

Spectrum Roadmap for the Future of 5G and beyond in India

2022-12-06



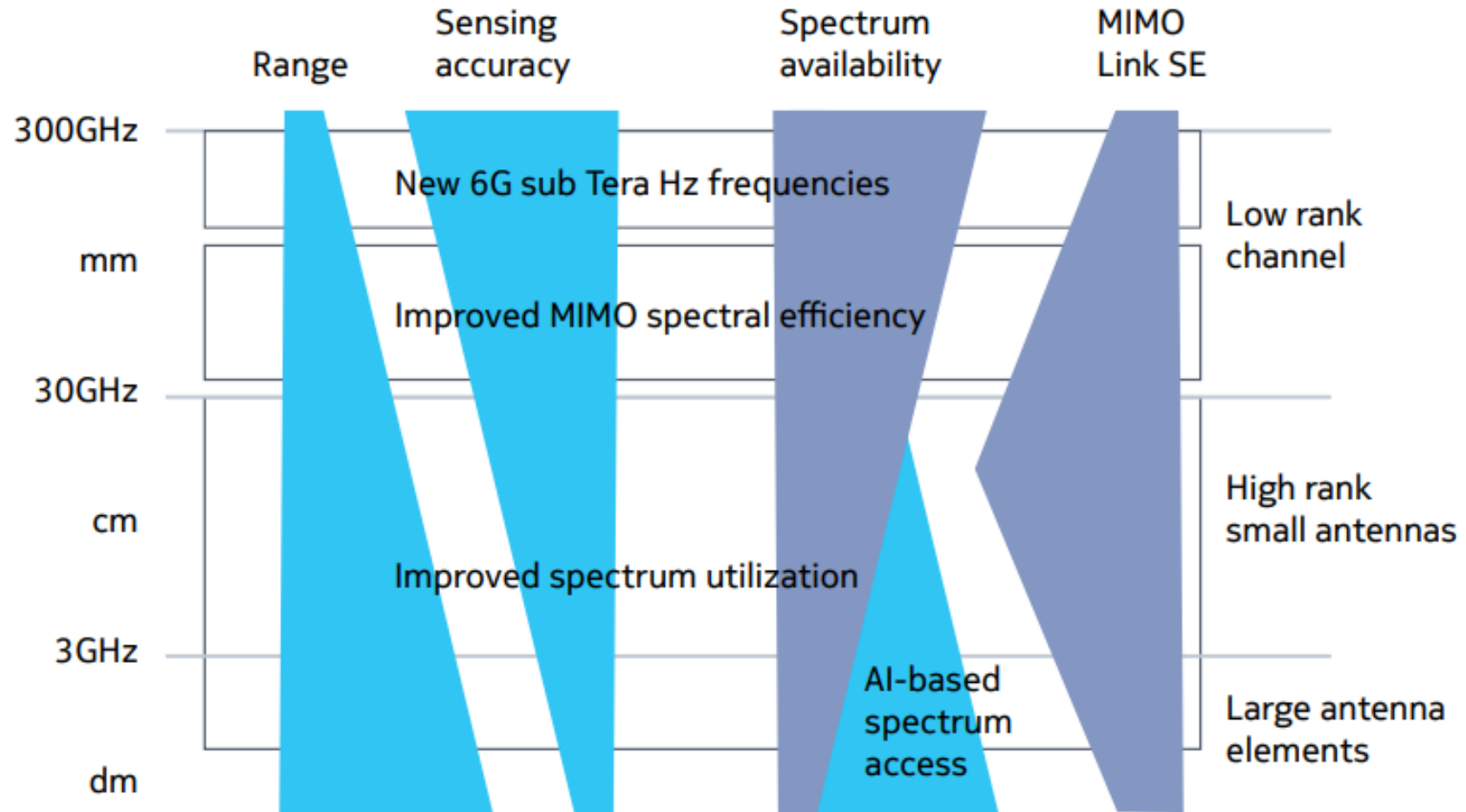
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About 5G India Forum

- The 5G India Forum (5GIF) is, an industry led initiative
 - to enable synergizing the national efforts in the telecom space
 - play a significant role in shaping the strategic, commercial, and regulatory development of the ecosystem for 5G and next generation 3GPP based technologies in India.

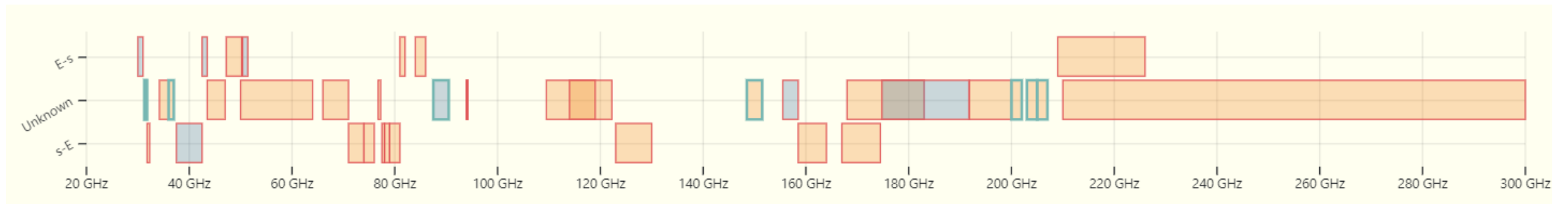
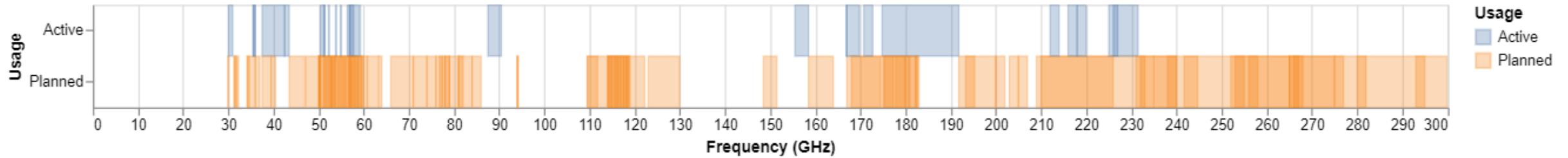
- 5GIF has been at the forefront of Industry activities
 - We have also been actively contributing to the ITU-R work and are a registered IMT evaluation group

Spectrum Options for 6G



Spectrum Usage Data in India

ISRO current and planned usage of spectrum from 30-300 GHz based on information provided to TIG-6G

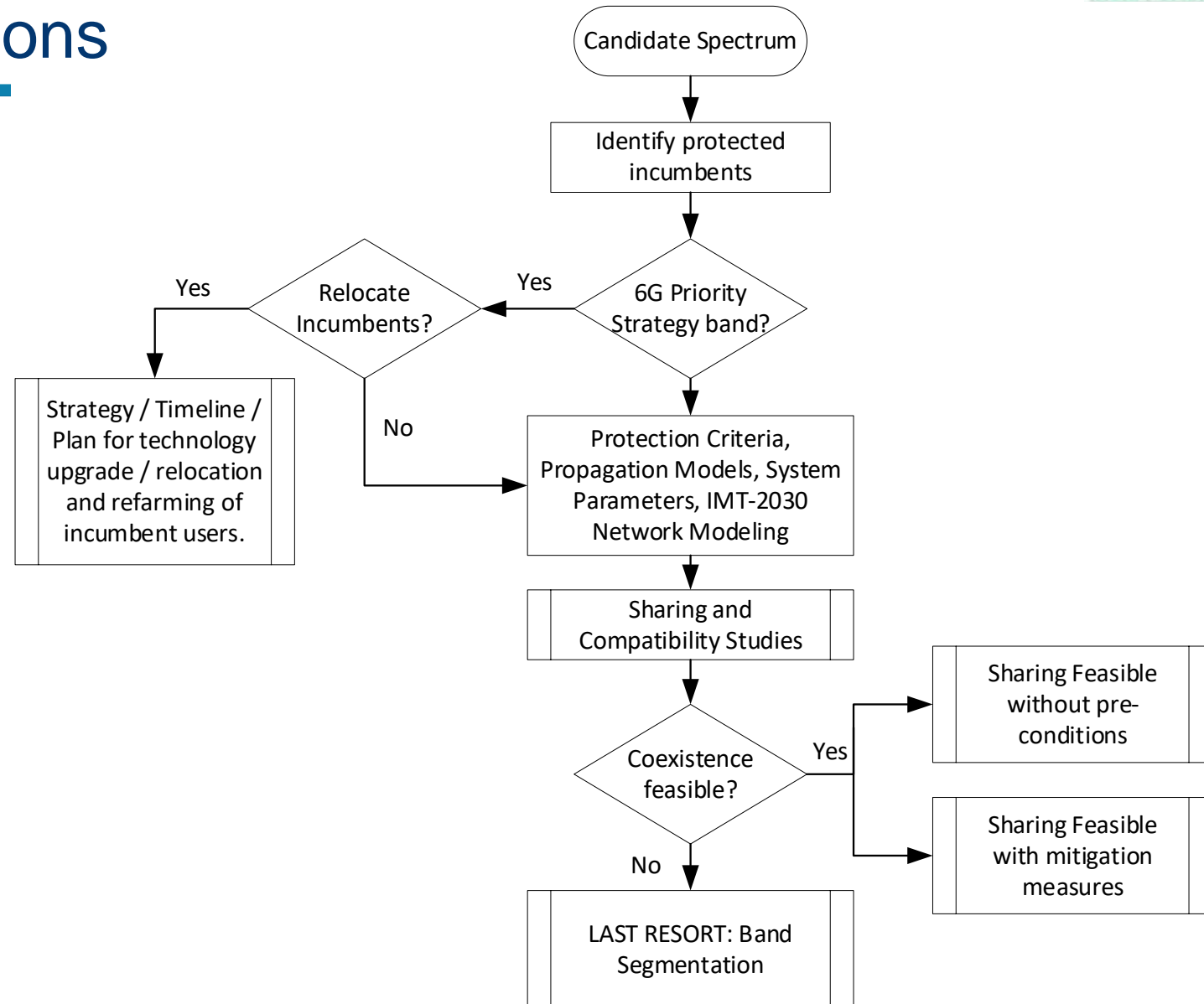


Source: 5GIF charts based on ISRO inputs to TIG-6G Spectrum

New Spectrum Considerations

Examples of strategic initiatives form the world

- ▶ USA 5G FAST program
- ▶ 5G Frontier



Key Recommendations

1. Spectrum range in Sub-1 GHz, 7-24 GHz and above 24 GHz (e.g., 30-300GHz, THz) should be made available for experiment license.
2. Global harmonization of the 6G spectrum.
3. Identify quantum of spectrum required for 6G based on traffic, user density, 6G applications and achievable spectral efficiency.
4. Develop system model for sharing study considering key technology components, deployment scenarios, system parameters, channel model, propagation model and updated protection requirements.
5. Establish sharing study group by involving the stakeholders. Timelines of deliverables should be harmonized globally while keeping focus on national and regional requirements.

