



Australian Mobile
Telecommunications
Association

International Regulatory Developments: What does it mean for us?



ACMA Radcomms 2024
Louise Hyland – CEO
24 October 2024



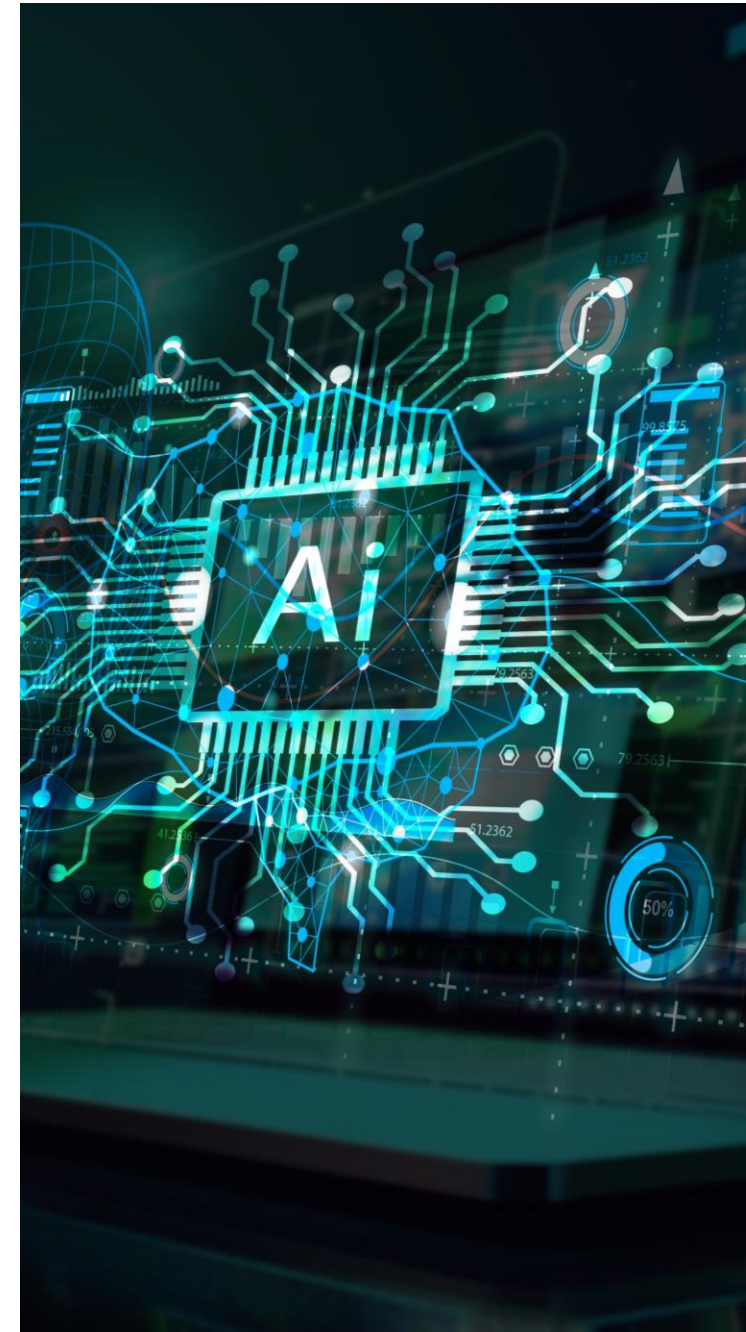
OVERVIEW

International Regulatory Developments:

- Context – the Importance of Mobile Connectivity and the demand for data
- International Regulation and Harmonisation
- IMT identification
- World Radiocommunications Conferences:
 - WRC-23 - outcomes
 - WRC-27 – what's next

Mobile Connectivity for Emerging Technologies

- Mobile connectivity is essential for AI and quantum technologies.
- AI applications, such as autonomous vehicles and smart cities, rely on low-latency, high-bandwidth networks to process and analyse data in real time.
- For quantum technologies, mobile networks will play a key role in secure communication and cloud-based quantum computing.
- Data requirements for AI are rapidly increasing. **By 2025, global data consumption is expected to reach 181 zettabytes annually.**
- **To give you a sense of scale – one zettabyte is equal to a billion terabytes or a trillion gigabytes.** Global IP traffic first exceeded one zettabyte in 2016, which was driven through video traffic.
- Surge in data generation means that industry needs sufficient, quality spectrum and resilient network infrastructure to handle the load.

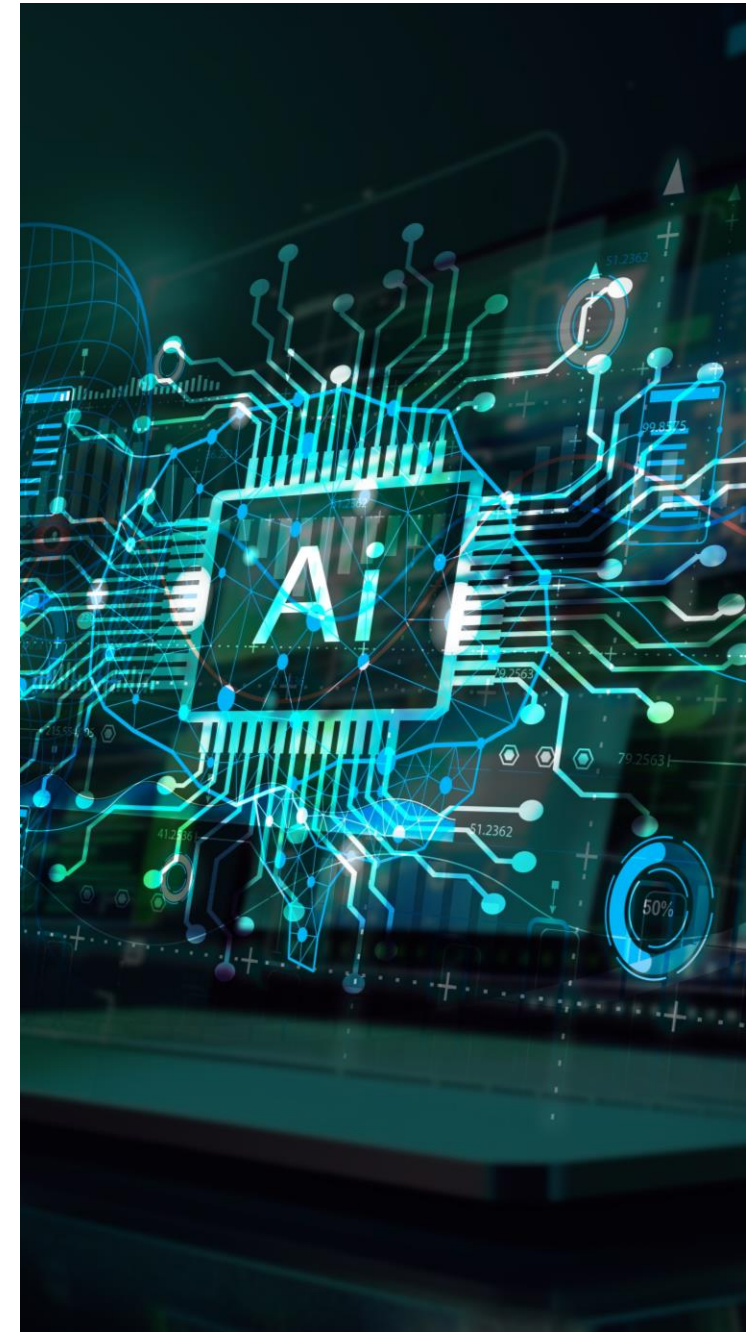


What do International Regulatory Obligations mean for the mobile industry?

1. International regulation and harmonisation

- **International standardisation:** Included in the technical specifications of 3GPP*
- **International harmonisation** – allows for economies of scale in device manufacturing (for radio access hardware and handsets); reduces cross-border interference; facilitates international roaming.
- **Increases confidence and certainty** for MNOs, equipment vendors and manufacturers
- **Ecosystem certainty** = investment in network infrastructure, devices and services

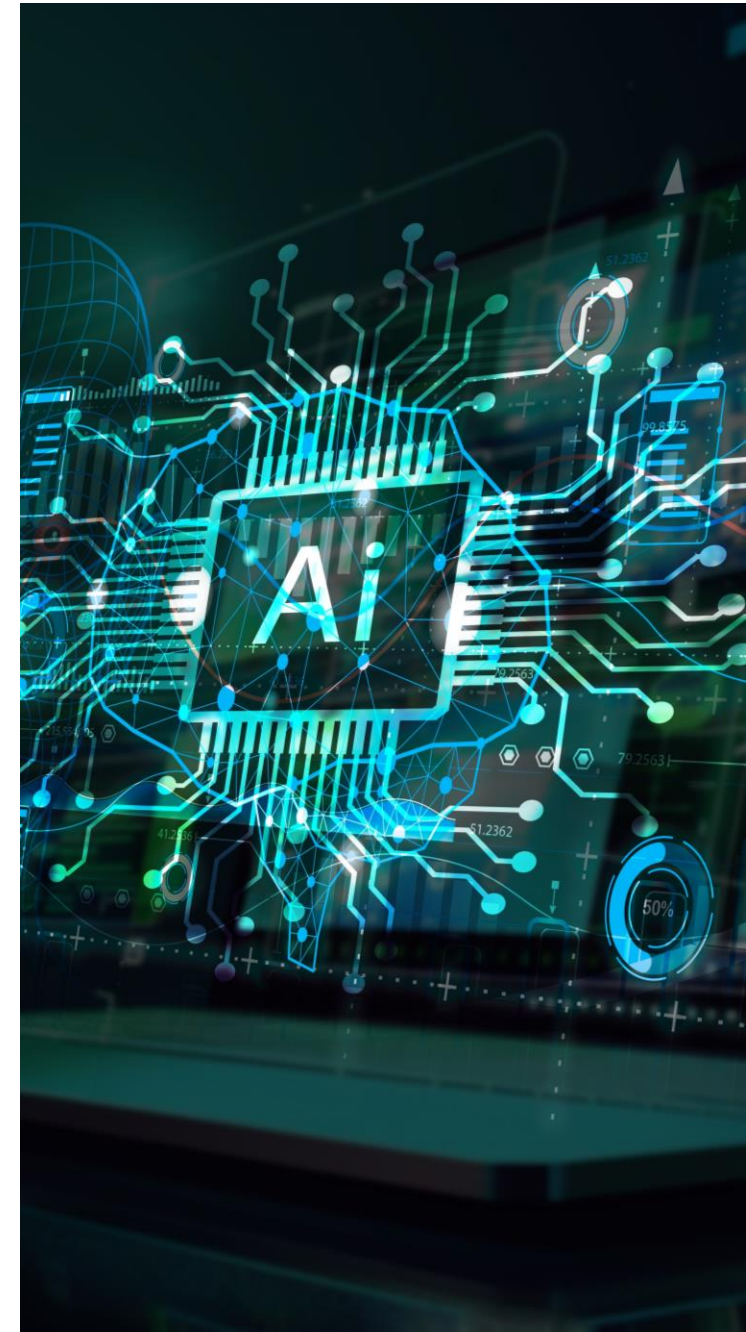
*3GPP (3rd Generation Partnership Project) is a collaboration of 7 telecommunications standards organisations to define global standards for mobile technologies



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2. IMT identification

- ITU's World Radiocommunications Conferences (WRCs)
- IMT = International Mobile Telecommunications – designated for terrestrial mobile
- IMT Identification:
 - has been pivotal for the mobile community for decades
 - **Sends a strong signal (!) to industry and regulators that:**
 - **International community has seriously considered compatibility issues**
 - Proponents are **confident that the future emergence of device ecosystems is possible**
 - The frequency bands used today to deliver quality mobile broadband (MBB) services to Australians have been identified for IMT at previous WRCs



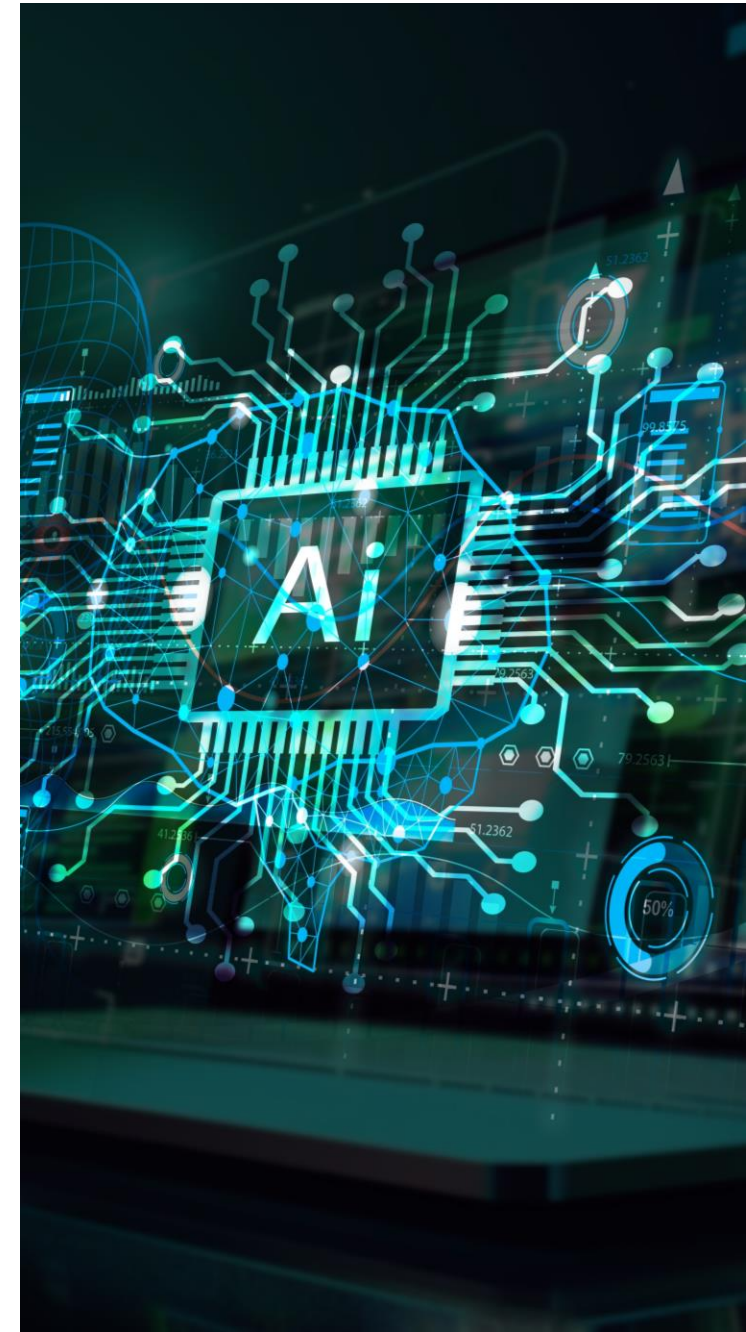
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3. Outcomes of WRC-23 (Nov 2023 – UAE)

ITU's World Radiocommunications Conferences (WRCs)

Key focus: Upper 6GHz (6425-7125 MHz) –presents the best option for additional mid-band spectrum to satisfy continued growth in mobile data consumption through 2030

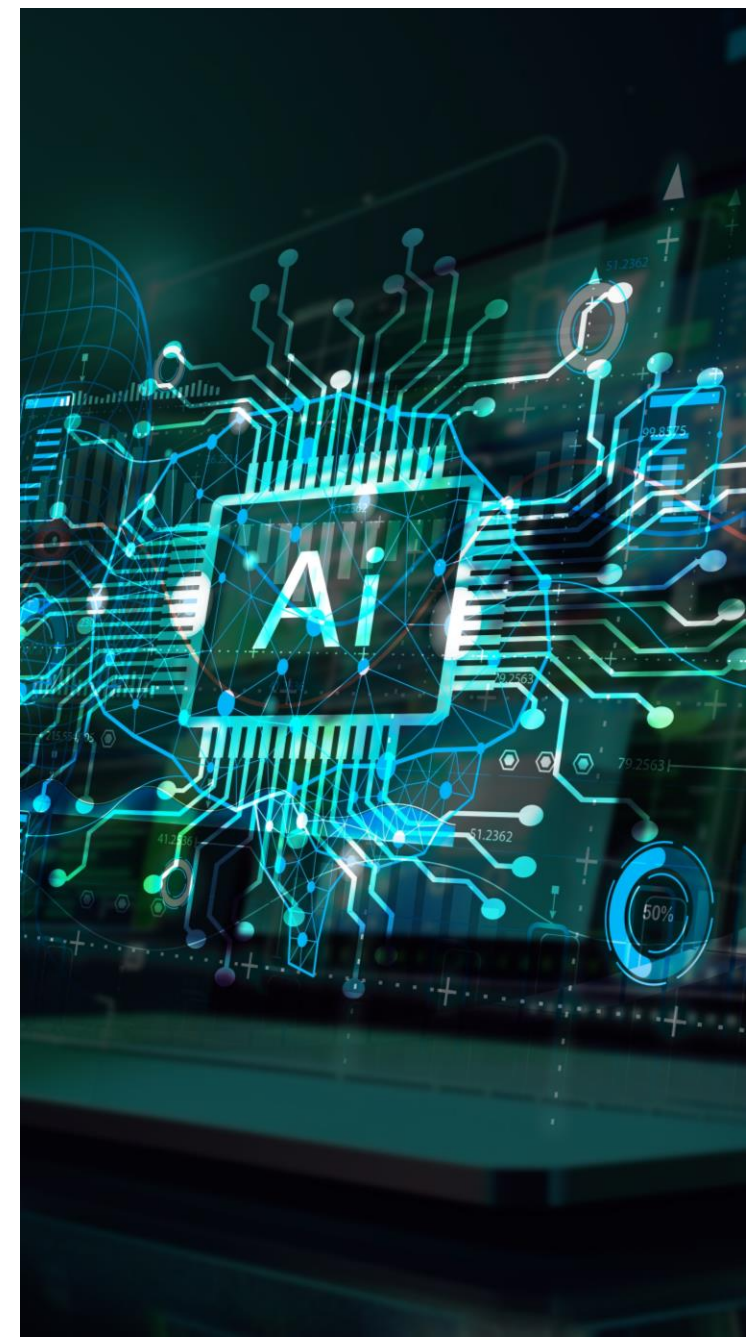
- **Highlight: Upper 6GHz identified for IMT all three regions to varying degrees – by regional identification or country-based footnotes**
- Region 1 (EMEA) – entire band identified for IMT
- Regions 2/3 – country-based footnotes were created to identify the entire band in certain countries:
 - Region 2 (Americas) – Mexico and Brazil
 - Region 3 (APAC) – Myanmar Laos and Cambodia
 - Region 3 (APAC) – Upper 100 MHz (7025-7125 MHz) was identified across whole region for IMT



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3. Outcomes of WRC-23 (Nov 2023 – UAE)

- **Upper 6GHz: Competing demands for a scarce resource**
- E.g. WiFi community – no urgent need for spectrum. WiFi can deliver 0.5-1.0 Gbps with existing spectrum
- (Note - Lower 6GHz band – 5925-6425 MHz is already allocated to Wi-Fi)
- Mobile industry – increasing demand for spectrum:
 - **Coleago study (2022) commissioned by AMTA showed that public mobile networks need c. additional 400-700 MHz in larger metro areas**
 - GSMA estimate a need for a total of 2 GHz of mid-band spectrum for MBB in each country
- **600 MHz band – identified for IMT in several countries in Region 1 (EMEA)**
 - AMTA interested in this band as it **could provide additional capacity in rural/remote** areas in the future – requires a re-stacking of broadcast TV spectrum



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4. What's next? WRC-27

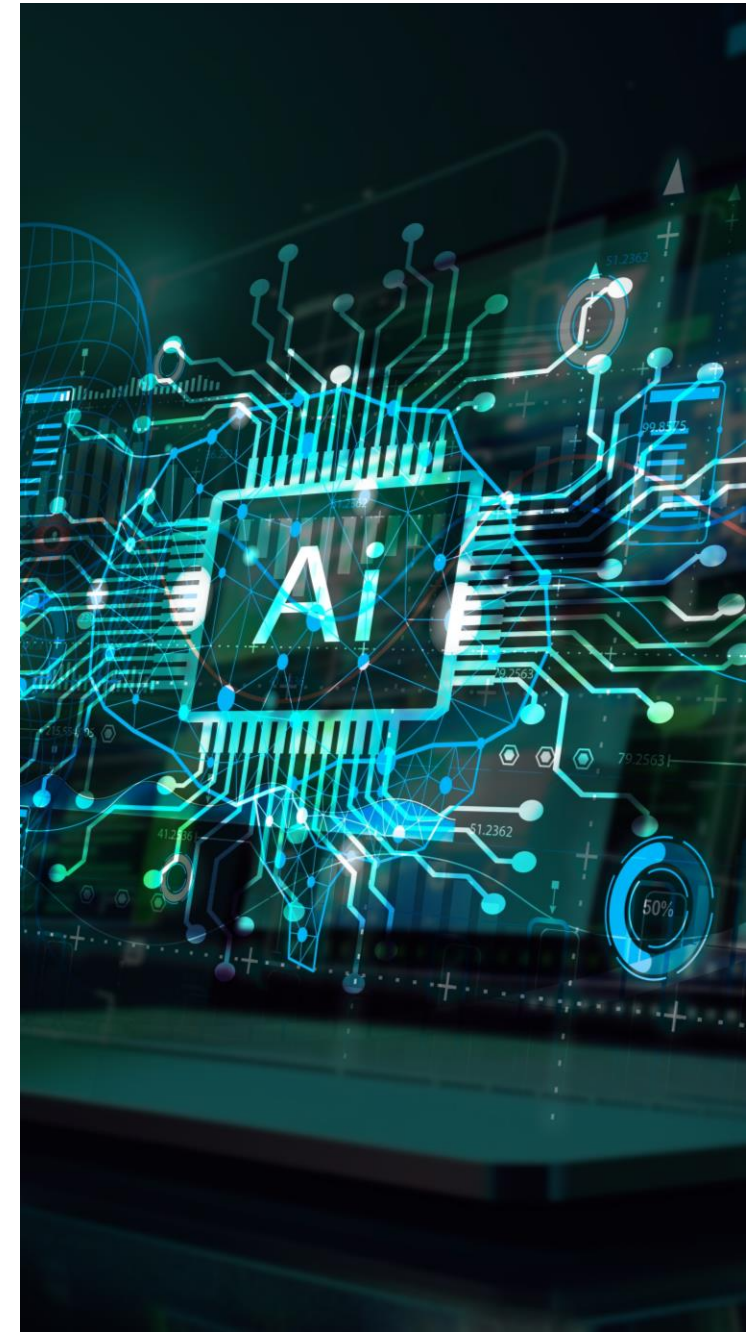
- Agenda Item 1.7 – considering :

- 7125-8400 MHz
- 14.8-15.35 GHz
- 4.4-4.8 GHz



But: Challenges with sharing with incumbent services esp. military (terrestrial, sat. and radar ops)

- This is why the Upper 6GHz band is critical for the mobile industry

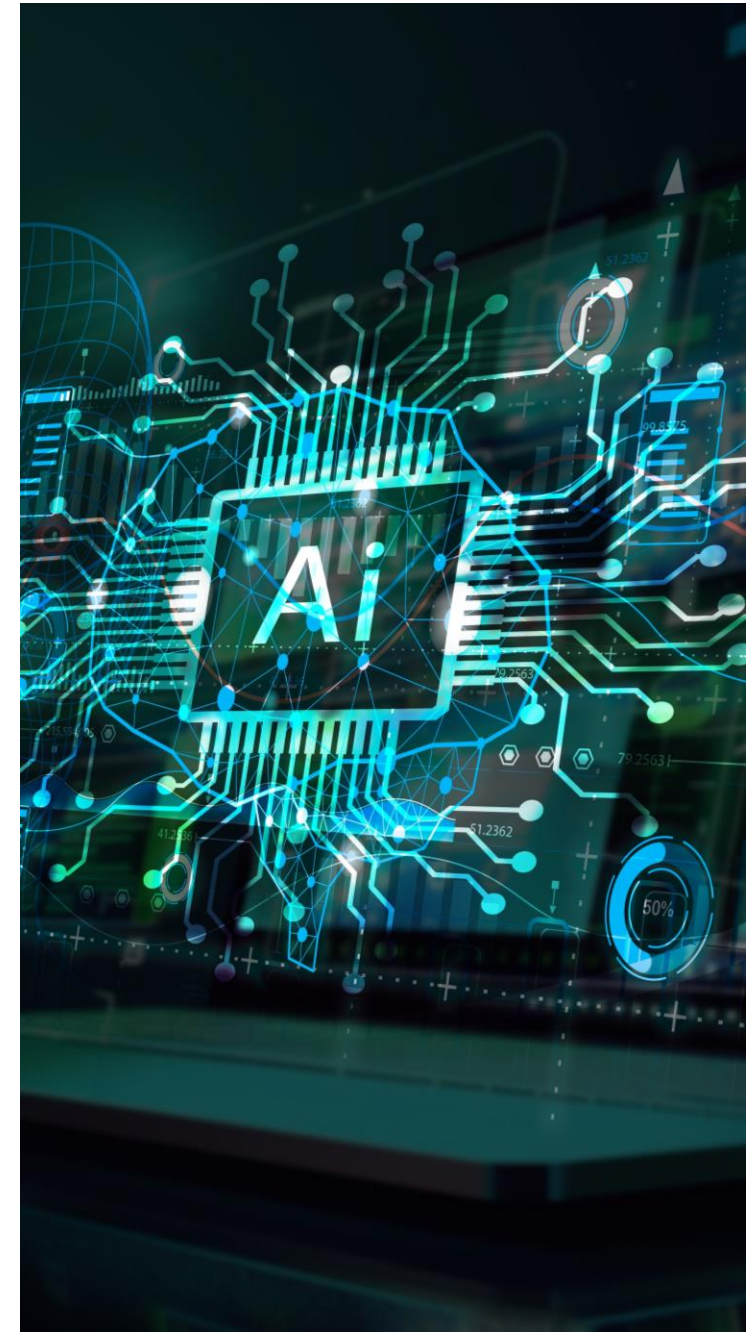


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4. What's next? WRC-27 (cont'd)

- **Agenda Item 1..13 and Satellite DTM, considering:**

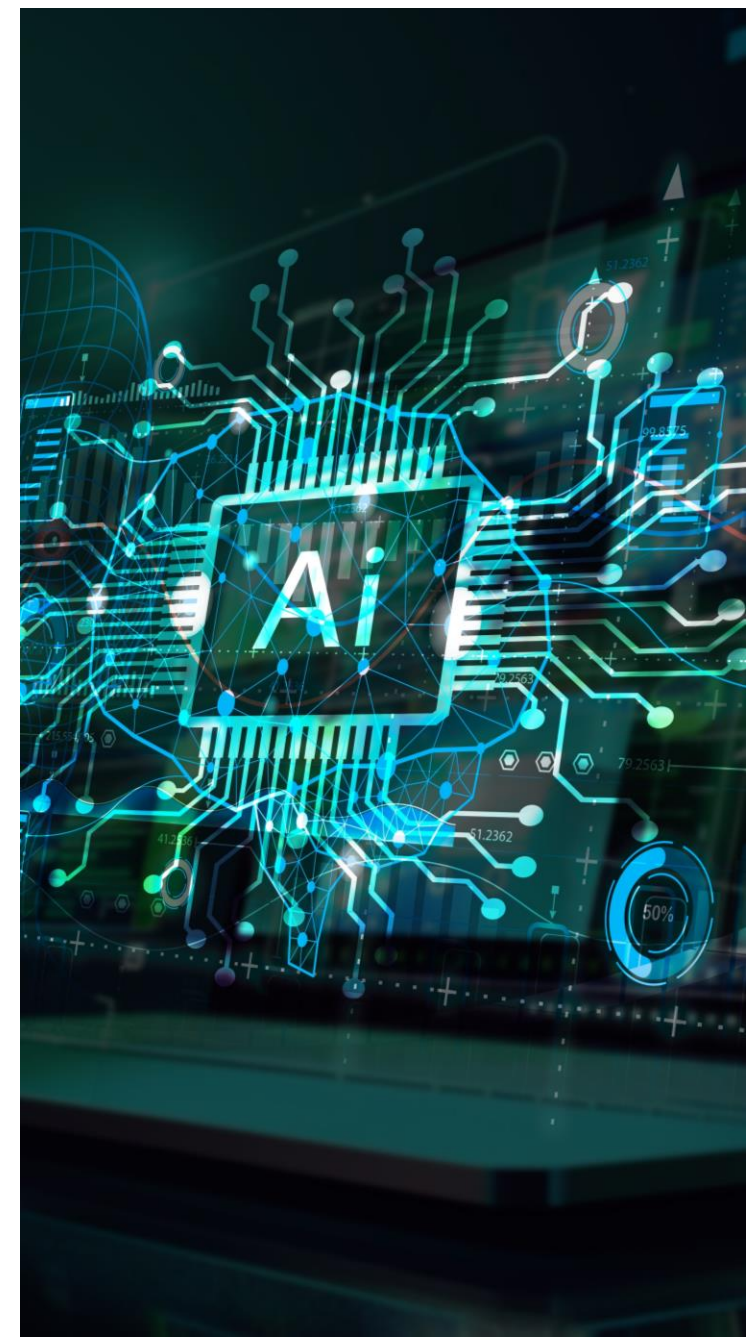
- *“possible new allocations to mobile-satellite service for direct connectivity b/n space stations and IMT user equipment to complement terrestrial IMT network coverage”*
- **Now called “IMT Direct-to-Mobile/IMT-DTM”**
- DTM will operate under Article 4.4 of Radio Regs: no interference/no protection
- Exciting development for the mobile industry (esp. Australia)
- **ACMA is commended for its decision to enable IMT-DTM to be authorised by existing spectrum licences**



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5. In Closing:

- **AMTA encourages the Department and the ACMA to actively advocate for Australia's national interests at the WRC – even if this means slight deviations from official processes (e.g. adding Australia's name to country-based IMT identification footnotes)**
- **AMTA commends the ACMA for creating the International Radiocommunications Strategy and Liaison Section:**
 - **Appointing experts to lead and be part of that team (Chris Hose/David Goggin).**
 - **Given the importance and high profile of the WRC, it is crucial for the ACMA and Government to be well-equipped with such great technical and regulatory expertise – and to be appropriately resourced.**





In closing – key takeaways

1

International standardisation and harmonisation is important to ecosystem certainty – and future investment

2

Upper 6GHz band is critical mid-band spectrum for IMT to meet consumer data demand through 2030

3

AMTA commends ACMA for creating the International Radiocommunications Strategy and Liaison Section and encourages government to actively advocate Australia's interests at WRC



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THANK YOU

