

# SESSIONS

DAY 1 - 22/06/2021

6G Digital Symposium

22 & 24 June 2021  
Digital Symposium, Online  
Timezone: BST

## Chair's Welcome and Opening Remarks

13:00 - 13:10  
6G Drivers and Players

### Participants

**Dario Talmesio** - Research Director, Service Provider Strategy & Regulation, Omdia

## Address: Towards 6G: the European Agenda

13:10 - 13:25  
6G Drivers and Players

- Motivations and drivers for beyond 5G/6G
- Expectations at EU level, how B5G/6G may contribute to EU policies;
- Promising technologies contemplated under the EU R&I programme
- Status of the "Smart Network and Services partnership" the European vehicle planned under the Horizon Europe R&I programme of the European Union, in support of B5G/6G industrial developments

### Participants

**Bernard Barani** - Deputy Head of Unit, DG Connect – Future Connectivity Systems, European Commission

## Panel Discussion: 4G, 5G and the role 6G is called to play

13:25 - 14:05  
6G Drivers and Players

- Do we need another G?: 6G, 5G+ or Beyond 5G (B5G)
- What are the shortcomings of 5G?
- Anticipating the revolutionary elements of 6G
- Is it time for telcos to stop thinking in 10-year technology cycles and move to a framework that allows gradual incorporation of technologies on a natural tempo?
- Not for humans: Will 6G be a machine-only network?

### Participants

**Moderator: Dario Talmesio** - Research Director, Service Provider Strategy & Regulation, Omdia

**Dr. Qi Bi** - CTO, China Telecom Research Institute and President, China Telecom Technology Innovation Centre

**Prof. Dr. Thomas Magedanz** - Director, Business Unit NGNI, Fraunhofer Fokuz

**Nick Sampson** - Strategy and Programme Committee Co-chair, NGMN and Director, Wireless Access and Core Network Standardisation, Orange

**Ray Dolan** - Chairman and CEO, Cohere Technologies

## 6G to consider societal requirements

14:05 - 14:20  
6G Drivers and Players

- NGMN strategic topics and 6G project
- Motivation and drivers
- A journey towards 6G

### Participants

**Nick Sampson** - Strategy and Programme Committee Co-chair, NGMN and Director, Wireless Access and Core Network Standardisation, Orange

## Break

14:20 - 15:00  
6G Drivers and Players

## Regulator Address: Regulatory Actions Towards 6G

15:00 - 15:15  
Spectrum and Regulation

- Regulators as enablers
- Cross-sectoral cooperation to support the move toward 6G
- Vertical opportunities: for 5G and beyond

### Participants

**Heidi Himmanen** - Chief Adviser, D.Sc. (Tech), Digital Connections, Finnish Transport and Communications Agency (Traficom)

## Panel Discussion: Spectrum policy and management

15:15 - 15:55  
Spectrum and Regulation

- Should we talk about re-farming sooner?
- The role of spectrum sharing in 6G
- Will 6G reinvigorate spectrum trading?
- Spectrum harmonisation
- Coexistence of spectrum for sensing-based, or other, applications
- Why are some countries already prioritising 6G?
- Reviewing publicly funding 6G initiatives and their aims
- Using spectrum sharing to cut costs – as well as data and infrastructure sharing
- Spectrum and interference management

### Participants

**Moderator: Dario Talmesio** - Research Director, Service Provider Strategy & Regulation, Omdia

**Christina Data** - Director of Spectrum Information and Analysis, Ofcom

**Marja Matinmikko-Blue** - Dr.Sc. (Tech), Ph.D., Senior Research Fellow, Adjunct Professor in Spectrum Management, Research Coordinator of 6G Flagship, University of Oulu

**Jon Peha** - Professor, Carnegie Mellon University, former Chief Technologist, FCC

## Break

15:55 - 16:30  
Spectrum and Regulation

## Address: European 6G Flagship Hexa-X view on 6G

16:30 - 16:45  
6G Applications

- Vision on 6G
- Use cases for 6G
- Enabling technologies for 6G

### Participants

**Dr. Mikko A. Uusitalo** - Project Lead, Hexa-X

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## Panel Discussion: 6G use cases: Holography, Internet of Senses and beyond

16:45 - 17:25

6G Applications

- What should come first? The technology or the use cases?
- Realising 5G promises – from digital twins, to predictive maintenance, autonomous driving, holographic communication, internet of senses and more
- Vertical use cases beyond 5G: Enabling sensing and location services apps as well as extreme mobility and fully immersive experiences
- What use cases are not being realised with 5G and will be with 6G?
- Should 6G be more than filling in the 5G gaps? Will it?
- How will vehicular networks change, and will 6G/connectivity be essential for autonomous driving?

### Participants

**Moderator: Dario Talmesio** - Research Director, Service Provider Strategy & Regulation, Omdia

**Rahim Tafazolli** - Regius Professor, Head of ICS, 5GIC and 6GIC, University of Surrey

**David Boswarthick** - Director of New Technologies, ETSI

**Dr. Ioannis Tomkos** - Professor of Optical Communications at the Department of Electrical and Computer Engineering, University of Patras

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## Close of 6G Digital Symposium Day 1

17:25 - 17:30

6G Applications

# SCHEDULE

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TIME	6G APPLICATIONS	6G DRIVERS AND PLAYERS	SPECTRUM AND REGULATION
13:00		<p>13:00 - Chair's Welcome and Opening Remarks</p> <p>13:10 - Address: Towards 6G: the European Agenda</p> <p>13:25 - Panel Discussion: 4G, 5G and the role 6G is called to play</p>	
14:00		<p>14:05 - 6G to consider societal requirements</p> <p>14:20 - Break</p>	
15:00			<p>15:00 - Regulator Address: Regulatory Actions Towards 6G</p> <p>15:15 - Panel Discussion: Spectrum policy and management</p> <p>15:55 - Break</p>
16:00	<p>16:30 - Address: European 6G Flagship Hexa-X view on 6G</p> <p>16:45 - Panel Discussion: 6G use cases: Holography, Internet of Senses and beyond</p>		
17:00	<p>17:25 - Close of 6G Digital Symposium Day 1</p>		

# SESSIONS

DAY 2 - 24/06/2021

6G Digital Symposium

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Digital Symposium, Online

Timezone: BST

## Chair's welcome and opening remarks

13:00 - 13:10

6G New Technologies and Architecture

## Participants

**Daryl Schoolar** - Practice Leader, Omdia

## Will 6G require a new waveform?

13:10 - 13:25

6G New Technologies and Architecture

Significant advances for 6G research, and how Delay Doppler can help address mobility problems for OFDM and be an integral part of OTFS for 6G.

## Participants

**Ronny Hadani** - Co-founder, Cohere Technologies and Associate Professor of Mathematics, University of Texas

## The ATIS Next G Alliance: Advancing North American leadership on the path to 6G

13:25 - 13:45

6G New Technologies and Architecture

- How the Next G Alliance is working to ensure a robust marketplace for North American innovation in future generations of wireless technology
- Addressing the full lifecycle of R&D, manufacturing, standardization and market readiness – for 6G and beyond
- The Roadmap for North American 6G wireless leadership
- How Next G Alliance Working Groups are addressing applications, technology, sustainability, spectrum and more

## Participants

**Brian Daly** - Steering Group Co-Chair, Next G Alliance and AVP Standards & Industry Alliances, AT&T

## Debate: The role of non-terrestrial networks (NTN) in connecting, everyone, everything, everywhere

13:45 - 14:05

6G New Technologies and Architecture

- How will GEO, MEO, LEO interact and complement 'traditional' networks?
- Will NTN operators offer more than connecting the unconnected, or those whose connectivity been disrupted, with 6G?
- Examining the sensing-based applications that NTN operators can bring to market?
- Taking cloud computing to the actual clouds: Can cloud services be hosted on NTNs?
- What will NTNs' role be in the future of edge computing?

## Participants

**Moderator: Daryl Schoolar** - Practice Leader, Omdia

**Kieran Arnold** - Director of Ubiquitous Connectivity, Satellite Catapult

**Aarti Holla-Maini** - Secretary General, EMEA Satellite Operators Association (ESOA)

## 5G Evolution and 6G

14:05 - 14:25

6G New Technologies and Architecture

NTT DOCOMO's concept on 5G Evolution and 6G including:

- Use cases and requirements
- Technology components

NTT DOCOMO's latest activities for 5G Evolution and 6G

## Participants

**Takehiro Nakamura** - VP and MD of 5G Laboratory, NTT DOCOMO

## Break

14:25 - 15:20

6G New Technologies and Architecture

## Panel Discussion: How will the way radio networks are architected change?

15:20 - 16:00

6G New Technologies and Architecture

- Moving to a distributed, cell-free architecture
- How will the RAN need to change for the next generation of networks?
- AI providing maximum mMIMO performance and holographic MIMO surfaces
- Reviewing the physics and new topology of antenna management in 6G
- What are the new waveforms and their requirements?
- The evolution of duplex

## Participants

**Moderator: Daryl Schoolar** - Practice Leader, Omdia

**Ian Corden** - Visiting Professor, Faculty of Engineering & Physical Science, University of Surrey

**Zhisheng Niu** - Professor: Department of Electronic Engineering, Tsinghua University

**Akihiro Nakao** - Chair, Beyond 5G Promotion Consortium

## ETSI's work on 5G Evolution and 6G

16:00 - 16:20

6G New Technologies and Architecture

ETSI's approach to linking EU research to standards, possible approach to 6G standards, how to handle the development of candidate 6G research technologies, and the importance of evolving 5G

## Participants

**David Boswarthick** - Director of New Technologies, ETSI

## Panel Discussion: Security, privacy and trust in the era of extreme connectivity

16:20 - 17:00

6G New Technologies and Architecture

- Will 6G help deal with cyber warfare and threats to national security, or augment the existing challenges?
- AI, blockchain and quantum computing: offering ultra-high security or increasing the attack risks?
- The need for new privacy requirements and the role of distributed ledger technology, or others, to support this
- The need to define trust models, policies, and mechanisms

## Participants

**Moderator: Daryl Schoolar** - Practice Leader, Omdia

**Muriel Médard** - Cecil H. Green Professor of EECS, Massachusetts Institute of Technology

**Brian Daly** - Steering Group Co-Chair, Next G Alliance and AVP Standards & Industry Alliances, AT&T

**Diego Lopez** - Senior Technology Expert, Telefonica

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## Telecom Italia presentation

17:00 - 17:15

6G New Technologies and Architecture

### Participants

Enrico Buracchini - 5G Senior Project Manager, TIM

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## Chair's closing remarks and end of 6G Digital Symposium

17:15 - 17:20

6G New Technologies and Architecture

### Participants

Daryl Schoolar - Practice Leader, Omdia

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<b>14:00</b>	<b>14:05</b> - 5G Evolution and 6G <b>14:25</b> - Break
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