

# 5G TESTS & PILOTS

The First Collaborative Webinar on Hot 5G Use Cases



22 SEPTEMBER 2021  
1100-1300 CET, 1430-1630 IST



# TSDSI-5GIA Webinar on 5G Pilots and Trials

## 5G Trials and Pilots Framework in India

By

Ms Neha Satak

Founder & CEO Astrome Technologies Pvt  
Ltd

< File Name >

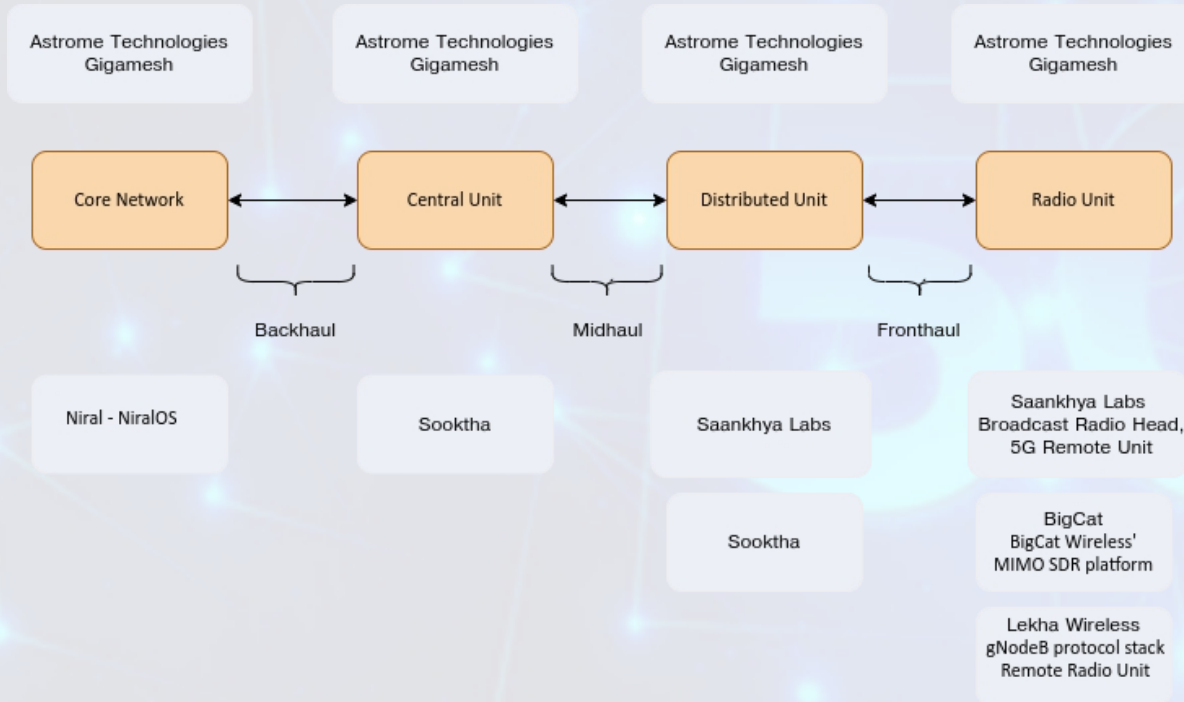
# Indian Government on 5G Spectrum Allocation

- The Department of Telecommunications (DoT) has allotted spectrum for 5G trial in
  - Mid-band (3.2 GHz to 3.67 GHz),
  - Millimetre wave band (24.25 GHz to 28.5 GHz) and
  - Sub-Gigahertz band (700 MHz).
- The Telecom Service Providers will also be permitted to use their existing spectrum (800 MHz, 900 MHz, 1800 MHz and 2500 MHz) for conducting 5G trials.
- India plans to implement the localized version of 5G, the 5Gi, which works on bands lower than the range of 5G bands to offer a wider coverage area with every 5G transmitter.

# Operators Trial Status

- Airtel 5G trial ( Spectrum allocated - 3500 MHz, 28 GHz and 700 MHz)
  - Airtel tested 5G over a live network in Hyderabad using liberalised spectrum in 1800 MHz band.
  - Airtel recorded throughput of over 1 Gbps speed in Gurgaon(3500 Mhz Band) (Partnered with Ericsson)
  - Airtel recorded 1.2Gbps with ultra-low latency in Mumbai. (Used Nokia's 5G gear)
- Vodafone-Idea 5G trial (Spectrum allocated - 26Ghz, 3.5Ghz)
  - 1.5 Gbps in the mid-band spectrum in Gandhinagar and Pune. (Partnered with Nokia and Ericsson)
  - In a lab set-up, peak speed in excess of 3.7 Gbps with very low latency on the mmWave (millimetre wave) spectrum band is claimed to be recorded.
- Jio 5G Trial.
  - Jio recorded 1 Gbps in Mumbai.

# Indian 5G Startups in 5G network



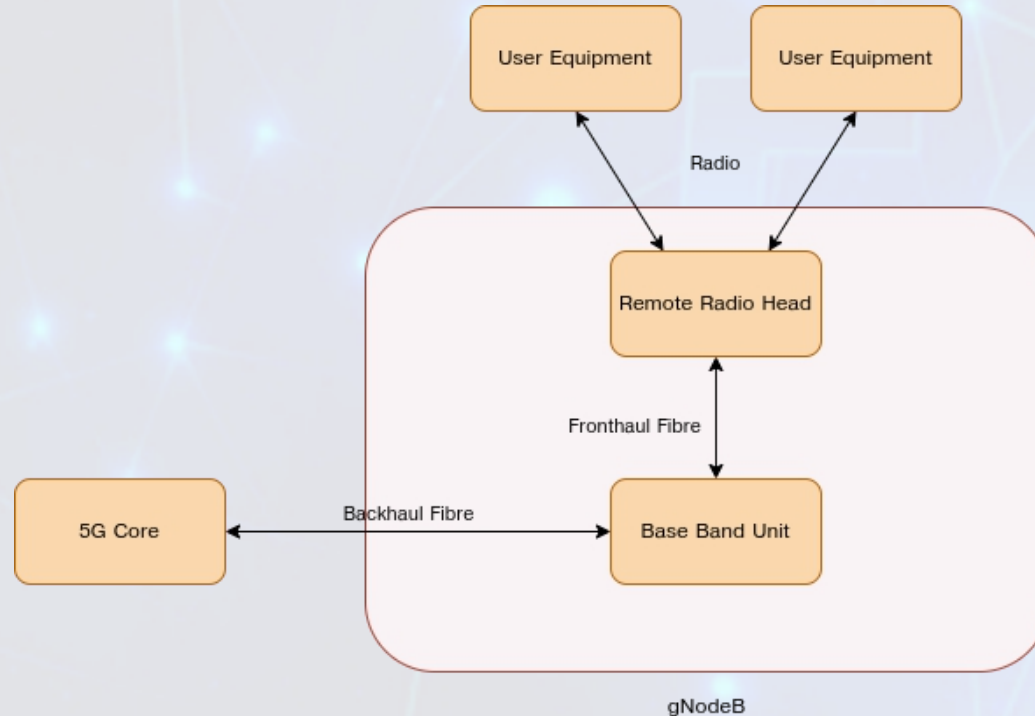
# 5G Testbed Project

This project is creating a 5G Prototype and Testing Platform which has been developed and funded by DoT. The 5G Testbed project involves top Indian institutes i.e IISc Bangalore, IITM, CEWiT, IITD, IITK, IITH and SAMEER

Major goals of 5G Testbed:

- Encourage existing telecom product startups in India.
- Increase R&D Capability to develop 5G solution to cater to the needs of Indian Market.
- Increase India's participation in global forums (3GPP, ITU, IEEE) - present test results for Indian use cases.

# 5G Testbed Project



# 5G Hackathon

DOT launched '5G Hackathon' in association with a number of governments, academia & industry stakeholders:

- To identify and promote applications relevant to India.
- Problem statements from more than 10 categories like Healthcare, Cyber Security, AgriTech, etc. to demonstrate the use of 5G.
- Winners of the various phases will share a total prize pool of INR 2.5 Crores and an opportunity to make their application market ready with the support of DoT, MeitY and a number of leading industry, academia, Telcos/OEMs.



# Astrome's Product



Multiple Beams simultaneously

**World's First Multi-Beam  
E-band radio**

[www.astrome.co](http://www.astrome.co)

© 2021 Astrome Technologies Private Limited. Proprietary and Confidential.



Operates in E-band. 10GHz spectrum available and is light-licensed



Modular Design to easily scale in capacity and links



Proprietary Algorithms enable Automatic Link Alignment and Dynamic Power Allocation



Scalable capacity (100+Gbps) enabled by high frequency re-use



Suitable both for long-range (10+ km) and for short-range (urban)



Seamless integration using standard interfaces

# Astrome Involvement Field Trials

- Simultaneous Multi-Beam data transfer at 1Gbps data rate on each link.
- Integrated field trials with Cisco devices and eventually collaborate with other startups.

# Thank You

Neha Satak

neha@astrome.co