

Ericsson's submission to the Australian Communications and Media Authority's Apparatus licences in the 3.4 – 4.0 GHz band in remote Australia – Consultation Paper

May 2022

Introduction

Ericsson welcomes the opportunity to respond to the Australian Communications and Media Authority's (ACMA's) *'Apparatus licences in the 3.4–4.0 GHz band in remote Australia (Licensing, allocation process, technical framework and pricing arrangements – consultation paper) (Consultation Paper)*.

Ericsson supports the submission made by the Australian Mobile Telecommunications Association (AMTA) in response to the Consultation Paper.

Below is a short 5G market update, an overview of Ericsson's position and further comments in response to selected issues raised in the Consultation Paper.

5G Market Update

- In Q4 2021, 5G reached 660 million subscriptions globally,¹ cementing 5G as the fastest deployed mobile technology generation to date.
- Between Q4 2020 and Q4 2021 mobile network data traffic grew 44 per cent.²
- Two hundred communications service providers have now launched commercial 5G services and at least twenty have launched 5G standalone (SA) networks.²
- In terms of forecasts,³ by the end of 2027:
 - there will be 4.4 billion 5G subscriptions, representing roughly half of all mobile subscriptions at that time.
 - video traffic will account for 79 per cent of all mobile data traffic, video traffic currently accounts for 69 per cent of all mobile data traffic.

Overview

- Ericsson supports the ACMA's proposal to "authorise access to the 3.4–4.0 GHz band in remote areas by means of area-wide apparatus licences (AWLs)".⁴
- Ericsson's response is provided from the perspective of a supplier to multiple operators in the Australian market who currently use, or intend to use, spectrum in the 3.4 - 4.0 GHz band.

¹ [Ericsson Mobility Report, Q4 2021 Update](#)

² [Ericsson Mobility Report, Q4 2021 Update](#)

³ [Ericsson Mobility Report November 2021](#)

⁴ [Apparatus licences in the 3.4–4.0 GHz band in remote Australia Licensing, allocation process, technical framework and pricing arrangements – consultation paper](#), p.1

- Ericsson strongly supports the adoption of 3GPP technologies in the 3.4 - 4.0 GHz band as critical to enable the further rollout of 5G in remote areas of Australia.
- 5G has multiple use cases and a flexible frame structure.
- Not aligning the 3.4 - 4.0 GHz band in remote areas with 3GPP will create a need for synchronisation with inflexible or limited non 3GPP technologies at the remote area boundaries, which in turn will create delay, cost and complexity for both equipment suppliers and mobile network operators.
- This is of most concern where remote areas are adjacent to spectrum licenced areas. Spectrum licenced areas today use 3GPP compliant technologies with the majority of operators deploying 5G networks.
- Ericsson supports the harmonisation of the 3.4 and 3.7 GHz bands. This includes the same spectrum, licence type, geographic area and expiry date. The remote Area Wide Licence's (AWLs) should align to the same licence conditions where possible to reduce issues at remote area boundaries with other licence types, now and at the proposed licence end date in 2030.

Issues for comment

1. **Do you have any comments, and supporting additional information, on the proposed technical framework, including the revised AWL LCD, draft RALI MS 47, and updated RALI FX3 and FX19?**
 - Ericsson supports the proposal for amateurs to no longer use spectrum in the 3400 – 3600 MHz band, with the 3300 – 3400 MHz (as a secondary service) appropriate for amateur use.
 - Ericsson supports:
 - the principle of an Earth Station Protection Zone (ESPZ) in Remote South Australia if this reduces the total number of Earth station locations across Australia that need to be coordinated with other spectrum users in populated areas.
 - new point to point (PTP) services in the 3.8 – 4.2 GHz frequency range with a preference for 4.0 – 4.2 GHz due to potential interference concerns with other regions, if below 4.0 GHz.
 - a 10MHz channel plan
 - While a fallback synchronisation requirement is good in theory, it should be used as a last resort. This is due to the multiple use cases 5G can support. For example, in practice, a small operator must match the synchronisation of a large operator due to the flow-on effect synchronisation has to all transmitters in a specific geographic location.

- 2. Do you have any comments on the other issues referred to in the technical framework that have not been resolved in the TLG, such as WBB coexistence with radio altimeters?**
- Ericsson support the ACMA's "Approach A" with no additional mitigation measures other than the proposed 200 MHz guard band for compatibility with radio altimeters.
 - If the ACMA were to propose "Approach B", Ericsson:
 - considers there is a need to more thoroughly understand the technical conditions causing the co-existence issue, including access to test results that established there was a co-existence issue.
 - recommends these measures to be temporary and only until the underlying technical limitation has had a reasonable time to be rectified.
 - Ericsson has not been made aware of any issue with emissions from our radios that have contributed to the stated co-existence issue. We would appreciate the ACMA sharing details, if they exist, of such concerns as soon as possible.
- 3. Do you have any comments on our proposal to use a multi-stage administrative allocation for apparatus licences in the 3.4–4.0 GHz band in remote Australia? Please provide any additional information in support of your views.**
- Ericsson supports a multistage allocation approach and the principles outlined in the Consultation Paper.
- 4. Do you have any views on the appropriateness of an allocation quantum policy? If an allocation quantum policy is adopted, do you have any views on whether that quantum should be 100 MHz or 150 MHz or some other quantum per single HCIS level 0 cell?**
- Ericsson supports an initial maximum of 100 MHz aggregate spectrum per operator.
 - Ericsson understands that the maximum spectrum per operator applied at HCIS level 0 or level 1 will favour operators differently dependent on needs and costs.
 - Additional spectrum, eg. up to 200 MHz aggregate, could be made available, after the allocation window, if unutilised spectrum remained.
- 5. Do you have any comments on our licence tenure and renewal policy for AWLs in the 3.4–4.0 GHz band in remote areas?**
- Ericsson supports the renewal date to align spectrum licences as proposed by the ACMA to support future band harmonisation.