6gip IETF 108
Side Meeting

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Motivation

- 5G rollouts are underway with deployments worldwide
  - https://www.telecomtv.com/content/intel-vsummit-5g-ran-5g-core/bringing-5g-networks-to-life-39158/
- Lufthansa pilots standalone 5G networks in aircraft maintenance industry
  - https://www.gsma.com/futurenetworks/5g/lufthansa-pilots-standalone-5g-networks-in-aircraft-maintenance-industry/
- Release 16 is 2nd phase of bringing 5G to life
  - https://www.3gpp.org/news-events/2129-sweet_rel_16

Agenda

- From 5gangip to 6gip history remarks
- Issues in 6G based on the white paper
- IRTF RG
- Closing

From 5Gangip to 6Gip

- Initial mailing list discussion to jump start move to 6G
  - Visionary issues for enhancement of current 5G still needed
- IESG approved the move to 6gip
  - Sorry for any inconvenience with new ML name
  - Archive will remain accessible!
- IRTF Initiative pending
  - how and what on to focus?

Issues in 6G

- White paper on 6G networking
  - Univ. Of Oulu document, June 2020
- 3 main areas are pointed out
  - Service based architecture (SBA)
  - New IP architecture
  - Network and Data Analytic Service

Enhanced SBA ++

- Next generation of communication networks should be more modular, open, and flexible … and sustainable
- 3GPP's SBA concept towards new paradigm of modularized micro-services instead of traditional network functions (NFs)
- Reflected in slicing-ready network architecture offering on-demand service deployment

SBA to MDA

- ‘6G SBA’ design of core network might extend to user plane
- 5G interworking/integration between fixed and mobile converged technologies still requiring gateway concept
- 6G might provide path towards true access technology agnosticism, e.g., deploying mobility and access management independently from each other

End-to-End Mandate-Driven Architecture (MDA)

- ”*mandate*” is seen as collection of network services required from underlying network(s) to comply with dynamic end-to-end QoS needs from specific applications
- different isolated networks of today may evolve towards smaller, more local, and dynamic deployments requiring less complex and infrastructures with more distributed type of control
- User access and distribution of data today are determined by directives of diverse incompatible operating systems rather than by end users

MDA

- MDA architecture is driven by end-to-end interactions between end-devices and/or (intuitive) human-machine interfaces, hence considering all possible relation models
- *Generic User Profile (GUP)* contains personal data and preferences related to data protection, application preferences and priorities
- *Generic Device Profile (GDP)* contains information on ownership and access control for users
- *Generic Network Profile (GNP)* provides information on network security and protection policies and compliance with regulations
- Innovative MDA architecture extends notion of management, control, and data plane separation to application level
- MDA architecture is characterized by scalable, end-to-end per flow monitoring and verification strategies

IRTF RG

- Initial application made
- Got some feedback
- Need to revise the proposal and send again
- Hopefully with a lot of feedback from this meeting

Discussion

- Draft on some 6G issue, e.g. MDA?

Thank you.