NGMN

6G Position Statement

An Operator View

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v1.0

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WE MAKE BETTER CONNECTIONS

6G POSITION STATEMENT

An operator view by NGMN Alliance

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OVERARCHING STATEMENT

NGMN Alliance (NGMN) believes that 6G is the graceful evolution of communication networks into the 2030s, delivering compelling new services and capabilities for customers whilst maintaining essential offerings such as voice. **6G will build on, and extend beyond, our existing 5G ecosystem to foster new innovations which deliver value to customers and simplify network operation.**

Concurrent to this journey towards the 6G era is the development of network disaggregation and an open, interoperable cloud native architecture.

INNOVATIONS AND NEW SERVICES

1. 6G provides an opportunity to support innovative new IMT-2030 features such as joint sensing and communications, AI, extended AR/VR, enhanced positioning etc.

2. 6G should facilitate seamless integration and interoperability with fixed and satellite networks.

3. 6G should inherently support network related APIs, fostering new service offerings which leverage network capabilities.

OPERATIONAL PRIORITIES

1. Network simplification leading to lower operational cost whilst retaining scalability and flexible deployment models.

2. Absolute energy reduction when assessed across mobile and fixed networks to support the transition towards low carbon economies.

3. Features (such as AI) that support automated network operations and orchestration to enable efficient, dynamic service provisioning.

4. Proactive network management capabilities across fixed and mobile networks to predict and address issues before they impact user experience.

5. Quantum safe infrastructure, resistant to attack by Quantum computers.

GUIDING PRINCIPLES

1. 6G mobile network standards must be globally harmonised.

2. 6G must not inherently trigger a hardware refresh of 5G RAN infrastructure. The decision to refresh 5G RAN hardware for operational reasons such as end-of-life, energy consumption or new capabilities must be an operator driven choice, independent of supporting 6G.

3. 6G introduction must allow certain scenarios to be realised through software-based feature upgrades of existing network elements to meet 6G requirements.

4. 6G must not result in degraded performance for customers connected to 5G networks.

5. New features should be able to be deployed as and when required, without compromising existing core connectivity services such as voice.

6. 6G must address demonstrable customer needs across mobile, fixed and non-terrestrial networks.

7. 6G must ensure interoperability and backward compatibility with 5G.

8. 6G must incorporate robust security measures by design to protect against emerging threats and vulnerabilities.

SPECTRUM

1. Existing IMT spectrum identifications (<7GHz) will remain essential for delivering mobile coverage.

2. New IMT spectrum in bands 6-15GHz must be licensed for IMT-2020 and beyond technologies.

3. Deployments using new IMT spectrum in the sub-THz bands may adopt a new IMT-2030 and beyond radio technology.

NEXT GENERATION MOBILE NETWORKS ALLIANCE

NGMN, established in 2006,
is a global, operator-led alliance
of over 80 companies and orga-
nisation spanning operators,
manufacturers, consultancies
and academia.

VISION

The vision of the NGMN Alliance is to provide impactful industry guidance to achieve innovative, sustainable, and affordable mobile telecommunication services for the end user with a particular focus on Mastering the Route to Disaggregation / Operating Disaggregated Networks, Green Future Networks and 6G, whilst continuing to support 5G's full implementation.

MISSION

The mission of the NGMN Alliance is

- to evaluate and drive technology evolution towards 5G's full implementation and the three major priorities for 2021 and beyond:

  Route to Disaggregation: Leading in the development of open, disaggregated, virtualised and cloud native solutions with a focus on the end to end operating model.

  Green Future Networks: Building sustainable and environmentally conscious solutions.

  6G: Emergence of 6G highlighting key trends across technology and societal requirements plus use cases, requirements and design considerations to address.

- to establish clear functional and non-functional requirements for mobile networks of the next generation.

- to provide guidance to equipment developers, standardisation bodies and cooperation partners, leading to the implementation of a cost-effective network evolution.

- to provide an information exchange forum for the industry on critical and immediate concerns and to share experiences and lessons learnt for addressing technology challenges.

- to identify and remove barriers for enabling successful implementations of attractive mobile services.