



## Mobile & Wireless Roundup #93 (see original on [LinkedIn!](#))

By Zahid Ghadialy

Welcome to the 93rd edition of this newsletter. One of the [stats](#) I heard this week at a conference was that Apple AirPods generated more revenue than Nokia and Ericsson. While this may not be [strictly true](#), it does show the power of Apple brand. Here is another similar [comparison](#) showing how AirPods are more profitable than Uber, Spotify, Airbnb, Snapchat and eBay combined.

I have observed over many years that most of the time when operators are attempting to sell their network to the end users, they are effectively doing this by offering cheaper handsets and cheap deals. This may be a fantastic strategy to attract new customers but in the long run does not show any network value to these users.

This is not to say that the networks are not innovating or doing amazing things, we do hear about them in conferences, however here people from the telecom industry are generally talking amongst themselves. How do the operators make their customers aware of these innovations and the value this brings to them eventually?

It's not just the operators who keep getting squeezed, often due to their own sales strategy, they in turn end up squeezing their vendors, but also the vendors who are often not able to explain their value beyond the low price point they are forced to offer.

You may have heard me complain that the telco vendors are bad at marketing. Now I think the operators are even worse at marketing their networks. What do you think?

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.

On a side note, I am away for the next few weeks without much access to emails, LinkedIn and/or X so you will not see a new newsletter for a while.



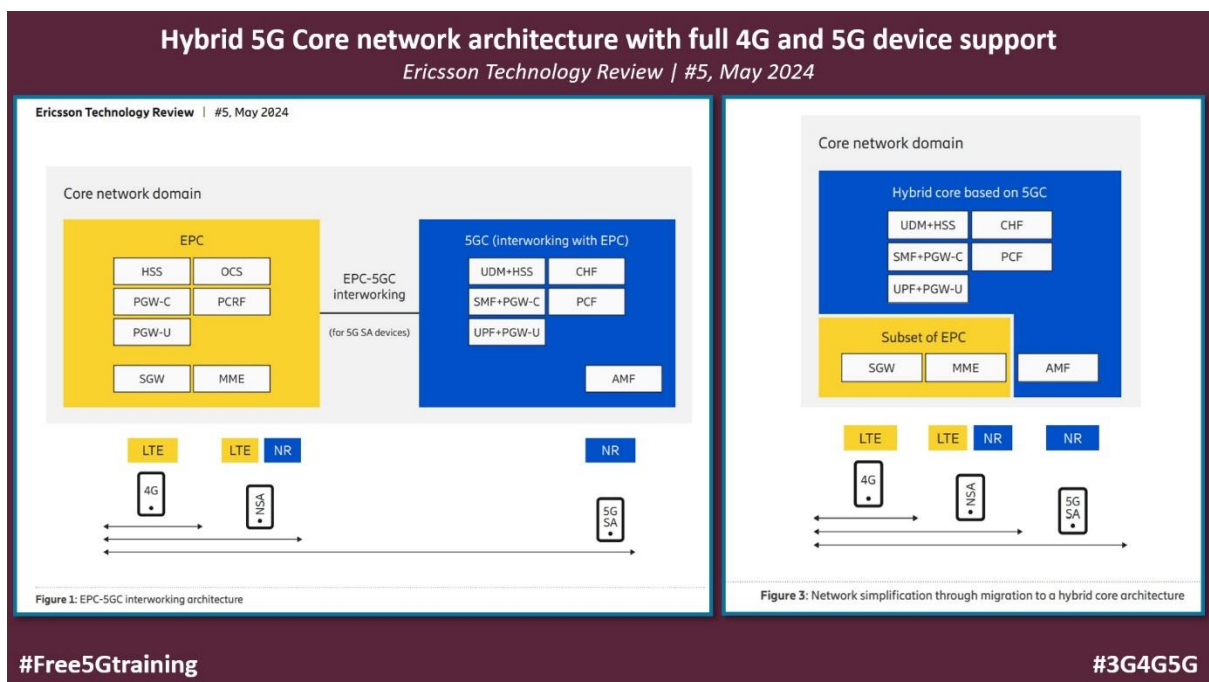
This newsletter is kindly sponsored by Firecell - the Private 5G experts

## 6G

- 6G SNS IA & AIOTI: White Paper The role of 6G in agriculture ([link](#))
- 6G SNS IA: Open Networks and Services Whitepaper, Platforms Subdomain ([link](#))
- 6G SNS IA whitepaper: Open RAN and 6G Future Networks Development ([link](#))
- NextG Alliance whitepaper - 6G Radio Technology Part II: Basic Radio Technologies ([link](#))
- Free 6G Training: Summary of '6G Global Summit 2024' ([link](#))

## 5G

- Ericsson Technical Review: Hybrid 5G Core network architecture with full 4G and 5G device support ([link](#))

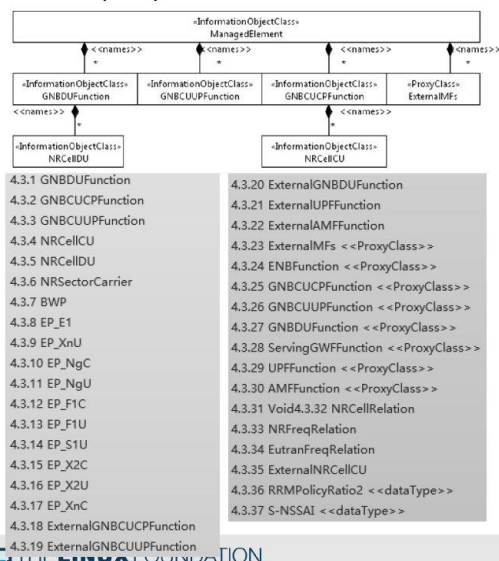


- Geoff Hollingworth on LinkedIn: "There's no such thing as 5G" - a real developer speaks. ([link](#))
- Operator Watch Blog: North Macedonia is a 5G Leader within Central and Eastern European Countries ([link](#))
- Jinsung (Alex) Choi on LinkedIn: Achieving Multi-Vendor Interoperability in 5G Networks with 3GPP Integration Reference Point (IRP) ([link](#))

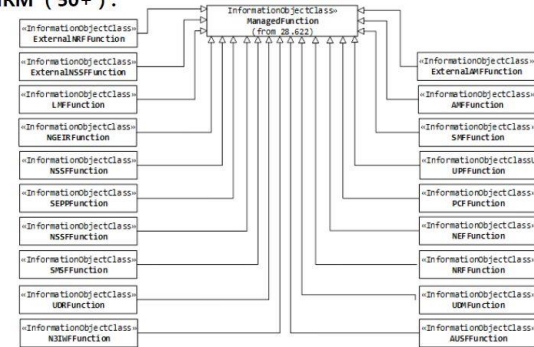
- Michael Thelander on LinkedIn: "Last week I attended the Ericsson Networks Smart 5G Factory Event and the Network X Americas event - both were held near Dallas, TX..." ([link](#))
- Dean Bubley on LinkedIn: "A topic that is coming up increasingly regularly for me is timing and synchronisation for networks. Especially for 5G RAN, but I've also seen it talked about for cloud recently as well..." ([link](#))
- 5G Technology World: Can dielectric waveguide antennas boost 5G efficiency? ([link](#))
- RCR Wireless: Why does timing and sync matter for 5G monetization? ([link](#))
- Jinsung (Alex) Choi on LinkedIn: Enhancing Multi-Vendor Interoperability with the 3GPP Network Resource Model (NRM) ([link](#))

## NRM IOCs Example [8, TS 28.541]

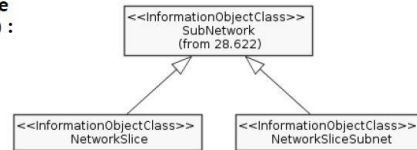
NR NRM ( 30+ ) :



5G NRM ( 50+ ) :



network slice NRM ( <10 ) :



### 🕒 2G/3G

- Telia Sweden postpones the shutdown of the 2G network until 2027. More than half of Telia's own 3G network has already been decommissioned, and will close as planned in 2025. ([link](#))

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

- Jinsung (Alex) Choi on LinkedIn - O-RAN RIC vs. SON: Evolving RAN Optimization and Management ([link](#))
- Light Reading: Nvidia to test O-RAN kit on its private standalone 5G network ([link](#))
- Nokia Open RAN Industry and Solution Update ([link](#))
- TIP: AT&T joins the Telecom Infra Project's Board of Directors ([link](#))
- Light Reading: AT&T starts looking at third-party rApps for its 5G network ([link](#))
- Samsung shared a video of their 2G, 4G, 5G vRAN solution deployed in Romania with Orange ([link](#))

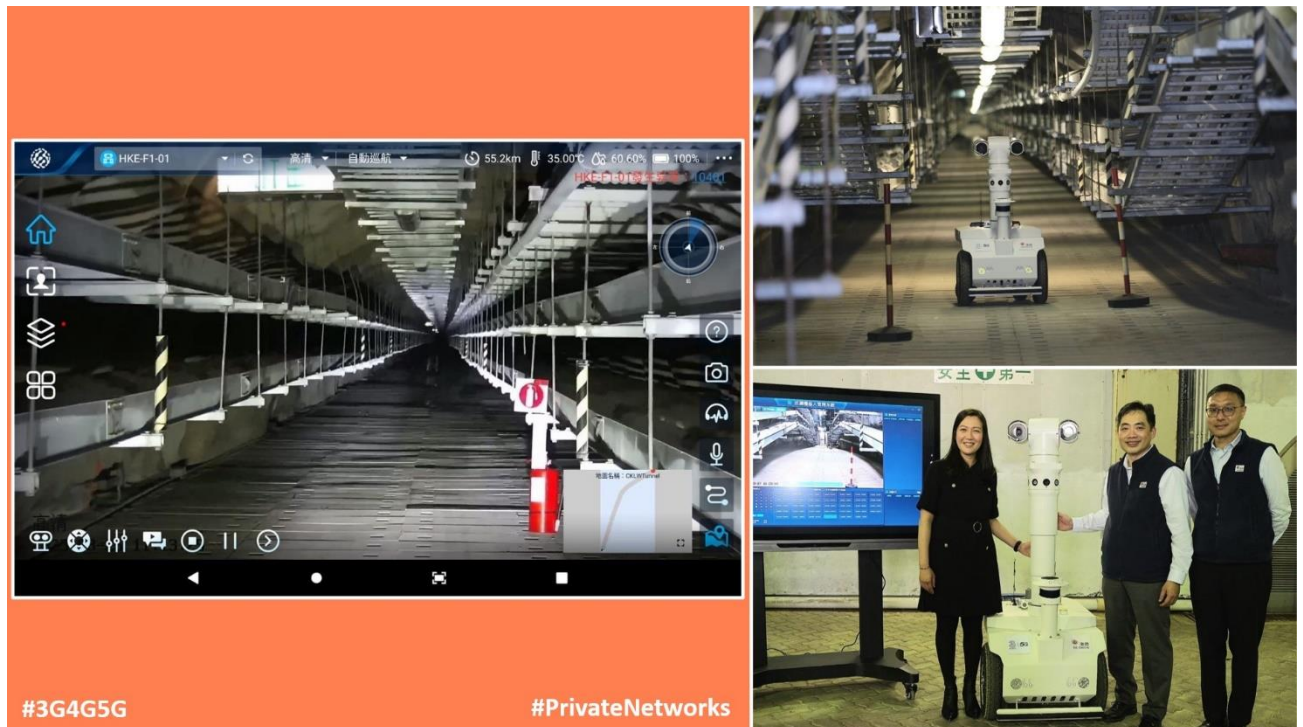
### 🕒 Spectrum

- Japanese Consortium Achieves World's First Demonstration of 5G Communication from Altitude of 4km Using 38GHz Band ([link](#))

- Richard Haas on LinkedIn: "Great story today in PolicyTracker by Laura Sear. Everyone says we need "6G Spectrum", but where exactly will this come from? ..." ([link](#)) – good discussion.

### 📍 Private Networks

- Private Networks Technology Blog: 5G 'Smart Inspector' Robotic Solution at Hongkong Electric Co., Ltd ([link](#))



- Pablo Tomasi on LinkedIn: "A few quick thoughts from the LR Network X Americas #private5g track which I had the pleasure to chair..." ([link](#))
- MWC Barcelona Manufacturing Summit 2024 Highlights ([link](#))
- MWL - Feature: Experts wrestle with private 5G network challenges ([link](#))
- RCR Wireless: Paris Olympics torch relay gets private 5G treatment ([link](#))

### 📍 Telecoms Infrastructure, Small Cells, Antennas & others

- TelecomTV: India offers Africa a 5G alternative ([link](#))
- Wave by AGC - Network densification: the challenges to deliver an improved 5G experience ([link](#))
- Total Telecom: Submarine Networks EMEA 2024: Collaborating towards a greener future ([link](#))

### 📍 IoT / M2M / Smart Homes

- Vaia Sdralia on LinkedIn: Global IoT connections to reach almost 40 billion over next decade ([link](#))

### 📍 Virtualization, Cloud & Edge

- TMN: Samsung hails Orange addition as 2G vRAN support points the way to faster rollouts ([link](#))

## 🕒 Security & Privacy

- CommsRisk: 4 Takeaways from the Verizon Data Breach Investigations Report 2024 ([link](#))
- MWL/Fortinet: The Importance of API Security in Telecom Networks and Services ([link](#))
- Traficom, Finland: Top hackers tampered with the data security of local 5G networks with permission ([link](#) in Finnish)

## 🕒 Smartphones, Devices, Wearables & Gadgets

- Marques Brownlee on X: "I recently got to visit some Apple labs where they durability test new iPhones before they come out, and learned a few things (🧵[THREAD](#))..." ([X thread](#) with videos)
- MWL: Lower-tier smartphones fuel Latin America gains ([link](#))
- Josh Whiton on X: "A crazy experience — I lost my earbuds in a remote town in Chile, so tried buying a new pair at the airport before flying out. But the new wired, iPhone, lightning-cable headphones didn't work. Strange..." ([link](#))

## 🕒 AI, ML & Automation

- Jinsung (Alex) Choi on LinkedIn: The Critical Role of AI in Managing Complex Mobile Networks ([link](#))
- SK Telecom Excalibur, an AI-based animal imaging diagnosis assistance service, takes the first step toward global commercialization in Australia ([link](#) in Korean)
- Jinsung (Alex) Choi on LinkedIn: Inside 3GPP's AI/ML and Data Analytics Innovations ([link](#))

## 🕒 Satellites, HAPS, Drones, UAVs & Space

- Light Reading: Verizon follows AT&T into space with a new \$100 million deal with AST SpaceMobile ([link](#))
- Light Reading: A third Chinese LEO satellite contender emerges ([link](#))
- Tim Farrar on X: "Seems that ~300 direct-to-cell sats are now planned for Starlink's initial service in the fall..." ([X post](#) with photos)

## 🕒 Sustainability

- Light Reading: Singapore banking on green strategies to drive data center expansion ([link](#))
- GSMA Intelligence - Going green: measuring the energy efficiency of mobile networks ([link](#))
- DOCOMO Launches Japan's First Demonstration Experiment of Self-powered Hydropower Base Station ([link](#))
- Vodafone publishes its Climate Transition Plan ([link](#))

## 🕒 Other News and Technology Stuff

- TechBrew: Behind Public Citizen's campaign to get cars made with 'green steel' ([link](#))
- Mark Nottingham: Consensus in Internet Standards ([link](#))
- Fernando Villalba on LinkedIn: "Here is a lady in 1983, who learned to code in her 70s, about to learn how to make circuit boards too - all while running a sweet shop! ..." ([link](#))
- Kanwal Rekhi on LinkedIn: "Nvidia shares closed at \$1068 on Friday, giving it a Market Cap of \$2.6 Trillion. Intel closed at \$30.7, giving it a Market Cap of \$130 Billion, just about 5% of Nvidia..." ([link](#))

- Paul Rhodes on LinkedIn: "...Wine is a great example of people creating massively different value with ostensibly the same ingredients. 🍷🍷 How do we do the same with mobile networks? 📱..." ([link](#))
- Jinsung (Alex) Choi on LinkedIn - From Siloed to Unified: The Evolution of Telecom Operations ([link](#))

📷 **Picture of the week:** Today we share a C-RAN (Cloud RAN) site that was shared by [Jamie Hayes on LinkedIn](#) some months back. This site in Kings Cross in London has 1x4G RRU (20MHz) and 2x5G RRUs (120 MHz) to keep the street uncluttered while providing high capacity solution for network densification. The original post has a lot more pictures than the one below.



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](#).