



Mobile & Wireless Roundup #68 (see original on [LinkedIn!](#))

By Zahid Ghadialy

Welcome to the 68th edition of this newsletter. Some of you may be old enough to remember when IMT-2000, more popularly known as 3G, was rolled out, the main motivation was video calls. I remember vividly that in the beginning operators would not officially sell any 3G mobile unless there was a front and back camera. Now one has to remember that these cameras were something like 0.1 MP resolution.

The camera modules were also expensive for the device manufacturers. Some handset makers overcame the issue of putting multiple cameras by creating a rotating camera (examples being LG [K8000](#) and [Samsung SCH-X590](#)). Then Nokia came up with [Nokia 7600](#), a unique radical design with only a single camera.

By this time the operators had started to realise that users don't care much video calling but love to use their phones as cameras and video recorders. Over the years the cameras and video recording functionality of the phones have steadily improved. They have gotten so good that unless you are a professional photographer or videographer you don't care about carrying an additional gadget. The connectivity is an added bonus to be able to upload your memories or any other thing that you think is important, instantaneously.

Back in the 1980's, as a young person I used to read a magazine called '2001'. The magazine predicted a lot of nonsense like we will have flying cars by the year 2000, we will power them with water, we would have started solving all the issues plaguing us, we would be safer, cleverer, etc. When I look at how things are going today, in 2023, it still seems as problematic as the 1980's, only that we have a lot more technology and gadgets.

One of the things that makes me proud as someone directly involved with the mobile technology is that we were able to create the whole ecosystem to be able to bring the latest information to people at an amazing speed. The fact that you can record high-resolution images and videos and

share it with people is allowing us to not just record good memories but also the ugly side, the war crimes and anything else that shouldn't be happening. I say we give ourselves a pat on the back for being enablers of truth, happiness and justice for what we have achieved. Our task isn't done though, lot of challenges still need to be overcome. Maybe we will revisit this topic once we know what 6G will look like.

For those of you who don't know me, I am a technologist with over 24 years' experience in mobile wireless technology, currently working as an independent advisor, analyst, consultant and a trainer. This newsletter is a summary of my posts and others news that caught my attention since the last newsletter.



New White Paper

Private 5G for Enterprises Becoming Real

Download Now ↓



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- Free 6G Training: Qualcomm Keynote on 'Advancing Wireless Innovations towards 6G — from a Device's Viewpoint' from B6GS 2023 ([link](#))
- Toon Norp on LinkedIn: "3GPP is not quite yet started work on #6G. But we did see today at the 3GPP SA1 #104 meeting in Chicago a first contribution about KVIS..." ([link](#)) – nice discussion as well.

© 5G

- Operator Watch Blog: Jio 5G - Enabling India to go Digital ([link](#))


Start of digital revolution in India

	Before Jio	After Jio
Speed	<1 Mbps	> 300 Mbps
Download Speed	Download Speed	Download Speed
Availability & Affordability	US\$ 4 – 300	<US\$ 0.1
Pricing	Per GB of Data	Per GB of Data
Increasing Usage	240 MB	>25 GB
Data Usage / Sub / Month	Voice, SMS	Audio and video streaming, commerce, social media, news and financial services

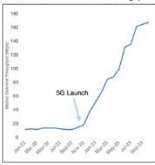
100x increase in Data Consumption in the Country | India's Share in Global Data Traffic has gone up From <1% to 21%+

The one year saga


5G speed test samples



Combined 4G+5G Downlink Throughput

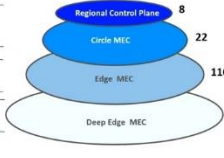


Congratulations Jio



- More than 1 Mn 5G cells made live in 12 months
- 75 million 5G customers on boarded
- Jio AirFiber FWA service launched

Delivering the latest 5G functionalities

<ul style="list-style-type: none"> <li style="background-color: #0070c0; color: white; padding: 5px; margin-bottom: 5px;">VONR <li style="background-color: #0070c0; color: white; padding: 5px; margin-bottom: 5px;">Network Slicing <li style="background-color: #0070c0; color: white; padding: 5px; margin-bottom: 5px;">Positioning <li style="background-color: #0070c0; color: white; padding: 5px; margin-bottom: 5px;">SON <li style="background-color: #0070c0; color: white; padding: 5px; margin-bottom: 5px;">RIM 	<p>eMBB, AirFiber homes</p> <p>Gaming, AR/VR, Enterprise</p> <p>Industry 4.0</p>	
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Digital twin for planning, performance and fixes

Lifecycle managed through digital twin

Network Planning

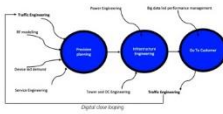
- Ray tracing based planning using 3D Maps
- Coverage Prediction for each home

Deployment


- Project tracking in detail for every building
- Optimized Infra Design

Customer Experience Management

- Identification of Precise Root cause
- Swift resolution to customer issues



#3G4G5G



- James Crawshaw on LinkedIn: "Vincenzo Procopio, Head of IT Production at Telia, presents a detailed view of #networkslicing. Quite an acronym soup!" ([link](#))
- New whitepaper from InterDigital, Inc. and ABI Research, "The State of 5G Advanced: Empowering New Verticals and Industries" ([link](#))

🕒 2G/3G

- Commsupdate: Digicel to shut down Trinidadian 2G network on 31 March 2024 ([link](#))
- Commsupdate: 4ka warning users of 3G switch-off ([link](#)) – press release from the MNO [here](#).

🕒 Open & Disaggregated Networks (including Open RAN, vRAN, etc.)

- Jinsung (Alex) Choi on LinkedIn: AI/ML Life Cycle Management in O-RAN Intelligent Controller ([link](#))
- Jinsung (Alex) Choi on LinkedIn: Inside the O-RAN ALLIANCE's Innovative Testing and Integration Ecosystem ([link](#))
- Jinsung (Alex) Choi on LinkedIn: The Power of O-RAN Open Fronthaul Interface Standard for Multi-Vendor Open RAN Market ([link](#))
- Jinsung (Alex) Choi on LinkedIn: O-RAN RIC - RAN AI App Foundry ([link](#))

🕒 Spectrum

- UK Spectrum Policy Forum (SPF) Cluster 1 Event Round-up: Connectivity from the Sky ([link](#))

The Future of Smartphones

Dubbed direct-to-device, this new paradigm brings satellite capability to devices

- The impact of the emerging D2D market goes beyond just connecting people.
- It has the power to transform economies, boost GDP, and increase productivity.

The communication journey in a D2D context follows:

- a user initiates communication via satellite
- the satellite relays the transmission to a ground station; which
- processes and routes it to a global destination.

The diagram illustrates the communication path: a mobile handset on the ground uses user links to connect to a satellite in orbit. The satellite then uses feeder links to connect to a satellite ground station on the ground. This ground station is connected to terrestrial infrastructure (represented by server racks), which then connects to user equipment outside the satellite network (represented by various devices and a network cloud).

#Free5Gtraining
#UK_SPF
#3G4G5G

- RCR Wireless - 'There are no easy spectrum allocation choices': White House spectrum strategy identifies a pipeline of five candidate bands ([link](#))
- Dean Bubley on LinkedIn - The 6GHz band at WRC23: Is "No Change" likely? ([link](#))
- Commsupdate: Australian Communications and Media Authority (ACMA) allocates area wide licences for 3.4GHz-4.0GHz spectrum in remote areas ([link](#))

🕒 Private Networks

- Private Networks Technology Blog: Mobile Private Networks Architecture ([link](#))

- Accelerating Crane Automation and Digital Industries of the Future with 5G ([link](#))
- MWL: China private 5G climbs across industry ([link](#))

🕒 Telecoms Infrastructure, Small Cells, Antennas & others

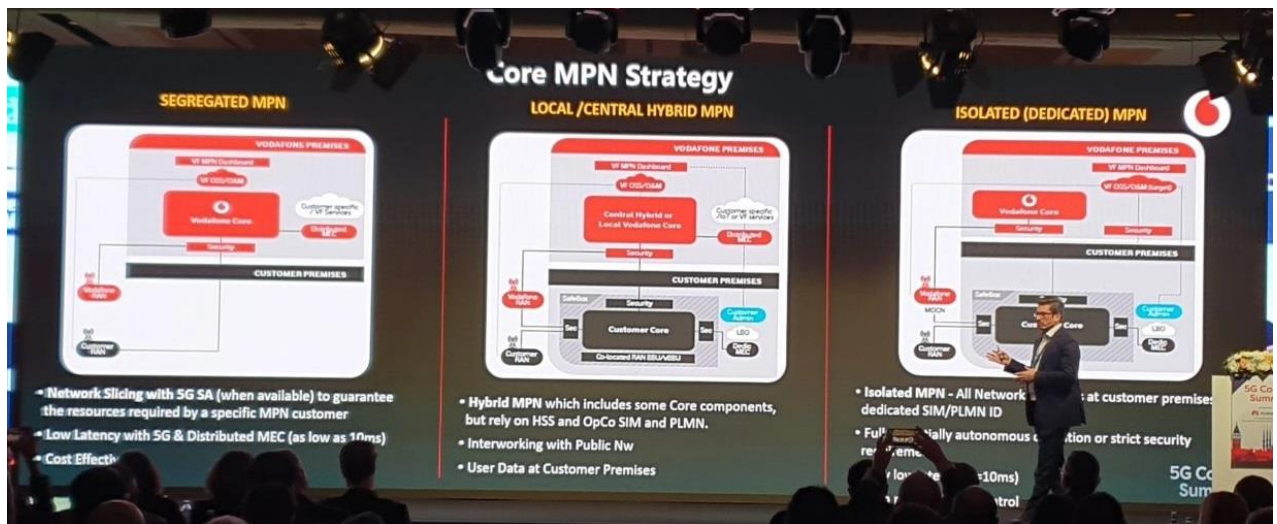
- Pipeline Publishing: How Ukraine's Telecom Infrastructure Became Critical for its Defense ([link](#))
- Paul Rhodes on LinkedIn - Thursday School : Massive MIMO Technology ([link](#))

🕒 IoT / M2M / Smart Homes

- RCR Wireless: Eight notable 5G RedCap tests (Part 1) ([link](#))

🕒 Virtualization, Cloud & Edge

- Roberto Kompany on LinkedIn: "Vodafone Turkey with be Cloud native by 2025 says Erhan Eraydin who also indicates the three possible private network architectures..." ([link](#))



🕒 Security & Privacy

- BBC - Thornaby: Woman targeted in £13k train station QR code scam ([link](#))

🕒 Smartphones, Devices, Wearables & Gadgets

- 9to5Mac: Apple announces that RCS support is coming to iPhone next year ([link](#))
- Apple extends Emergency SOS via satellite for an additional free year for existing iPhone 14 users ([link](#))
- Ookla: Your Black Friday/Cyber Monday Guide to iPhone 15 and Samsung Galaxy Z Fold5 and Flip5 Performance ([link](#))

🕒 AI, ML & Automation

- Qualcomm presentation: Making AI ubiquitous, Oct. 2023 ([link](#))
- The Fast Mode: The Synergy of AI and Wireless Technologies - Part 1 ([link](#))
- James Crawshaw on LinkedIn: "Elisabeth Py, VP at Orange Innovation, presents the group's plan to move 2 of its processes (change and monitoring) across all operating units from TM Forum Autonomous Network level 1 or 2 today to level 3 by end 2024 and 5 by end 2025..." ([link](#))

- Nvidia - Silicon Volley: Designers Tap Generative AI for a Chip Assist ([link](#)) – see also this Tweet for summary [here](#).

🕒 Satellites, HAPS, Drones, UAVs & Space

- MWL: Paul Jacobs, CEO of Globalstar, downplays extreme satellite fears ([link](#))
- Light Reading: AT&T and T-Mobile are in a heated race to space ([link](#))
- Sawyer Merritt on Twitter: "*SpaceX has introduced their next generation Starlink terminal...*" ([Tweet](#) with photos) – specifications ([link](#))



🕒 Wi-Fi

- Dean Bubley's Twitter threads from Train Comms ([Day 1](#), [Day 2](#))

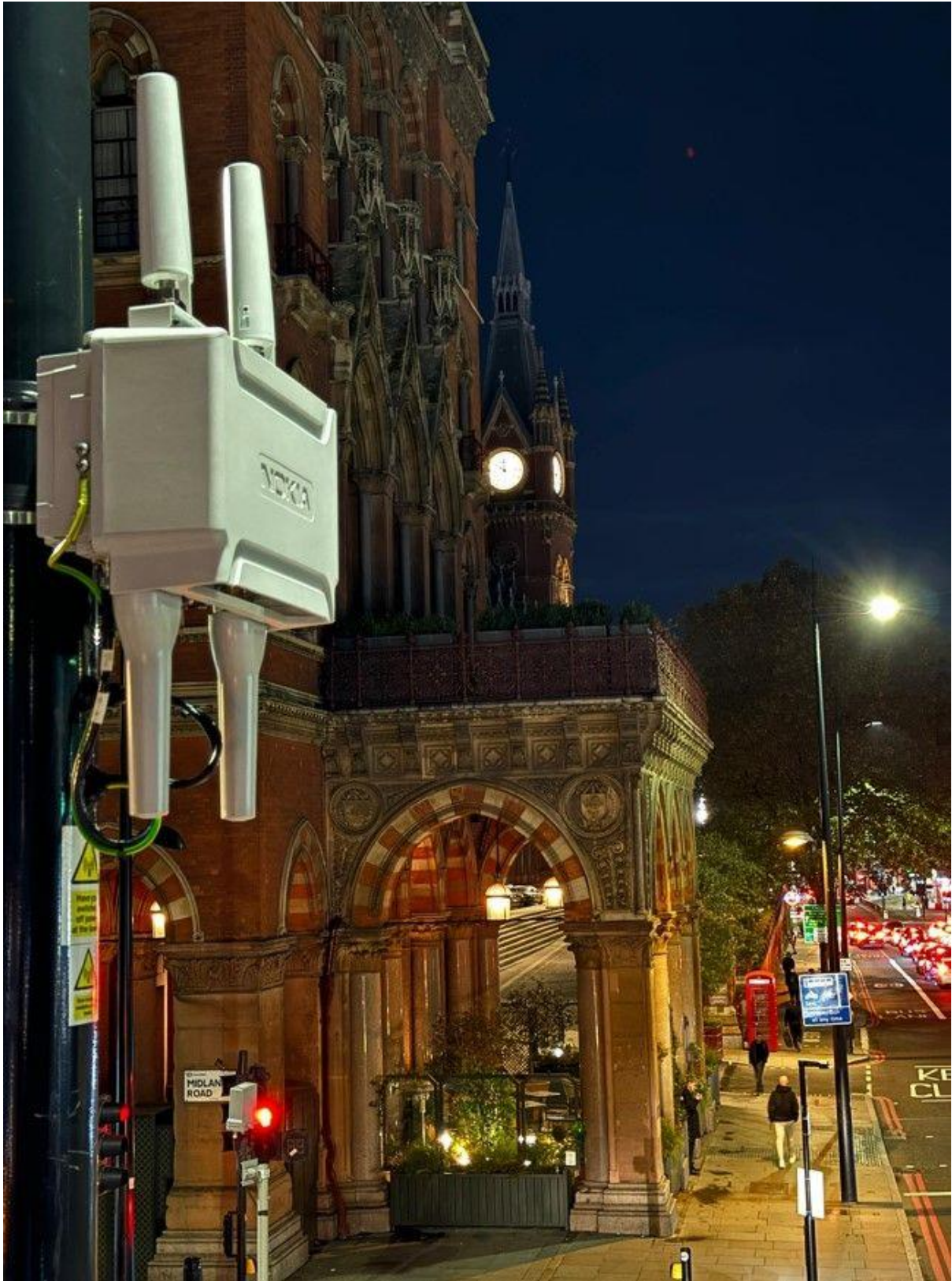
🕒 Sustainability

- Jinsung (Alex) Choi on LinkedIn: Green O-RAN open RAN ([link](#))

🕒 Other News and Technology Stuff

- James Crawshaw on LinkedIn: "*enrique blanco, CTIO of Telefonica, wants OSS to be open, secure, zero-touch, data-driven, and er ... not proprietary.*" ([link](#))

🕒 **Picture of the week:** Today's picture is one shared by Jamie Hayes on LinkedIn [here](#). A Nokia small cell at London Kings Cross. As the post says, the download speed has improved from 40-50 Mbps to 200-240 Mbps.



Happy to hear your thoughts. Feel free let me know what worked, what didn't, how I can make this better, etc. Get in touch over LinkedIn!

PDF version of this and previous newsletters are available [here](#).