managed services provider for mobile network operators, Ericsson plays a key role in the development of standards for mobile telephony and mobile broadband technologies, and seeks to ensure a globally harmonised allocation of spectrum to foster a global ecosystem of network infrastructure, handsets, and other devices to benefit enterprises and consumers.

Ericsson has one of the industry's strongest telecom technology portfolios, with around 35,000 granted patents worldwide and is the leading patent holder for 3GSM family of mobile network equipment standards: GSM (2G), UMTS / WCDMA (3G) / LTE (4G). Ericsson is the leading vendor in supplying LTE equipment to mobile operators around the world, and is a net receiver of licensing royalties with more than 90 patent-licensing agreements in place.

Ericsson is the fifth largest Information Technology Company by software revenues, following Microsoft, IBM, Oracle and SAP. Ericsson employs over 118,000 staff worldwide and over 25,000 of those are dedicated to research and development (R&D). Ericsson invested USD 5 billion in R&D in 2014.

Ericsson makes its technology available to others, and is a champion of industry practice on FRAND (Fair, Reasonable and Non-Discriminatory) licensing.

¹ [Ericsson Media Vision 2020](#)



In agreement and in support of telecommunication developments, the Department of Communications as well as Government authorities around the world play a significant role in maximizing the societal benefits of convergence and in creating incentives for industrial and societal transformation toward a digital networked society.

Ericsson has been an active industry participant in Australia since the 1950s, and currently has a strong presence of around 1100 employees, delivering high-value professional services capability across Australia, New Zealand and the Asia Pacific region.

Ericsson Australia responses to Implementation Questions

QUESTION 1: What factors will influence the decision to increase or reduce the number of services a broadcaster chooses to provide?

Terrestrial broadcast spectrum has been the traditional method of TV distribution in Australia, and after the digital dividend restack, there is now a reduced amount of spectrum available for broadcast TV use.

However, as IP-based delivery of video content, such as HbbTV and online streaming to multi-screen devices becomes more prevalent and demanded by customers, this will also provide a significant opportunity for broadcasters to leverage new content distribution methods as well as access new revenue models that were simply not possible previously. A key challenge that must be acknowledged in the short-medium term, however, is the variability in broadband access speeds available to all households – and which will be addressed by the National Broadband Network rollout over time – but today remains a very real barrier for ubiquitous high quality video delivery to all Australians.

Finally, it must be noted that broadcasting remains a heavily regulated industry, whereas in the internet or IP domain, relatively little if any regulation exists at all. This disparity in regulatory regimes is almost certain to have an effect on future investment decisions for broadcasters related to new content channels and distribution methods chosen.



QUESTION 2: What safeguards, if any, should the Government put in place to make sure that an appropriate balance is maintained between giving broadcasters the freedom to use their spectrum how they see fit, providing audiences with a diverse range of television services and the appropriate and efficient use of spectrum?

In order for broadcasters to continue to deliver a high-quality viewing experience to consumers, Ericsson recommends that focus should be on sustaining service equivalence – in terms of number of services and the quality of experience – rather than purely focus on the quantum of spectrum available or the mechanics of delivery optimization.

This is particularly important for broadcasters in order to remain competitive and relevant to their audiences as competitors move to High Definition (HD) and 4K content delivery in the future.

QUESTION 3: What consequences, if any, could the removal of ‘service deficient’ declarations have on the content delivered to viewers in smaller regional and remote areas?

No comment.

QUESTION 4: What impact, if any, will the removal of the requirement for the primary channel to be provided in SD have on viewers?

A very high proportion of digital TVs installed in Australian households already today are HD compliant, estimated to be > 80% in Australia today.² Consequently, the removal of the primary channel to be provided in SD would have a relatively low impact on viewers.

QUESTION 5: What factors will influence a television broadcaster’s decision to continue to offer HD content?

The revenue potential of HD content, such as high-quality sporting events, will have a strong influence on a broadcasters’ decision to continue to offer HD content.

² Based on extrapolation of figures cited in 2012 submission by Broadcast Australia.
http://www.acma.gov.au/webwr/assets/main/lib410179/ifc3-2012_broadcast_aust.docx



QUESTION 6: What form of regulation should there be for services that are indistinguishable to viewers from more regulated services and accessed with common equipment, such as HbbTV?

Convergence has allowed new or existing players to enter new or existing “home” markets and moreover to some degree reconfigure corresponding value chains by circumventing or bypassing some value chain activities and players (aka new business models). This has been a key source of new consumer value creation and differentiation. Ultimately, convergence has increased competition and rivalry in affected existing markets and created new markets by enabling new offerings/value propositions to emerge. But it has also led to collapses of incumbent businesses, markets and products. This is why convergence is so frequently coupled with creative destruction and hence Schumpeterian economic theory.

- **Distortion of competition** – near perfect substitute platforms should be by principle regulated the same way e.g.: terrestrial broadcast, satellite, telecom, cable and internet. The particular service in question should be in the focus of regulation, not the technology or the platform that provides the service, application or content (i.e. technology neutral regulation). This does not mean that all services should be regulated but rather that those that are, should be regulated symmetrically across any platform.
- **Convergence is creating** increasing risk for overlapping policy remits. A broad and holistic perspective of converging value chains is necessary; likewise policy makers need to rethink objectives, responsibility, governance and forms of intervention.
- **Weakening of regulatory** effectiveness when alternative providers in unregulated channels [sectors] are less regulated, the lowest denominator prevails and becomes the norm in the long run. This situation creates an opportunity for regulatory arbitrage and distorts competitive and market based business investment decisions.
- **Regulatory flight** – companies moving or being taken over by those outside the regulatory jurisdiction.

Today, regional viewers with generally poorer broadband service availability and speeds will be at a distinct disadvantage over viewers in capital or regional cities.



QUESTION 7: What arrangements may be required to allow currently established datacasting services provided by commercial broadcasters to continue where necessary after the repeal of the datacasting provisions in the BSA and Radcomms Act?

Ericsson recommends that the relevance of datacasting should be reconsidered in light of the multitude of IP-based broadband service delivery mechanisms available for content delivery today, such as HbbTV, streaming video, VoD.

QUESTION 8: Other than narrowcasting services, are there any other types of services which broadcasters should offer on their television multiplexes?

Ericsson has no comment on what types of services broadcasters should offer on their television multiplexes as this is ultimately a commercial decision made by individual broadcasters themselves.

However, services that could be offered, depending on the service mix that an individual broadcaster feels is most appropriate, include SD, HD and 4K, as well as digital radio broadcasting (albeit via a set-top-box).

QUESTION 9: Is it likely that commercial television broadcasters will want to use their multiplexes and hence spectrum to offer third party content that they are not responsible for under the relevant broadcasting legislation? If so, what form of regulation would be appropriate to ensure such content was provided in a manner consistent with commercial broadcaster provided content?

Yes, it is likely that TV broadcasters will want to use their multiplexes and hence spectrum to offer 3rd party content.

Ericsson does not recommend further regulation beyond compliance with existing Australian broadcasting regulation.

QUESTION 10: How important is it that broadcasters have the regulatory flexibility to make greater use of new technologies to deliver their television services to viewers?

Ericsson believes that it is vitally important to separate regulation of services from the underlying content delivery mechanism in order to ensure that market distortions are not created that unfairly disadvantage some players or provide an unfair advantage to others. For example, today broadcasters are strictly regulated whereas over-the-top internet-based video services are virtually unregulated.



QUESTION 11: How can the Government support the broadcasting and manufacturing industry in managing a transition to MPEG-4 only television?

The government can support the broadcasting and manufacturing industry in managing a transition to future encoding standards by:

1. Providing adequate spectrum allocations to support such a transition; and
2. Not specifying a single compression standard but instead considering alternatives such as HEVC and DVB2 in order to maximise the benefit to viewers.

QUESTION 12: Should the Government consider any legislative mechanisms such as technical standards for MPEG-4 terrestrial transmitters and/or television receivers?

Ericsson recommends that any legislative mechanisms employed should have the ability to continually assess and plan for the flexibility to introduce new technology, in order to maximise the efficiency of spectrum use.

Television receiver standards should be mandated by the government to set agreed dates for equipment to support specific standards in order for TV receivers to be sold in Australia. Without such firm dates, any migration to future standards will be delayed or potentially stall altogether.

QUESTION 13: By what date does the broadcasting and manufacturing industry consider that MPEG-4-only television could be achieved?

Ericsson believes that there are no technological limits to deploying MPEG-4-only television today; however the transition and associated timing of migration to MPEG-4 only will be limited by migration practicalities.

This will include the possibility of interoperability issues between receivers and MPEG-4 broadcast streams due to the absence of an MPEG-4 standard being mandated for devices sold in Australia over the past 8-9 years.

QUESTION 14: What does the industry consider should be the future standard(s) for broadcast television in Australia? Should a pathway to next generation technologies such as DVB-T2 or HEVC also be considered?

Ericsson strongly supports the creation of a clear migration path and framework to future broadcast standards in order to benefit from technology evolution and improvements over time. Additionally, a clear roadmap with associated timings should be developed to guide and encourage migration to more efficient broadcast technologies over time. For example, if an MPEG-4 standard was specified for Australia when this was first available around 9 years ago, today it would be possible to rapidly migrate to MPEG-4.



A pathway to next generation technologies such as DVB-T2 and HEVC should also be considered as part of an overall future roadmap for broadcasting. DVB-T2 could be implemented already today; however HEVC could take up to two years since there is a lag between standard-setting and the mandatory adoption of specific requirements for field-devices (TV, STB, etc.) to actual deployment.

QUESTION 15: What consumer issues are raised by the transition to new transmission standard such as MPEG-4?

It is estimated by the Consumer Electronics Industry in Australia today that 15-20% of terrestrial broadcast receivers do not support MPEG-4 (refer to Question 4 response). This is due to interoperability issues that are caused by some set-top-boxes or TV's being incompatible with certain stream types, since there has been no control over device compliance against MPEG-4 in Australia to date.

In the UK, device certification is undertaken for all Freeview devices to ensure compliance against defined standards. A similar approach in Australia would ensure compliance for future technology migration and reduce the risk of interoperability issues.

Additionally, it is important to consider additional technology transition challenges and standards such as Freeview+, HBB 1.5, HBB2.0, EPG components, to name a few, for current and future standards as part of any transition planning and to ensure that device experiences are consistent across the various standards.

QUESTION 16: Are there any alternative arrangements to digital television multiplex licensing that the Government should consider?

There are many examples of alternative arrangements for digital television multiplex licensing including New Zealand, Malaysia and the United Kingdom, where multiplex operators are decoupled from broadcast license holders.



QUESTION 17: Are there other ways commercial television broadcasters can be encouraged to share or utilise their spectrum more efficiently?

A number of options exist for television broadcasters to utilize spectrum more efficiently; these include:

1. Utilization of latest generation compression technologies (for example, adoption of HEVC or T2)
2. Ensuring broadcast technology regulations have sufficient flexibility to enable newer, more efficient technologies to be introduced in a controlled manner over time (refer to detailed response to Question 14 earlier).
3. Ensuring broadcast regulation also has sufficient flexibility to accommodate alternative delivery mechanisms beyond terrestrial, such as IP-based delivery.
4. Reconsidering the 'must-carry' arrangements for broadcasters, such as the primary channel to be SD format.
5. Planning for next-generation modulation technologies such as polarized antennas (vertical and horizontal) as well as multi-path antenna configurations (MIMO) – which are currently the subject of ongoing standards.
6. Consideration of supplementary services such as LTE-Broadcast.
7. Increased frequency re-use by installing additional transmitters serving smaller areas.

QUESTION 18: How might national broadcasters implement spectrum sharing while maintaining their distinct television services?

The introduction of spectrum sharing would be difficult to achieve today without the risk of a reduction in picture quality to end-users when using MPEG-2 or MPEG-4. However, use of DVB-T2 or HEVC would enable a migration path to spectrum sharing without degrading the picture quality.



Ericsson looks forward to continued engagement with the Department of Communications on television and digital economy related matters in the future, and is pleased to be contacted in relation to any points raised in this submission.

Yours sincerely,

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