

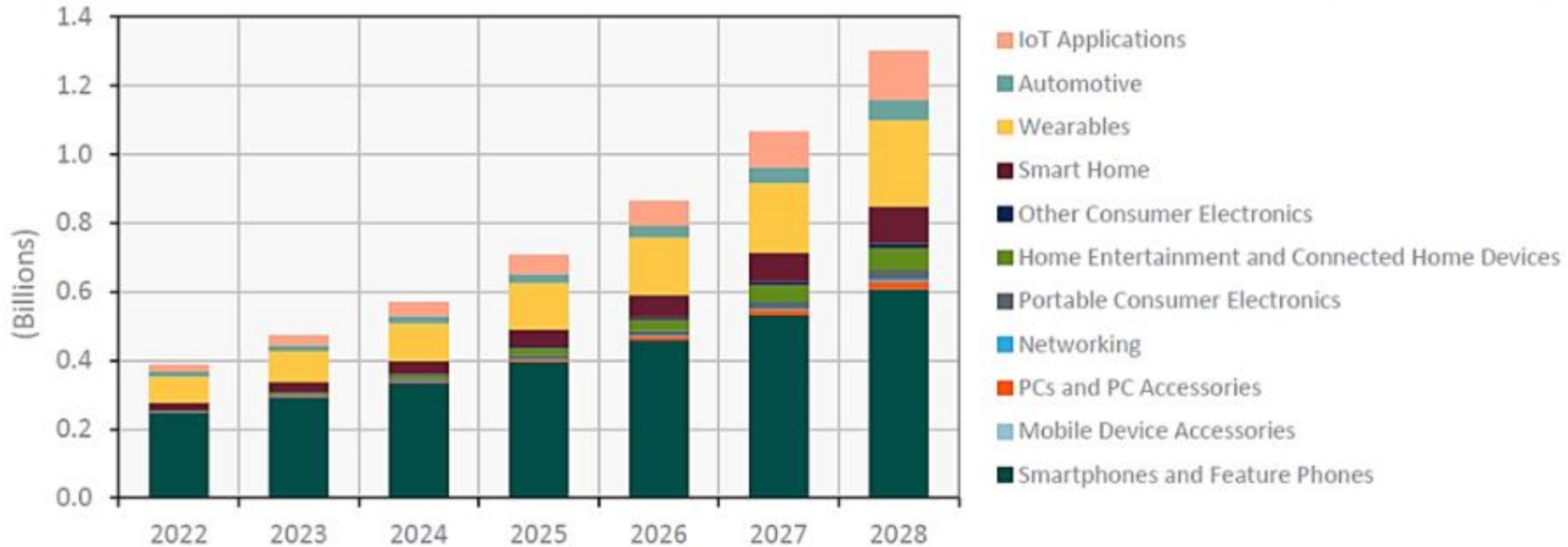
UWB: Sharing In The Mid-Band Ecosystem

October 1, 2024

More Than a Billion UWB Devices Used Everyday

UWB-Enabled Device Shipments World Markets: 2022 to 2028

(Source: ABI Research)



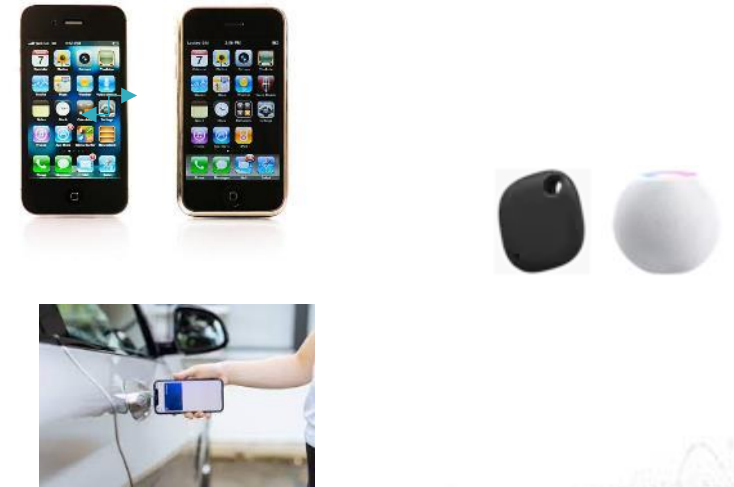
Power And Range Hierarchy Of Spectrum Users

	GPS	4G-LTE 5G	Wi-Fi	Bluetooth BLE	UWB	RFID	NFC
Wide Area Outdoor Locating (4.5 m)	✓						
Wide Area High-Speed Data Communications		✓					
Wide Precision Wide Area Locating and Tracking		✓					
Local Area High-Speed Data Communications			✓				
Personal Area Low Power Data Communications				✓	✓		
Secure Access and Precision Tracking (1 cm)					✓		
Ultra-Low Latency, High Dynamic Range Audio					✓		
Passive Portal Tracking						✓	
Very Short Range (Near Field) Data Communications							✓

Unique High-Volume Applications for UWB

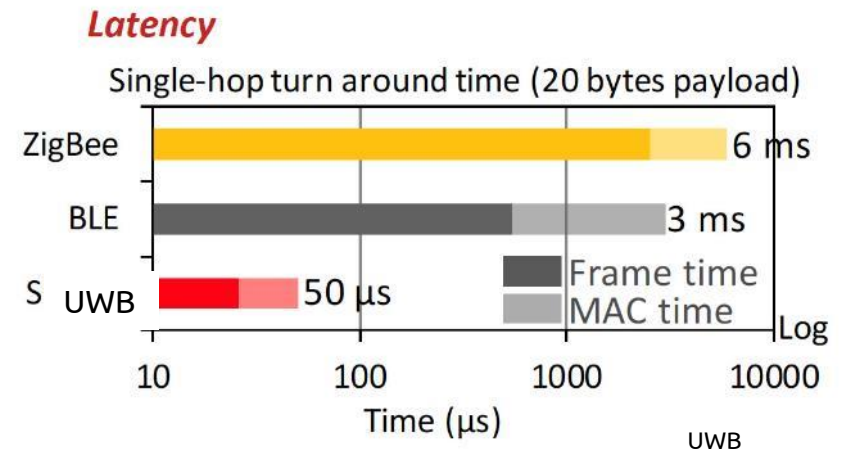
- Smartphones Ecosystems

- AirDrop
- AirTags/Galaxy SmartTags
- Secure Digital Key
 - Phone or Key fob

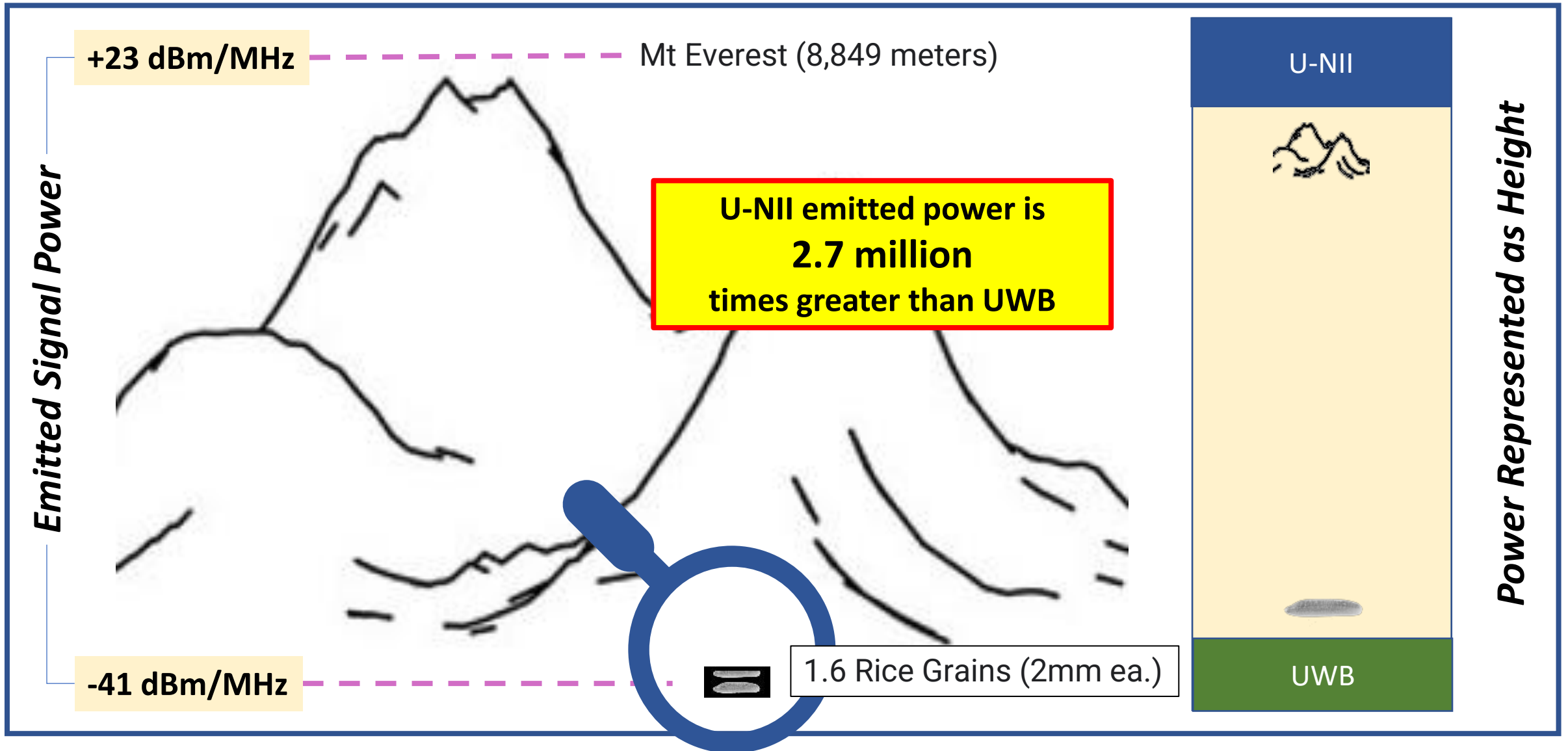


- Next Gen Audio

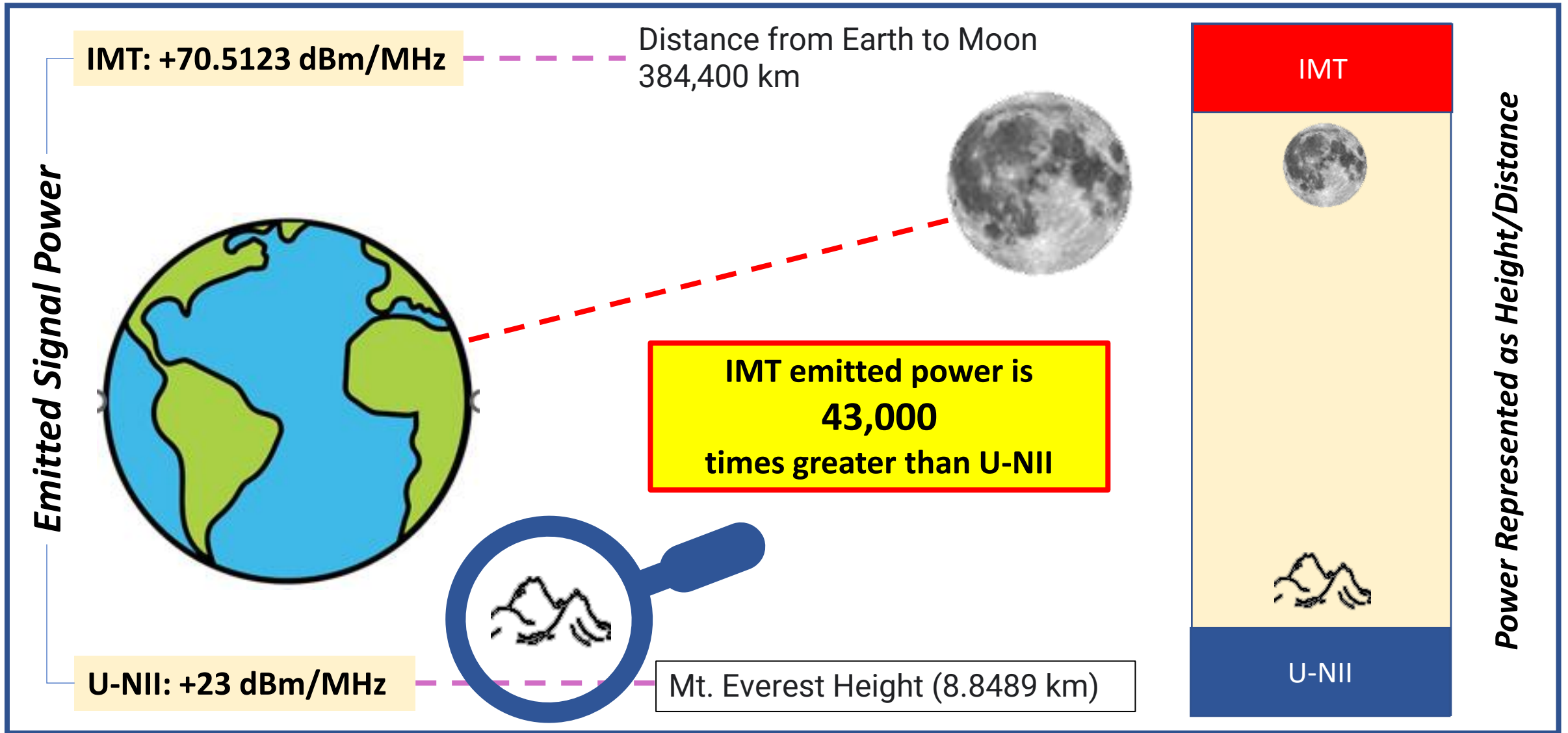
- Lossless Wireless - no compression
- Ultra-low latency



UWB Tx Compared to U-NII



U-NII Tx Compared to IMT



**Better And More Efficient Use Of
Spectrum Requires
Reducing The Interference Footprint,
Including Lower Power.**

Thank You