

ACMA Spectrum planning for Wi-Fi

Date: 16 January 2025

Author:

| Name | Company | Address | Phone | Email |
|----------------|---|------------------------------------|----------------------|----------------------------|
| Andrew Stewart | Australian Communications and Media Authority | PO Box 78 Belconnen ACT 2616 | +61 26219523 8 | Andrew.stewart@acma.gov.au |



We regulate communications and media
to contribute to maximising the economic and social benefits of
communications infrastructure, services and content for Australia.

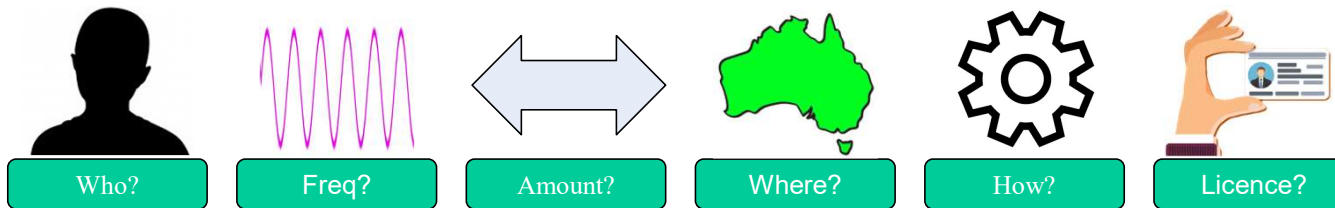
Spectrum is a limited resource

- **Limited by physical properties**
- **Like any limited resource**
 - Society benefits when it is allocated and used efficiently

“The key purpose of spectrum management is to maximise the value that society gains from the radio spectrum by allowing as many efficient users as possible while ensuring that the interference between users remains manageable”

Essentials of Modern Spectrum Management – Cave, Doyle, Webb

What is Spectrum Planning?



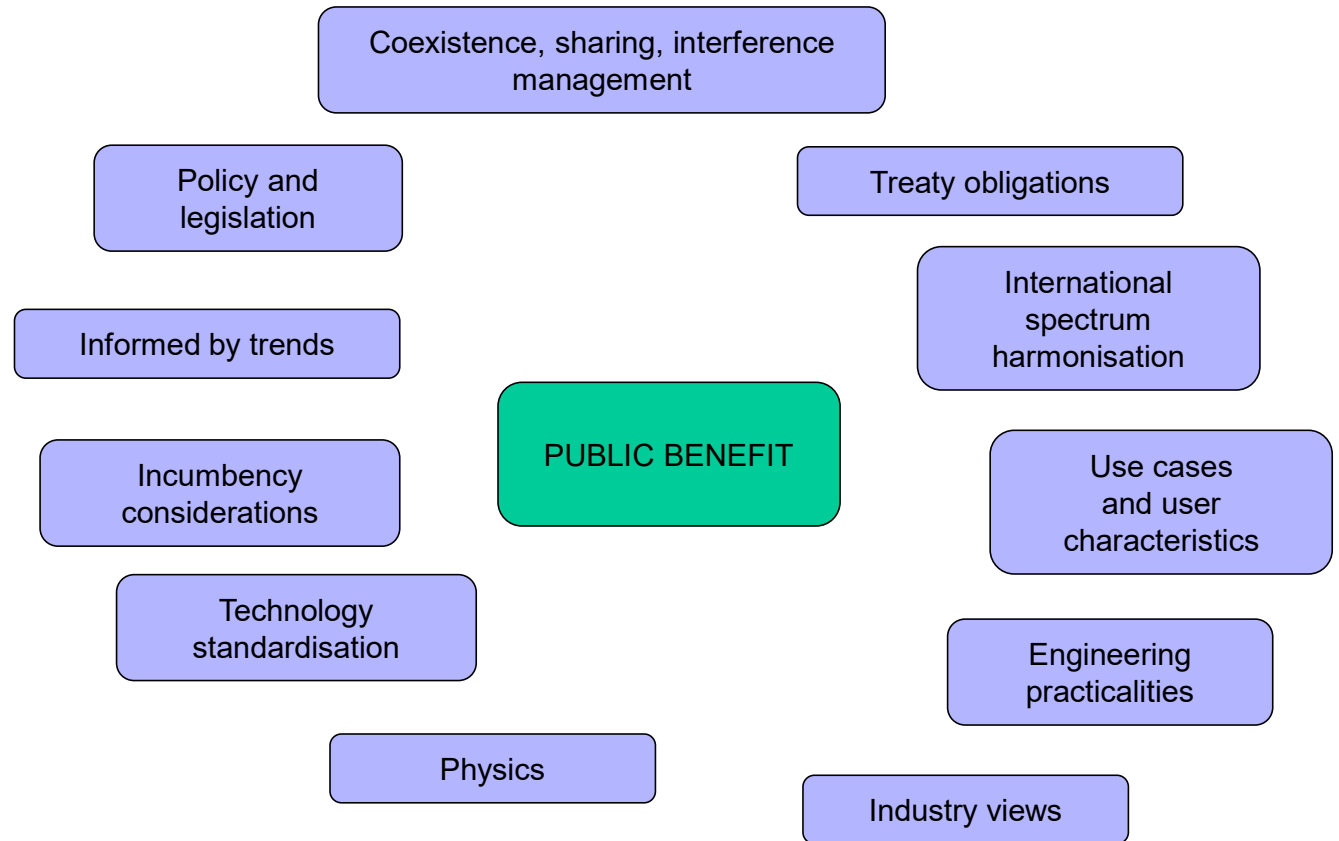
Goals

- Maximise spectrum utility
- Promote long term public interest
- Minimise interference (probability)

Framework

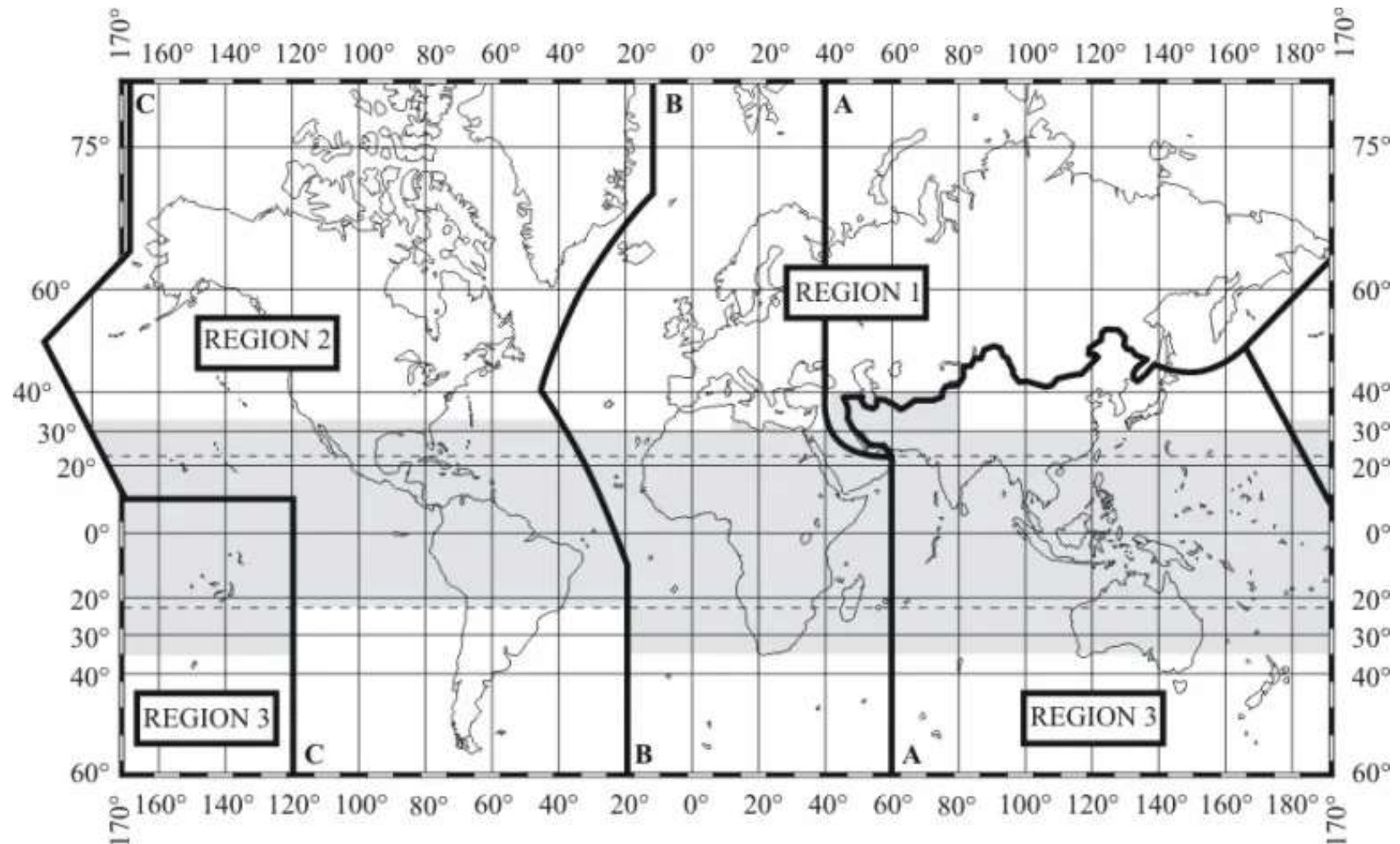
- > Legislation
 - > Radcomms Act
- > Government policy
- > Overarching principles / priorities

Spectrum Planning Ingredients



International Influences






Licence Types

Class
“Unlicensed”
No fee



This block contains three items: a white wireless router with two antennas, the Bluetooth logo in a blue circle, and a black mobile phone.

Apparatus
Up to 20 years
Over-the-counter



This block contains two items: a diagram of two buildings connected by a yellow signal line, and a black mobile phone with a speaker.

Area-wide
Area, not location

Spectrum
Freq. range + geographic area
Auction



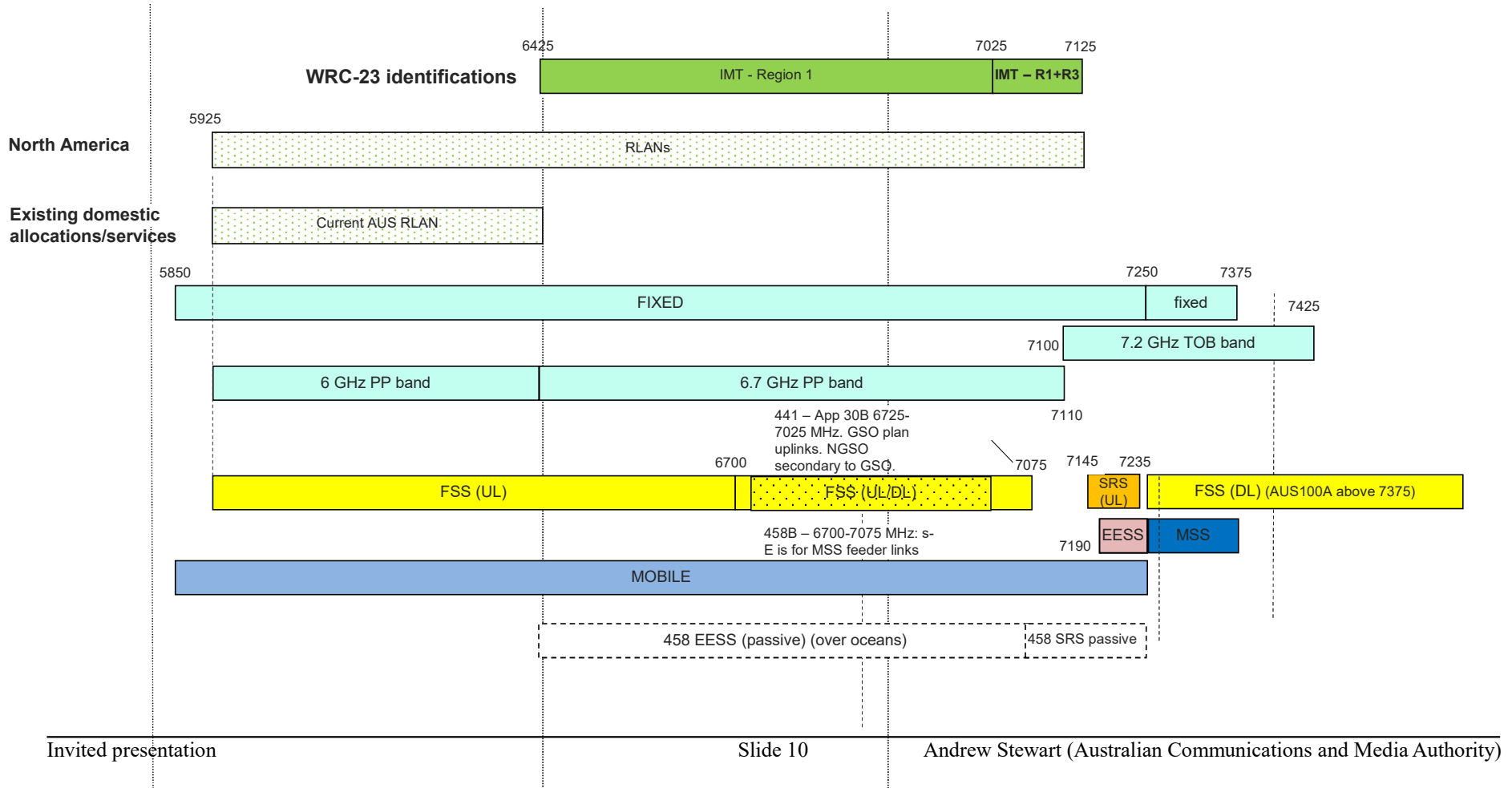
This block contains two items: a white outline map of Australia and a black radio tower with multiple antennas. A grey double-headed arrow labeled "frequency" connects the map and the tower.

How does this apply to Wi-Fi?

- **Brings significant value to society**
- **Is used extensively**
- **Harmonised technology – STANDARDS**
- **Harmonised spectrum arrangements**
- **Can usually share spectrum**
- **Increased use trend**

- **Many other use cases make these claims also!**

Case Study: 6 GHz RLAN



Upper 6 GHz - options

- **Wi-Fi or WA WBB (Wide area wireless broadband)**
- **Consultation:**
 - Workshop February 2024 (attended by 100+ participants)
 - Discussion paper published
 - 28 responses received
 - Outcomes paper published December 2024

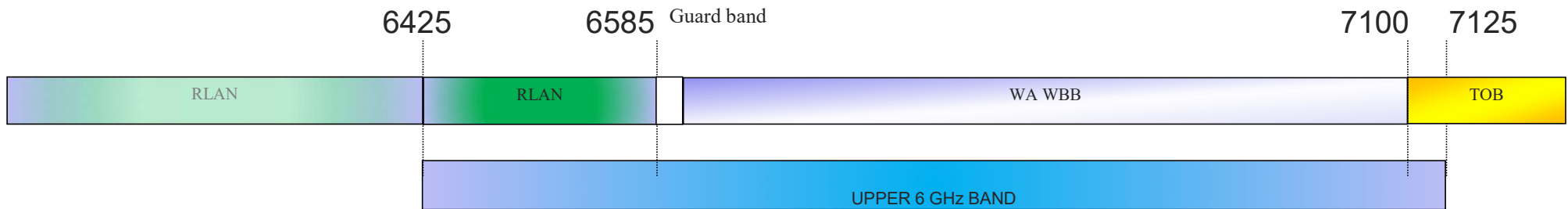
Options (June 2024)

- 1) No change – do nothing
- 2) Some or all RLAN – no WA WBB
- 3) Some or all IMT – no RLAN
- 4) Both RLAN and IMT

Outcomes (December 2024)

- 6425-6585 MHz for RLAN
- 6585-7100 MHz for WA WBB **if this is the trend internationally**

Upper 6 GHz outcome



Thank you

Questions