

## Mobile & Wireless Roundup #77 (see original on [LinkedIn!](#))

By Zahid Ghadialy

Welcome to the 77th edition of this newsletter. I reached a milestone of completing 25 years in the mobile wireless industry. I started this journey in the last week of Jan. 1999 working on 3G. The specifications were not complete and that gave me and the team I was working in a lot of time to play around with the frames and slot structures to see how things would change.

I moved to UK and continued working on 3G. I was fortunate to be part of the NEC team that launched not just the first 3G network in the world, but also in Japan. The UK operator '3' launched their 3G network on 3/3/3 which consisted of NEC RAN as well. The killer app, as we call it nowadays, for 3G was video calling. I recently came across [this nice video](#) from the BBC archive of the 3G network launch in UK.

While we can debate the reasons video calling didn't take off, it was mainly the cost of the service. I had some 25 mins allowance included in my package but after that it was 50 pence per minute. That was a lot of money for me back then. The humble SMS that is free and not valued as much was some 12 pence per message back then.

People are so used to everything being included in their bundles now that it is difficult to bring something new and ask them to pay for it. It may be easier to leave the applications to the creators and OTT players while the operators focus their efforts on improving coverage and bringing it to places where people would need them, maybe not every day, but on a regular basis. The focus has to shift from population based coverage to a geographic one. It's true that non-terrestrial networks will help but they can't be the only one.

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 others news that caught my attention since the last newsletter.



## Private 5G Networks Made Simple



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### 6G

- Free 6G Training: Key Sustainability Indicators for Next Generation Radio Network Technologies ([link](#))
- Videos & Presentations from Mobile Korea 2023 - 6G Global Day 1 & 2 ([link](#))
- Wireless Future Blog: Book chapters about 6G technology ([link](#))

### 5G

- Luke Kehoe on LinkedIn: "Great to publish a new piece about the commercial realities of 5G for telcos in the Business Post. An unvarnished assessment has long been overdue - much of the industry has succumbed to collective delusion about the merits of the technology in the non-standalone context..." ([link](#))

### 4G/LTE

- The 3G4G Blog: UE Assistance Information in LTE and 5G ([link](#))

The diagram illustrates the UE Assistance Information flow between a UE and a network. The flow is as follows:

- UE Capability Enquiry (Network to UE)
- UE Capability Information (UE to Network)
- RRC Reconfiguration (Network to UE)
- RRC Reconfiguration Complete (UE to Network)
- UE Assistance Information (UE to Network)

The UE Assistance Information is categorized into two groups:

- Originally a LTE Mechanism (R11)**
  - Originally "Power Preference"
  - BW (Bandwidth)
  - SPS (Semi-Persistent Scheduling)
  - RLM (Radio Link Management)
  - Delay Budget
  - Overheating
- Included in 5G**
  - Originally "Delay Budget"
  - Overheating
  - DRX
  - IDC (In-Device Coexistence)
  - BW (Bandwidth)
  - CC (Component Carriers)
  - SL (SideLink)
  - Gap Preferences
  - MUSIM (Multi-user SIM)
  - RLF (Radio Link Failure)
  - BFD (Beam Failure Detection)
  - SDT (Small Data Transmission)
  - Uplink Data
  - SCG Preferences

#3G4G5G

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

- Jinsung (Alex) Choi on LinkedIn: Speeding Up O-RAN RIC Deep Reinforcement Learning (DRL) Model Training with Isaac Gym ([link](#))

- TIP - Paving the Future: Unveiling the RFI Process for Disaggregated Distributed Backbone PE Routers in TIP OOPT ([link](#))
- Jinsung (Alex) Choi on LinkedIn: From Predictive Analytics to Prescriptive AI in O-RAN RIC ([link](#))
- Alok Tripathi on LinkedIn: SK Telecom Successfully Conducted Trials of Both Look-Aside and In-Line L1 Acceleration ([link](#))
- Jinsung (Alex) Choi on LinkedIn: The Art of Crafting RANchain Code with LLMs - Network APIOps ([link](#))

## 🕒 Spectrum

- Summary and presentations from 'UK SPF Cluster 3 Event Round-up: Spectrum Sharing' ([link](#))
- CEPT ECC Newsletter: WRC 2023 Conference agrees updated global regulations for 5G, satellite and other wireless applications ([link](#))
- Mobile Europe: Polish regulator says nobody wants 26GHz ([link](#))


## 🕒 Private Networks

- Private Networks Technology Blog: Private 5G Helps Volvo in Construction, Mining, Quarrying with Autonomous Transportation ([link](#))

**V O L V O**

### Why private networks?

- Facilitates a better QoS control over network resources
  - Far from perfect but much better than public networks
  - Autonomous operation of machines and trucks in confined areas consists of a diverse set of applications using the long-range connectivity capability
  - QoS is essential given the safety aspects of autonomous operation but also for productivity
- Great opportunity for verticals to enjoy advanced wireless technology in a cost-efficient way



Volvo Autonomous Solutions  
Katriin Sjöberg

#3G4G5G
#PrivateNetworks

- RCR Wireless: Private 5G will 'not reach potential' – even as spending jumps 800% to \$9bn by 2028 ([link](#))
- Light Reading: Paradise boasts of 1Gbit/s open RAN 5G network ([link](#))

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

- Kevin Kleinsmith on LinkedIn: There is a tsunami coming... ([link](#))
- Paul Rhodes on LinkedIn - Thursday School : CRAN Makes sites Cheaper ([link](#))

## 🕒 IoT / M2M / Smart Homes

- New Omdia research shows cellular IoT connections will reach 5.4bn in 2030 ([link](#))

## Virtualization, Cloud & Edge

- Jinsung (Alex) Choi on LinkedIn: Hardware-Agnostic AI Frameworks in Distributed Edge AI Computing ([link](#))
- Forbes - Effective Edge Computing: 20 Current And Potential Use Cases ([link](#))
- Jinsung (Alex) Choi on LinkedIn - Revolutionizing Distributed Edge AI: Delivering Full-Power AI in a Fraction of the Size ([link](#))

## Security & Privacy

- BBC: British man acquitted over London-Spain flight bomb hoax ([link](#))

## Connected And Autonomous Vehicles (CAVs)

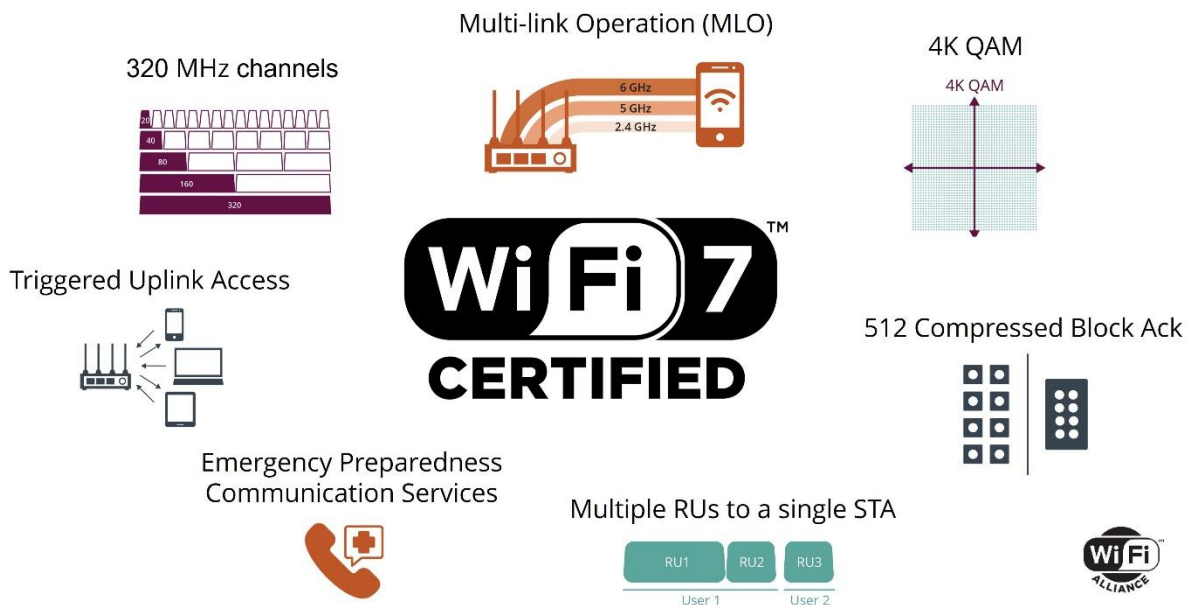
- Qualcomm Booth Tour talks Automotive at #CES2024: Digital Chassis, Motorcycles, Software Defined EV ([video](#))

## AI, ML & Automation

- Jinsung (Alex) Choi on LinkedIn - Revolutionizing O-RAN: Key AI Agent Tool Requirements for O-RAN CoPilot Systems ([link](#))
- RCR Wireless Reader Forum: AI means showtime for enterprise network modernisation ([link](#))
- Jinsung (Alex) Choi on LinkedIn: AI Reasoning - TRIZ of Thoughts ([link](#))

## Wi-Fi

- Wi-Fi Alliance on Twitter: “#WiFiCERTIFIED 7 brings 7 new features to supply advanced performance for next generation #WiFi. One key feature is Multi-link operation (MLO)...” ([link](#))



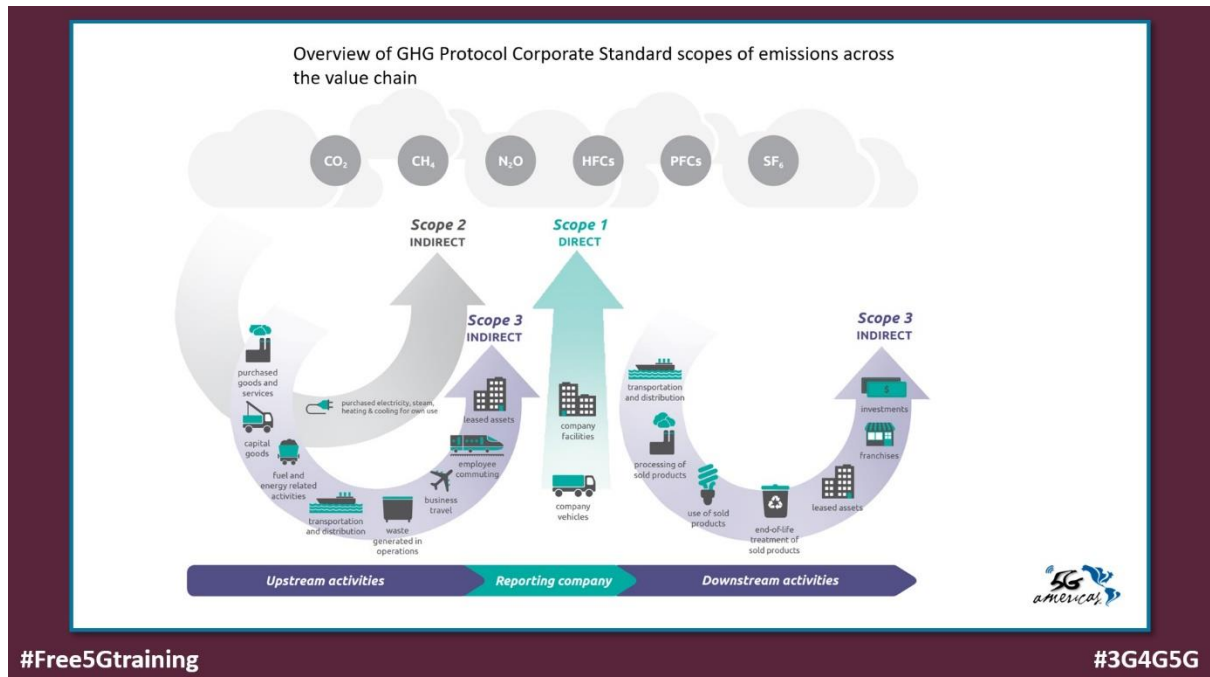
## Smartphones, Devices, Wearables & Gadgets

- MWL: EC consults on Apple opening NFC tech access ([link](#))
- Bilge Mutlu - Enabling Everyday Use of Robots as Products, Tools, and Platforms ([video](#))

- KaiOS discusses the future of Smart Feature Phones with 5G at the CES® tech event 2024! ([link](#))

### 🕒 Sustainability

- 5GAmericas white paper: Energy Efficiency and Sustainability in Mobile Communications Networks ([link](#))



### 🕒 Other News and Technology Stuff

- Paul Rhodes on LinkedIn - Saturday School : Virtualisation 101 ([link](#))
- Light Reading: Dell'Oro thinks annual RAN sales will drop by \$5 billion this year, compared with 2022, and smaller vendors could have it much worse than the Nordic giants ([link](#))
- The Verge: Microsoft lays off 1,900 Activision Blizzard and Xbox employees ([link](#))
- Spotify: Apple's Proposed Changes Reject the Goals of the DMA ([link](#)) – Twitter thread [here](#).
- Telefonica: What is Open Gateway? ([link](#))
- Jinsung (Alex) Choi on LinkedIn - Network/Cloud Infra Engineering vs. Network/Computing Platform Engineering: A Comprehensive Overview ([link](#))

🕒 **Picture of the week:** Couple of weeks back I [blogged](#) about LinkNYC's tall towers. Here are some [pictures from the latest install](#) shared on LinkedIn!



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](#).