IEEE NETSOFT 2020

Tutorial - A softwarized perspective of the 5G networks - Conclusion

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Softwarization in 5G and beyond

- Still in its infancy
- Opportunities our countless
- Some difficulties:
  - For IT people: acquire Telecom background
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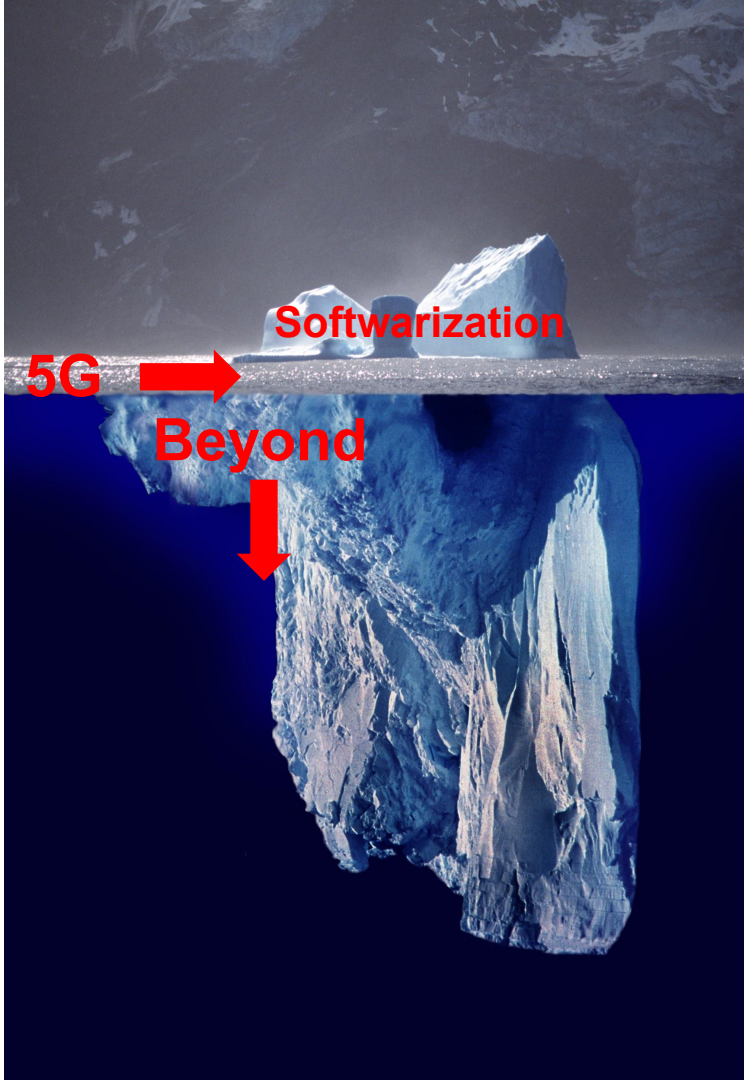
- Smart approach: bring the communities together
  - IEEE NetSoft is a great initiative!



3GPP Releases 16 and 17

- Data-driven network
  - Predictable network performance assisted by NWDAF
  - UE oriented data analysis
  - Expose of NWDAF data analysis for user applications
  - NWDAF supporting the detection of anomalous events and helping to analyze their causes
- Improvements for vertical domains
  - Support to Time Sensitive Communication (TSC)
  - Non-Public Networks (NPNs), i.e., private networks
  - Support to 5G LAN services
  - Advanced location services

3GPP Releases 16 and 17 (2)

- Security evolution
  - Support for NPNs with new authentication schemes
  - Network slice specific authentication option
  - Advanced security for Radio Resource Control and NAS signaling
  - Support for integrity protection in the user plane
- Other advances
  - Vehicle-to-everything (V2X) – platoon formation, autonomous steering, and remote steering
  - Access to unlicensed spectrum using 5G New Radio
  - Dynamic Spectrum Sharing (DSS)
  - IoT for Non-Terrestrial Networks (NTNs)
  - Support for Unmanned Aerial Systems (UAS)

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