The Future of Connectivity

Fixed Broadband Wireless, TVWS, Wi-Fi 6 and IoT
5G as a Fixed Wireless Technology

- High data demand and Subscriber Count PtMP Network

Economies of Scale Cost per Unit

1. Radio should support wide-band frequencies in order to eliminate the need for sub-band specific SKUs.

- Economic Model – Shared Service to Reduce ARPU

- High frequencies of 24-28GHz, 60GHz (PtMP) and 70/80GHz.

5G Backhaul solutions in Fixed Broadband Wireless to replace/support Fibre
**Challenges:** Interference, Density, Subscription per Base Station

**Advantages:** Time to market, Rapid Deployment, ROI for Enterprises, reduced cost per subscriber.

**Wi-Fi 6 Spin-Off: Cost Effective PtMP for Residential and SME’s**

- **802.11b** releases, featuring wireless speeds of 11Mbps
  - **1999**
- **802.11g** lets consumers stream music at 54Mbps
  - **2003**
- **802.11n** boosts range and throughput for video streaming
  - **2009**
- **802.11ac** breaks the gigabit per second barrier
  - **2012**
- **802.11 next-gen ac** introduced – MU-MIMO
  - **2015**
- **Wi-Fi 6** provides massive MU-MIMO upstream and Downstream – higher capacity and better interference mitigation
  - **2019**

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**MiRO**

**Wireless IP Convergence**

- Wireless
- Networking
- VoIP
- IP Video
How Wi-Fi 6 will benefit Fixed Broadband Wireless

Massive MU-MIMO: Upstream and Downstream
- Higher Capacity per subscriber
- More Subscribers per Access Point
- Spectrum Efficiency

Support for low powered IoT devices on Fixed Wireless
- Utilities IoT readers – automatically updates per billing cycle to local municipality
- Battery operated devices – less ‘wake up’ requests from AP

Expectation on Implementation
- By 2024/25 we should see this implemented in Fixed Broadband Wireless Devices

2024/25
TVWS Frequencies in Wireless Applications:

- Lower capacity requirement – especially as a PtMP backhaul solution to remote / rural locations
- Less stringent on clear line of sight as the lower frequency has better propagation
- Greater distances can be covered i.e. up to 50km with current solutions being offered by Vendors
How MiRO will distribute 5G and Wi-Fi 6 solutions

- Local Stock Holding
- Partner with leading vendors
- Pre-Sales Solution Planning and Sales
- Logistics and Distribution across all metros
- Training of Customers and Internal Staff
- RMA and Warranty Support
- After Sales Technical Support and On-Site Technical Support
- Training of Customers and Internal Staff

MiRO WIRELESS IP CONVERGENCE