Mobile & Wireless Roundup No. 136 (see original on LinkedIn!)

By Zahid Ghadialy

Welcome to the 136th edition of this newsletter. I particularly enjoyed reading an article by Iain Morris this week. Over the years, I have appreciated the way he explains things with clarity and perspective. I have also been told that he has quite a fan following, although I have not seen this for myself.

As mentioned in earlier editions, Iain and others have been pointing out the slowing down of growth in mobile data usage. This poses a challenge for operators. When everyone offers more or less the same service at similar prices, it becomes very difficult to grow in mature markets. Often, the only time subscribers switch providers is when there is a major data breach, such as the recent SK Telecom breach.

One clear route for operators to grow is through better coverage. Some may argue that with D2D (Direct-to-Device) satellite services becoming available, there will be less need to build additional terrestrial coverage. But having worked as a field engineer myself, I know many people still choose their provider based on who can offer them decent and reliable mobile coverage, regardless of the other features available.

Satellite services like Starlink may offer a good solution indoors, but having a backup mobile network connection remains important. Speeds with D2D are still limited, and indoor coverage can be challenging depending on the frequency used. In many cases, a stable mobile signal providing 20 Mbps download and 10 Mbps upload is more than sufficient when nothing else is available.

Some communities I used to be involved with now have fibre connectivity, which has resolved many indoor coverage problems. However, the moment you step outside, connectivity can still be an issue. It can be quite a shock to go from gigabit speeds to no signal in an instant. Operators continue to compete through low prices, cheap devices and bundled offers, but I am always surprised they do

not do more to highlight the coverage improvements they are making in difficult areas. Helping to close these coverage gaps is something that deserves far more attention.

For those of you who don't know me, I am a technologist with over 25 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 other news that caught my attention since the last newsletter.

◉ 6G

- Light Reading: Telcos guilty of 6G mixed messages and falsehoods (link)
- ETSI Creates New Software Development Group to Deliver Open-Source Operator Platform for 6G Testbed Federation (PR)
- Paul Rhodes on LinkedIn - Friday Thoughts: 6G-Ready Small Cell Networks! (link)
- Free 6G Training: Bharat 6G 2025 Marks India's Ambitious Bid for 6G Leadership (link)

◉ 5G

- 5G Technology World: What is precoding? What does it do? (link)
- Connectivity Technology Blog: Seamless 5G Connectivity Across Germany on Deutsche Bahn (link)

- Michael Thelander on LinkedIn: "*Although 4x4 MIMO in low-band 5G spectrum is generally considered to be impractical and unnecessary, it didn't stop me from testing the functionality in a pair of noncommercial smartphones. I wanted to see for myself if the more advanced antenna configuration could help improve performance…*" (link)
- Mohamed Abbas on LinkedIn: What is the difference between SUPI, SUCI and 5G-GUTI in 5G SA Networks? (link)

◉ 4G/LTE

- Mohamed Abbas on LinkedIn - Fact: 5G uses more battery than 4G (link)

◉ 2G/3G

- GSMA white paper - SMS for IoT after 2G/3G Shutdown: Ensuring SMS service continuity for IoT on LTE (link)

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

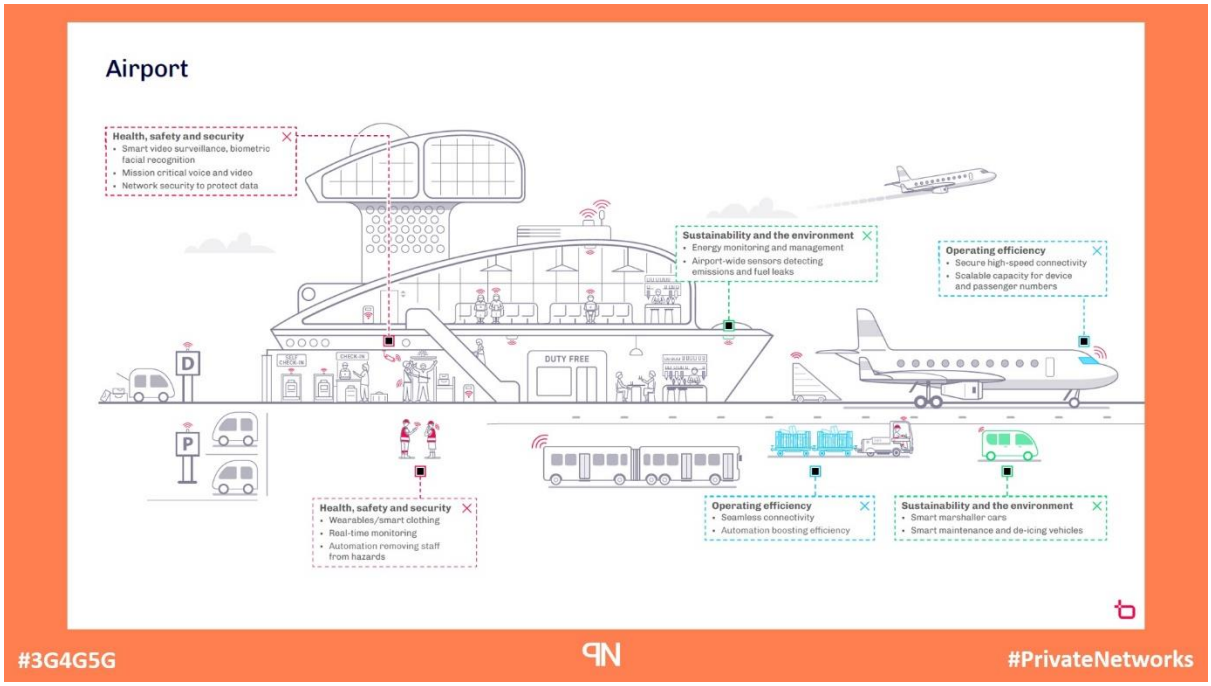
- O-RAN white paper: Deployments of O-RAN-based Non-Terrestrial Networks (PDF)
- O-RAN white paper: O-RAN Enabling 5G Private Networks (PDF)
- O-RAN white paper: O-RAN Testing: Challenges, and Recommendations (PDF)

◉ Spectrum

- Analysys Mason: Spectrum choices dictate the launch and evolution of D2D services (link)
- Fierce Network: FCC questions EchoStar about how it's using 5G spectrum (link)
- Light Reading: AT&T pursues Nsight's 3.45GHz spectrum in 5G 'catch-up' strategy (link)

◉ Private Networks

- RCR Wireless: Powering progress—How private mobile networks are transforming utilities (link)
- Private Networks Technology Blog: Why Private 5G Networks Are Taking Off at Airports (link)

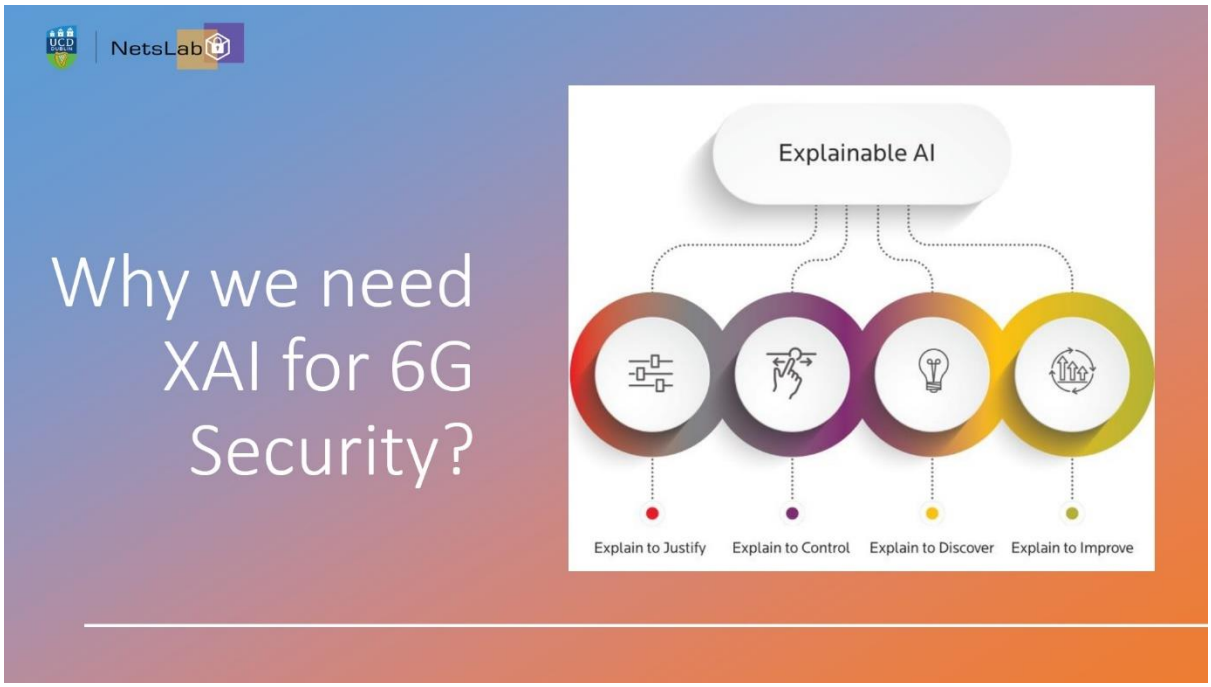


◉ Telecoms Infrastructure, Small Cells, Antennas & others

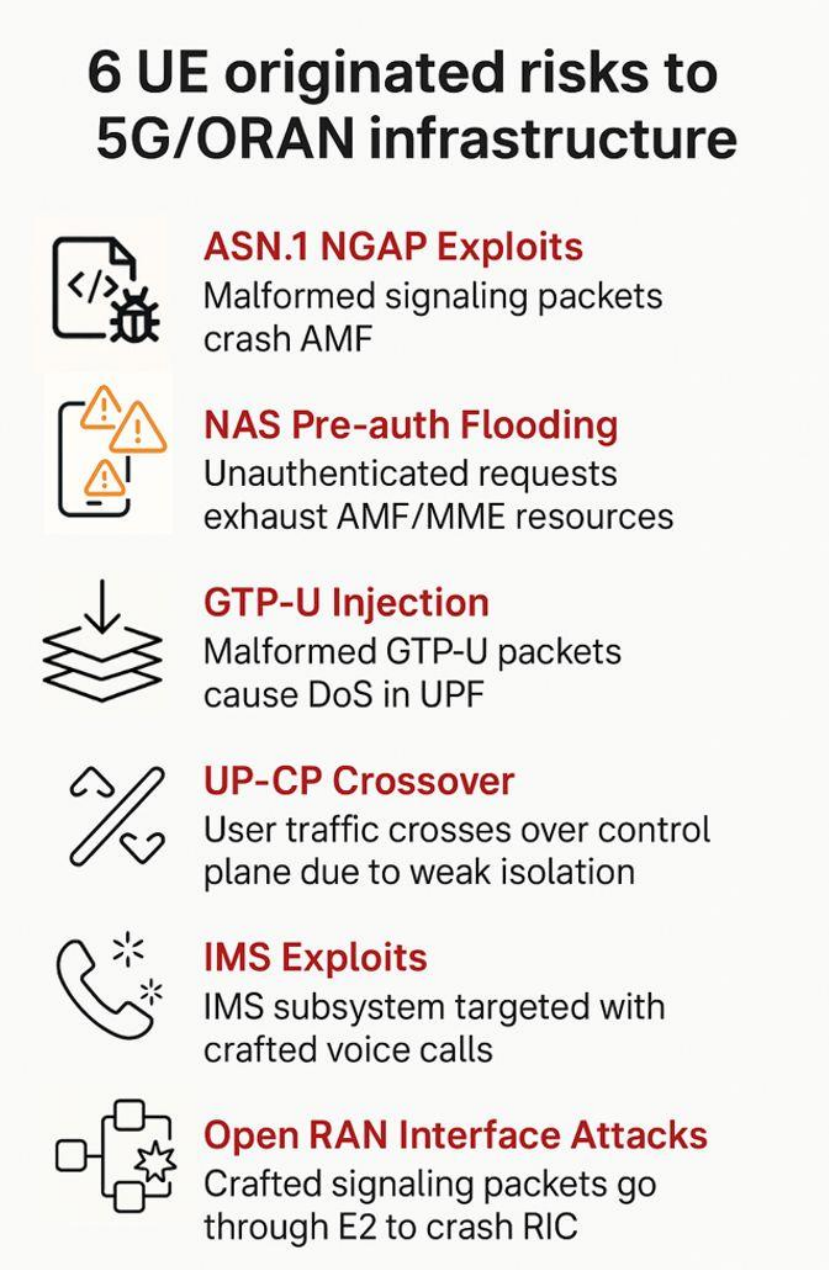
- Light Reading: 5G small cells are out, colocations are in – report (link)
- Mobile communications from streetlights: O2 Telefónica starts nationwide expansion of 5G streetlights (PR)
- Paul Rhodes on LinkedIn - Tuesday Thoughts: Modestly Magic Massive MIMO! (link)

◉ Security & Privacy

- Dmitry Kurbatov on LinkedIn: "*Last year, I had the honor of participating in an ITU-D cybersecurity workshop focused on 5G protection and cyber resilience…*" (link)
- 6G Security presentation by Madhusanka Liyange, NetsLab (link)

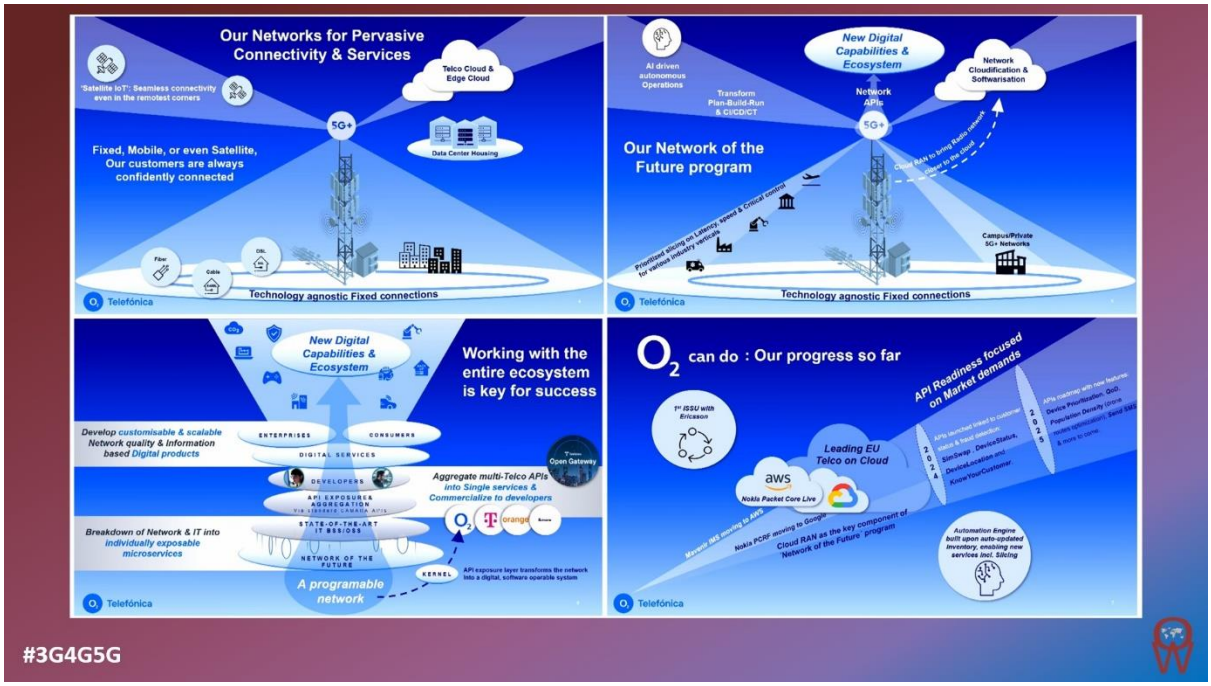


- Ars Technica: AI-generated code could be a disaster for the software supply chain. Here's why (link)
- Michael Furlough on LinkedIn: How Telecom Backbone Vulnerabilities Still Expose SMS, Calls & User Location (link)
- Dr. David Rupprecht on LinkedIn: "*I'm excited to share our comprehensive 5G core network risk analysis for the Federal Office for Information Security (BSI)! Using the PASTA model, we examined security aspects of 5G core networks across 21 distinct risk scenarios…*" (link) – The English site for all BSI 5G Risk Analysis documents is here.
- TelecomTV: Telco SecOps learnings from the SK Telecom hack (link)
- Silke Holtmanns on LinkedIn: "*This sounds like they have now the possibility using the SIM OTA (Over the Air) management system to replace the baseline key. Let's cross fingers that this one is properly secured…*" (link)
- Salim S I on LinkedIn: User devices aren't just endpoints, they're potential attack vectors. Here are six examples from real-world research and CVEs (link)



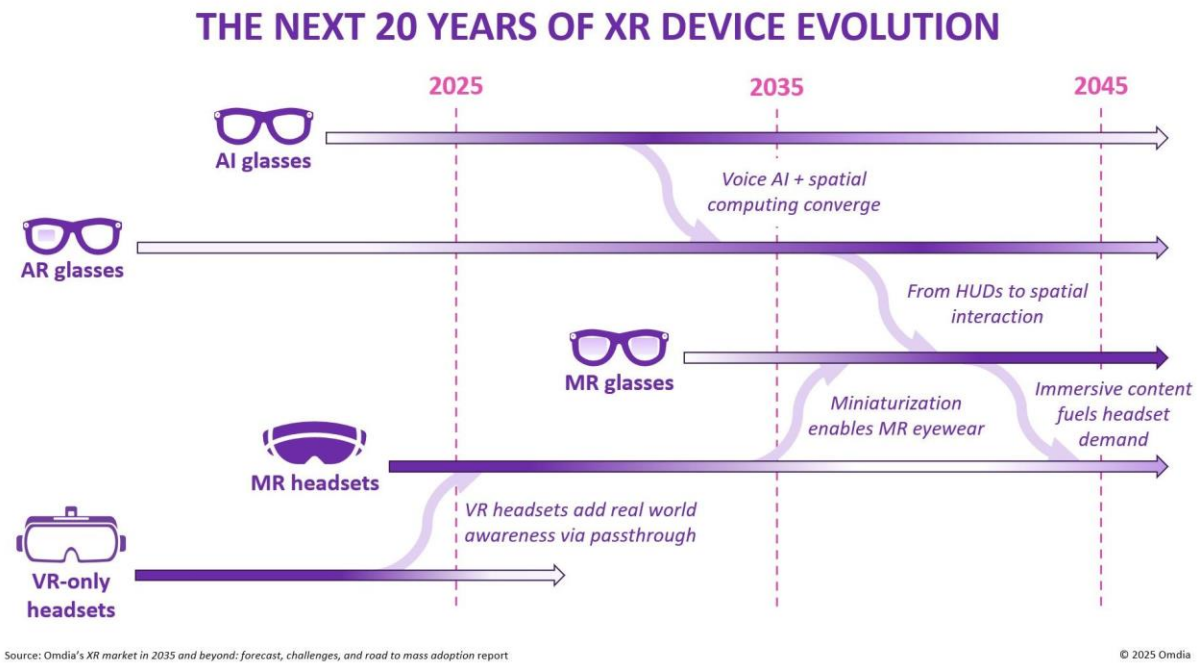
◉ AI, ML & Automation

- Operator Watch Blog: How O2 Telefónica is Redefining the Network with NaaS and Open APIs (link)



◉ Metaverse & Extended Reality (XR)

- George Jijiashvili on LinkedIn: "🥽 *This is how XR devices are likely to evolve over the next 20 years* 👇..." (link)



◉ Connected And Autonomous Vehicles (CAVs)

- Denis Laskov on LinkedIn: Why do self-driving cars crash into emergency vehicles? Because ADAS systems are blinded by emergency lights (link)

◉ Satellites, HAPS, Drones, UAVs & Space

- RCR Wireless - Analyst Angle: Will D2D make rural cell sites an endangered species? (link)
- Ookla - Connecting Africa: The Performance and Impact of Starlink's Satellite Internet (link)
- Railway-News: ScotRail Introduces Starlink Satellite Technology in New Trial (link)

◉ Other News and Technology Stuff

- Light Reading: Telcos tire of all-you-can-eat data, get a taste for portion control (link)
- The Journey from Communications Service Provider (CSP) to Digital Service Provider (DSP) (link)

◉ Picture of the week: A modern, high-capacity mobile telecoms mast featuring stacked antenna arrays, courtesy of Paul Rhodes on LinkedIn. The comments are insightful.

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.