

**NGMN Industry Conference &
Exhibition 2015
24 – 25 March 2015
Kap Europa, Frankfurt,
Germany**



5G Highlight of the Year

The 5th generation of mobile technology (5G) is positioned to address the demands and business contexts of 2020 and beyond. It will enable a fully mobile and connected society that is characterized by a tremendous growth in connectivity, traffic density and volume as well as a broad range of use cases and business models.

NGMN had and still has a central role in the definition of operator requirements contributing significantly to the overall success of LTE. In the meantime, LTE and LTE – Advanced have become truly global and mainstream mobile technology, that will continue to support the customer and market needs for many years to come.

A global initiative has been launched by NGMN to define the end-to-end requirements for 5G. The requirements have been outlined by the operators, in close interaction with all NGMN partners, **in the NGMN 5G White Paper**, to address the needs of customers and markets beyond 2020. The White Paper serves as a guideline for 5G definition and standardization, and also delivers insight into areas of further exploration by NGMN and other industry stakeholders.

**Register online via
ice2015.ngmn.org/registration.html**

Find the latest programme and information on the website.

- A limited number of rooms have been reserved at the Maritim Hotel Frankfurt.
- Significant Group Discounts available!

The content and main messages of the 5G White Paper will be publicly presented at the **NGMN Industry Conference & Exhibition 24-25 March 2015 in Frankfurt / Germany**. Board Directors, senior industry and research representatives as well as subject matter experts will be on stage to share detailed insights and viewpoints, and to discuss in panels and with the audience the White Paper and all related technology and eco-system aspects.

The conference will provide a comprehensive overview on 5G requirements, technology evolution, architecture principles, future services, spectrum demand and IPR policy. In addition you will get a clear and coherent view on the coming years' roadmap and end-to-end solutions including access, core, devices and network management.

**Evening Event
kindly sponsored by Huawei**

Meet colleagues during our entertainment & networking get-together on 24th March! Enjoy an evening with uplifting music, multinational food and cool drinks in a pleasant atmosphere!

Conference Day 1, Tuesday, March 24th 2015

Welcome and Opening

Welcome Note:

Peter Meissner,
CEO, NGMN Alliance

Opening Keynote:

Bruno Jacobfeuerborn
Chairman, NGMN Alliance, CTO, Deutsche Telekom

NGMN 5G White Paper Keynote Session

The NGMN 5G White Paper outlines end-to-end operator requirements that have been developed in close interaction with the NGMN Partners. This session will provide an overview on the structure and content of the White Paper. It serves as an introduction to the following sessions covering the different White Paper sections on "Vision, Business Context and Use-Cases", "Requirements", "Technology & Architecture", "Spectrum" and "IPR".

Speaker: **Rachid El Hattachi**
SVP, Deutsche Telekom

Javan Erfanian
Distinguished Member of Technology, Bell Mobility

White Paper Session on Vision, Business Context and Use Cases

5G is positioned to address the market demand and business environment of 2020 and beyond. It will enable a fully mobile and connected society and will empower socio-economic transformations in countless ways. The industry will see the emergence of new use cases and business models driven by customers' and operators' needs. These will be enabled both by the maturity of current technologies and by the emergence of new key technologies.

This session will highlight the main use-cases, business models and operator value proposition envisaged for 2020 and beyond.

Speaker: **Sandro Dionisi**
Director of Engineering & Telecom Italia Lab,
Telecom Italia

Panellists: **Armando Annunziato**
NGMN Work Stream Lead;
NW Design and Development, Telecom Italia

Bertrand Grau
Principal, Arthur D. Little

Kevin Holley
Head of Standards, Telefónica

Yogesh Malik
Group CTO, Vimpelcom

White Paper Session on Requirements

5G requirements are derived out of NGMN's vision of the potential use cases and business models for 2020 and beyond. NGMN believes that the requirements shall satisfy the value creation that operators intend to deliver to the different types of customers and partners. Requirements have been defined along the six dimensions: User experience, system performance, devices, enhanced service, business models and network management & operation.

Speakers in this session will give an in-depth introduction to the White Paper requirements, highlight the most challenging parameters and will propose priorities.

Speaker: **Li Zhengmao**
EVP, China Mobile Communications Corporation

Panellists: **Eric Hardouin**
NGMN Work Stream Co-lead;
Coordinator of Research on Wireless NW, Orange

Hugh Bradlow
Chief Scientist, Telstra

Joachim Horn
CTIO, Tele2

Tom Keathley
SVP, AT&T

Zhu Peiying
Huawei Fellow, Huawei

Conference Day 1, Tuesday, March 24th 2015 (continued)

White Paper Session on Technology & Architecture

The 5G architecture should be designed in a way to accommodate a wide range of use cases, business and partnership models. The overall aim is to optimize network usage and to address the market needs in an agile and cost efficient manner. Speakers in this session will present the White Paper technology gap analysis, design principles and the initial architecture concepts.

Speaker: **Seizo Onoe**
EVP & CTO, **NTT DoCoMo**

Panellists: **Mikio Iwamura**
NGMN Work Stream Lead;
Director, Wireless Research Group, **NTT DoCoMo**

Russell Hsing
Professor, **National Chiao Tung University**

Uwe Janssen
VP Innovation & Research, **Deutsche Telekom**

Theodore Sizer
VP Wireless Research Program, **Alcatel-Lucent**

White Paper Session on Spectrum

Evolving today's smartphone use cases and expanding into a wide range of new ones with significant traffic growth will require far more spectrum than is currently allocated to mobile broadband. Ensuring the availability of the right amount of spectrum, considering relevant spectrum bands and spectrum management, is key to providing the required consistent user experience across different use cases.

International subject matter experts will provide an overview on spectrum bands for 5G, spectrum management options and the related ITU roadmap.

Speaker: **Alain Maloberti**
SVP Networks, **Orange**

Panellists: **Stefan Apetrei**
NGMN Work Stream Lead;
Dep. Direct., Strategy & Intern. Plan., **Orange**

Simon Wilson
Head of Spectrum Technology, **Telefónica**

White Paper Session on IPR

NGMN is aiming for a transparent and predictable IPR eco-system across the mobile industry that will support the commercial implementation of 5G technologies and will ensure that the business case for 5G is sustainable.

Operator and vendor specialists will discuss the current IPR eco-system and present potential future improvements.

Speaker: **Luke Ibbetson**
Head of R&D Technology, **Vodafone**

Panellists: **Luigi Licciardi**
Head of Tech. Plan and Standards, **Telecom Italia**

Philippe Lucas
SVP International Standards, **Orange**

Martin Natt och Dag
Senior Group Legal Counsel, **Ericsson**

Stefan Engel-Flechsig
Legal Counsel, **NGMN Alliance**

Dirk Weiler
Head of Standards Management & Horizontal, **Nokia**

Services, Vertical Industry Applications & Devices

Demand for new services from end-customers, enterprises and industry verticals like health or automotive will drive and shape the evolution of 5G. This session provides insights into current trends and potential future developments around mobile applications, services and the underlying enabling platforms. Furthermore, the market demand for new devices and chipsets and the related technology roadmap will be discussed.

Speakers: **Luis-Jorge Romero**
Director General, **ETSI**

Günther Ottendorfer
CTO, **Telekom Austria**

Martin Reitenspiess
Vice President/Partner, **Strategy&**

Bernd Adler
VP Platform Engineering Group, **Intel**

Jack Barrett
Senior Director, Strategic Field Marketing, **Juniper**

Stefan Butz
VP New Digital Data- and Business Models, **BMW**

Ralf Jahns
Managing Director, **research2guidance**

Robert Jiang
Senior Manager 5G Wireless, **Lenovo**

Holger Knöpke
VP Connected Home Deutsche Telekom, **Qivicon**

Roberto Minerva
Head of Innovative Architectures, **Telecom Italia**

Benjamin Sarda
Director of Product Marketing, **Orange Healthcare**

Kobi Scheim
Senior Researcher, **General Motors**

Conference Day 1, Tuesday, March 24th 2015 (continued)

Technology Outlook (Research Perspective)

Several 5G research initiatives and programs have been successfully launched. In this session, representatives from leading research institutes will provide their perspective on future technology development, most promising technology candidates and potential challenges. Among others, the speakers will explore topics such as the concepts of full-duplex, tactile internet, mm-wave communication, and information-centric networking.

Speakers: **Chih-Lin I**

Chief Scientist, Wireless Technologies,
China Mobile Research Institute

Gerhard Fettweis

Vodafone Chair Mobile Communications Systems,
Technical University Dresden

Thomas Haustein

Head of Wireless Comm. and Networks,
Fraunhofer Heinrich Hertz Institute

Jiao Bingli

Professor, **Peking University**

Raymond Knopp

Professor, **Eurecom**

Thomas Kürner

Professor, **Technical University Braunschweig**

Rudolf Mathar

Professor, **RWTH Aachen**

Hugo Tullberg

Technical Manager of the METIS project, **Ericsson**

Conference Day 2, Wednesday, March 25th 2015

CTO Keynote Session: 5G Technology and Solutions

Long-term research, thorough strategic planning and a market-oriented technology development is required to build the envisaged 5G platform addressing a breadth of use-cases and business models. Operator and vendor CTO speeches in this session will reflect on the guidelines provided in the NGMN 5G White Paper and will highlight the needs, challenges and requirements from a global and regional perspective.

Speakers and panellists:

Alex Choi

CTO, **SK Telecom**

Hugh Bradlow

Chief Scientist, **Telstra**

Kyungwhoon Cheun

EVP, **Samsung**

Yang Chaobin

Chief Marketing Officer, **Huawei**

Eduardo Esteves

VP Product Management, **Qualcomm**

Ulf Ewaldsson

Group CTO, **Ericsson**

Philippe Keryer

EVP Strategy & Innovation, **Alcatel-Lucent**

Paul Mankiewich

CTO for Service Provider Mobility, **Cisco**

Hossein Moiin

CTO, **Nokia**

Gabriel Treiband

VP Corporate Marketing, **Mediatek**

Innovations in Service Enablement, QoS

Key focus of operators' future technology strategy will be on the enhancement of customer experience and enablement of new services. Vendors from the measurement, testing, monitoring and OSS area are working on solutions to address these needs. Presenters in this session will discuss the main improvement levers, technology developments and the business impact of their respective solutions.

Speakers: **Mats Svärdh**

Head of Group Networks and IT Infrastructure,
TeliaSonera

Jonathan Borrill

Director of Marketing, **Anritsu**

Cyril Doussau de Beizignan

Sen. Dir., Head of Service Assurance Product Line,
Infovista

Frank Galuppo

VP & GM Customer Experience Management, **Spirent**

Anton Messmer

VP Mobile Radio Testers, **Rohde & Schwarz**

Piyush Sarwal

CTO, **IBM**

Conference Day 2, Wednesday, March 25th 2015 (continued)

Technology Outlook (Industry Perspective)

A step-change in performance improvement and fundamental revolutionary changes in the architecture will be needed to meet the outlined qualitative and quantitative 5G requirements. Some leading international vendors which have already launched major initial R&D programmes will present in this session their technology vision and promising first results of their work. The presentations will cover 5G technology candidates, architecture concepts and an outlook on the remaining challenges.

Speakers include:

Michael Fritsch
Consultant, **Telecommunications & Technology**

Michael Färber
Director EU Wireless Research, **Intel**

Roland Gabriel
Senior Director R&D, Electronic, **Kathrein**

David Huo
OSSP - Strategy, **ZTE**

Ping Liang
Co-founder, **RF DSP**

Khurram Sheikh
President, **SiBeam**

Industry Organisations' Global Perspective on 5G

Technology standardisation will be essential for the global success of future 5G solutions and the related ecosystem. It avoids fragmentation and ensures (multi-vendor) interoperability and economies of scale. Given the range of interfaces, network elements and legacy systems, numerous standardization bodies are expected to get involved in the 5G standardization work. In this session, representatives of the most relevant players discuss the main priorities in standardisation, their organisation's roadmap and the need for industry alignment.

Speakers and panellists:

Asok Chaterjee
Executive Director, **TSDSI**

Colin Langtry
Chief of the Radiocommunication SGD, **ITU-R**

Werner Mohr
Chairman Steering Board, **Networld 2020**

Seth Newberry
General Manager, **OMA**

Chris Pearson
President, **4G Americas**

Carl Piva
Vice President, **TM Forum**

Luis-Jorge Romero
Director General, **ETSI**

Alex Sinclair
CTO, **GSM**

Way Forward, Closing

The publication and dissemination of the NGMN 5G White Paper is only the initial step on the roadmap towards 5G launch and deployment. The key objective of NGMN's future activities is that the commercial 5G solutions will fulfil the NGMN requirements. In order to reach this objective, detailed milestones and a roadmap needs to be defined and the necessary steps within the roadmap have to be outlined. Guiding principle is that the migration towards 5G and the development of 5G solutions should be as efficient as possible for the operator and supplier industry stakeholders, and as beneficial and seamless as possible for the end-user.

Speakers: **Rachid El Hattachi**
SVP, **Deutsche Telekom**

Peter Meissner
CEO, **NGMN Alliance**

For more information on the conference venue and accommodation, visit the IC&E 2015 Website.

See next page for Event Sponsor, Exhibition Partners, Co-operation Partners and Media Partners

Event Sponsor:



ERICSSON

Exhibitors:

Alcatel·Lucent

Anritsu
Discover What's Possible™

CISCO

ERICSSON

Fraunhofer
Heinrich-Hertz-Institut



KATHREIN
Antennen · Electronic

NOKIA

RF DSP
Multiplying the Spectrum™

ROHDE & SCHWARZ



TECHNISCHE
UNIVERSITÄT
DRESDEN

Co-operation Partners:



5G Forum

5G IMT



BITKOM

ETSI
World Class Standards

未来移动通信论坛
FUTURE MOBILE COMMUNICATION FORUM



IMT-2020



NETworld

oma
Open Mobile Alliance

tmforum

tsdsi
India's Telecom SDO

UMTS
Forum

wip
wireless industry partnership

WIRELESS WORLD
RESEARCH FORUM

Media Partners:

FierceWirelessEurope
Telecoms EMEA

GIGAOM

MUSTARDPR

TP TELCO PROFESSIONALS
Your Opinions Online

telecoms.com

telesperience

