

Registration & Coffee

08:00 - 09:00

The Optical Masterclass Series

Workshop: New Standards

09:00 - 10:15

The Optical Masterclass Series

- New EU telecom rules
- Recent developments in the communications sector impacting the standards
- Overview of standards and standards bodies

Workshop: New Technologies

10:15 - 11:30

The Optical Masterclass Series

- Gamechangers in optical networking technologies
- What's on the horizon for new technologies?

Workshop: Quantum Computing: Quantum Based Communication Explained

11:30 - 12:15

The Optical Masterclass Series

- Building the World's First Integrated Quantum Communication Network
- The applications of such quantum communication from banking to power grids
- Quantum Leap: Is This the Future of Cyber Security?

Networking Lunch Break

12:15 - 13:15

Chair's Opening Remarks - Market Overview from Omdia

13:15 - 13:25

Keynotes

Looking Beyond 400G, Towards 800G and Terabyte Technologies

13:25 - 13:45

Keynotes

- What 800G optical modules and transmissions can offer
- Assessing the current status of 800G optical modules and technologies
- 800G trials and roll-out early learnings – increased capability and maximised efficiency
- Status of and impact of 800G optics rollout

Examining the Changing Topology of Networks and its Implications on End-Users

13:45 - 14:05

Keynotes

- Examining network design best practice
- What impact does network topology have on the performance of a network?
- Making sure end-users are catered for

Panel Discussion: What are the Challenges the Market Growth in the Optical Sector?

14:05 - 14:35

Keynotes

- Understanding when to scale
- Assessing end-user demand
- CAPEX cost considerations
- Short, medium, or long-term ROI projections?

Coffee & Networking Break

14:35 - 15:35

Keynotes

How to Bridge the Connectivity Gap & Increase Market Share?

15:35 - 15:55

Keynotes

- The role institutions, governmental policies and regulation plays in scaling connectivity
- The cost implications of connecting geographies & potential returns of doing so
- Effective roll-out strategies to build market share and grow revenues?

Panel Discussion: The Impact of Terabyte Technologies on Future Service Creation & Delivery

15:55 - 16:25

Keynotes

- Exploring the potential services unlocked with next-generation technologies
- Are cloud gaming / cloud VR the services to justify future network spend?
- Which services will demand a pure optical network?
- What is the potential for more ISPs to use data caps to disincentivize heavy bandwidth use?

Rolling Out a Successful Optical Fibre Deployment and Generating ROI

16:25 - 16:45

Keynotes

- Analysing different business models which map a path to success
- How targets, resources, market structures and geographies can affect rollout plans
- Impacts of a successful deployment and potential impact on service provider revenue growth

Deutsche Telekom Fibre Optics Targets in 2021 and Beyond

16:45 - 17:05

Keynotes

- Doubling the amount of FTTH connections to households in Germany in a year
- The operational challenges of laying 575,000 kilometres of optical fibre in the country
- The economic objectives of our approach
- 3-5 year plan for network success

Chair's Closing Remarks

17:05 - 17:15

Welcome Drinks Reception

17:15 - 18:15

SCHEDULE

DAY 1 - 28/09/2021

NGON & DCI World

28 - 30 September, 2021
Hesperia Tower
Barcelona

TIME	KEYNOTES	THE OPTICAL MASTERCLASS SERIES
08:00		08:00 - Registration & Coffee
09:00		09:00 - Workshop: New Standards
10:00		10:15 - Workshop: New Technologies
11:00		11:30 - Workshop: Quantum Computing: Quantum Based Communication Explained
12:00	12:15 - Networking Lunch Break	12:15 - Networking Lunch Break
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15:00	15:35 - How to Bridge the Connectivity Gap & Increase Market Share? 15:55 - Panel Discussion: The Impact of Terabyte Technologies on Future Service Creation & Delivery	
16:00	16:25 - Rolling Out a Successful Optical Fibre Deployment and Generating ROI 16:45 - Deutsche Telekom Fibre Optics Targets in 2021 and Beyond	
17:00	17:05 - Chair's Closing Remarks 17:15 - Welcome Drinks Reception	17:05 - Chair's Closing Remarks 17:15 - Welcome Drinks Reception

Registration & Coffee

08:00 - 08:45

Chair's Opening Remarks

08:45 - 09:00

Keynotes

Market Status Update - How Shifting Data Requirements will Continue to Shape our Industry

09:00 - 09:20

Keynotes

- How do we support greater levels of bandwidth?
- COVID-19 impacts on data consumption and network demands
- Supply chain management best practice in an era of scarcity

SDN Optical Transport and DCI Networks

09:20 - 09:40

Keynotes

- How SDN helps to create a more holistic view of provisioning of capacity across multi-vendor, multi-domain networks
- The role of AI & Big Data in service provisioning and network operations
- Simplifying control of network management and reducing latency
- Overview of current technology use cases

Panel Discussion: The Journey Towards Open and Disaggregated Optical Networks

09:40 - 10:10

Keynotes

- What are open and disaggregated optical transport networks and why is it being suggested?
- The efforts of ecosystem players in promoting fully disaggregated transport networks
- Examining the pros and cons of disaggregation
- What are the best ways to disaggregate an optical transmission system?

Boosting Your Optical Network Infrastructure Using Automation

10:10 - 10:30

Keynotes

- Is automation needed because of increased bandwidth innovations?
- How advanced automation is a means of reducing OpEx and network availability
- Using automation to test & validate new network features & upgrades prior to rollout

Morning Coffee & Networking

10:30 - 11:30

The Economic Benefits of Innovative Approaches to Organising and Managing Transport Networks

11:30 - 11:50

Keynotes

- Brazilian Use Case: Passing Fibre Optics via Sewage Systems
- How TIM Brasil seeks to take advantage of Brazil's sanitisation framework
- Creating a win-win relationship between telco and sanitisation companies
- The operational challenges of this approach

The Importance of ROADM Technologies in Building a Fully Automated Optical Network

11:50 - 12:10

Keynotes

- ROADM as a key enabler of 400G+ high capacity networks
- Creating optimum efficiency across networks to reduce operating costs and enhance asset utilisation
- Flexibly scaling network bandwidth
- How dynamic can it be?

Panel Discussion: Assessing the Future of Data Centres

12:10 - 12:40

Keynotes

- International modernisation efforts and pilot schemes
- What are digitized data centres?
- The new emerging locations for hyperscale data centre investments. The market shift to Africa and Asia Pacific?

How Edge Computing is Shaping the Future of Data Centres

12:40 - 13:00

Keynotes

- Latency reduction and enhanced security due to proximity of data to the end user
- How edge data centres will complement existing data centre designs
- Increasing green efficiency through reduced power consumption across networks

Networking Lunch

13:00 - 13:50

Chair's Opening Remarks

13:50 - 14:00

Optical Networking

Chair's Opening Remarks

13:50 - 14:00

Data Centre Connectivity

Achieving Higher Performance and Efficiency Using Coherent Pluggable Optics Supported by Automation

14:00 - 14:20

Optical Networking

- How has coherent technology evolved over the years?
- Assessing the complimentary relationship between pluggable and coherent
- Will coherent optics make it to the data centre?
- 400ZR and point-to-point data centre interconnect (DCI) representing new evolutions towards higher capacity, pluggable solutions

Advanced in Data Centre Interconnect and Evolving Data Centre Interconnect Architecture

14:00 - 14:20

Data Centre Connectivity

- How is the data centre interconnect growing?
- Examining the shift to pluggable coherent modules
- 400ZR pluggable modules drive down costs

Addressing Interoperability Issues and Preventing Vendor Lock-In

14:20 - 14:40

Optical Networking

- Reducing infrastructure costs by adopting interoperable and open transponders to replace the mono-vendor supply model
- What are the technical and commercial implications of operators seeking interoperability and openness?

Photonic Technologies for Beyond 400G Ethernet

14:20 - 14:40

Data Centre Connectivity

- Challenges for photonics technologies to meet Data Centre expectations to reach the 400G
- Last developments in PICs for optical communications regarding InP, Silicon photonics, and hybrid integration
- Different form factors for packaging of transceivers: pluggable transceivers vs On-board optics vs co-packaged optics
- Development of standards and automatization to ramp up photonic modules for optical comm applications

Panel Discussion: Advances in Optical Line Systems and the Road to 100 Tbps

14:40 - 15:10
Optical Networking

- C-band, C+L band and Super C-band paving the way for enhanced optical system capacity
- Will existing technologies need an upgrade to support this expanded spectrum?
- The solution for fibre constrained enterprises

Panel Discussion: Going Green/Green IT

14:40 - 15:10
Data Centre Connectivity

- How exponential data growth is contributing to increased power consumptions
- Analysing the environmental impact of multi-tenant data centres
- What strategies can best mitigate increased demands for electrical power?
- The green and sustainable options available to data centre operators

Use Cases, Architecture and Migration Steps for Open Optical Transport Networks

15:10 - 15:35
Optical Networking

Use cases and the SDN reference architecture for open optical networks validated in the 2020 OIF SDN interoperability event and agreed with other 5 operators (Orange, Telia, DT, Vodafone, MTN) within TIP MUST group.

Main technical challenges identified during the migration process towards open optical networks in Germany

- Adapting site infrastructure and installation (e.g., moving from vendor specific monolithic racks with large chassis towards flexible installations.)
- Decoupling OLS and OT license fees

The Impact of Cloud Computing on Data Centres

15:10 - 15:30
Data Centre Connectivity

- Examining the major growth and demand in cloud adoption and what this means for data centres
- Managing redundancy when backup and disaster recovery are in the same location
- Finding crossroads - the balance between cloud and data centres

Afternoon Coffee & Networking

15:30 - 16:00
Data Centre Connectivity

Afternoon Coffee & Networking

15:35 - 16:00
Optical Networking

Software Defining Fibre Broadband - What, Why and How?

16:00 - 16:20
Optical Networking

- Traditional way of deploying FTTH and issues
- How hardware abstraction can bring flexibility and agility
- Using open source technologies to allow for a cost-effective and efficient PON deployment
- Challenges and way forward

Building More Capacity to Power 5G Through Building Greater Numbers of Small Data Centres

16:00 - 16:20
Data Centre Connectivity

- Understanding the impact of edge computing and 5G co-evolving
- The need to locate more capacity and processing power close to end users
- Overcoming technical constraints such as latency

The Developments in New Fibre Optic Sensors

16:20 - 16:40
Optical Networking

- Exploring the growing range of uses for future-proof sensors
- Overview of various fibre optic sensor developments where speed is multiplied by up to 100
- Benefits ranging from safety applications and signal quality improvements

Free Space Optical Communication I A Market Overview

16:20 - 16:40
Data Centre Connectivity

- Outlining the major challenges and developments
- Overview of some of the opportunities this technology may present
- A roundup of some of the key players

Panel Discussion: Are Optics Indispensable for 5G Networks?

16:40 - 17:10
Optical Networking

- Evaluating how optical fibre infrastructure is leveraged by 5G networks
- Will wireless technologies become an obstacle or necessity to adopting next-generation optical technologies?
- 5G's relationship with & reliance on optical networks

Panel Discussion: To Infinity and Beyond

16:40 - 17:10
Data Centre Connectivity

- Bypassing Fibre by supplying satellite internet to modular data centres
- The operational challenges of building a space-based data centre
- Supporting customers who require cloud computing capabilities in hybrid or remote and challenging environments
- Examining various international case studies including the Microsoft, SpaceX and Starlink collaborative project and assessing its potential implications on global communications

Use Case: 5G Ready - Optical Networks

17:10 - 17:30
Optical Networking

- Lessons already learned from deployment of 5G
- How 5G and optical networks are intrinsically linked
- Outlining the timeline of 5G worldwide deployments and how this will impact optical rollout

The Importance of Zero Touch Data Centre Provisioning

17:10 - 17:30
Data Centre Connectivity

- Reducing data centre downtime
- Finding alternatives to manual configuration
- Facilitating network automation
- Easing operational burdens

Chair's Closing Remarks

17:30 - 17:40
Optical Networking

Chair's Closing Remarks

17:30 - 17:40
Data Centre Connectivity

SESSIONS

DAY 2 - 29/09/2021

NGON & DCI World

28 - 30 September, 2021

Hesperia Tower

Barcelona

Drinks Reception

18:00 - 19:30

Beach Party at CAN FISHER, BARCELONA

19:30 - 20:30

SCHEDULE

DAY 2 - 29/09/2021

NGON & DCI World

28 - 30 September, 2021
Hesperia Tower
Barcelona

TIME	DATA CENTRE CONNECTIVITY	KEYNOTES	OPTICAL NETWORKING
08:00	08:00 - Registration & Coffee	08:00 - Registration & Coffee 08:45 - Chair's Opening Remarks	08:00 - Registration & Coffee
09:00		09:00 - Market Status Update - How Shifting Data Requirements will Continue to Shape our Industry 09:20 - SDN Optical Transport and DCI Networks 09:40 - Panel Discussion: The Journey Towards Open and Disaggregated Optical Networks	
10:00	10:30 - Morning Coffee & Networking	10:10 - Boosting Your Optical Network Infrastructure Using Automation 10:30 - Morning Coffee & Networking	10:30 - Morning Coffee & Networking
11:00		11:30 - The Economic Benefits of Innovative Approaches to Organising and Managing Transport Networks 11:50 - The Importance of ROADM Technologies in Building a Fully Automated Optical Network	
12:00		12:10 - Panel Discussion: Assessing the Future of Data Centres 12:40 - How Edge Computing is Shaping the Future of Data Centres	
13:00	13:00 - Networking Lunch 13:50 - Chair's Opening Remarks	13:00 - Networking Lunch	13:00 - Networking Lunch 13:50 - Chair's Opening Remarks
14:00	14:00 - Advanced in Data Centre Interconnect and Evolving Data Centre Interconnect Architecture 14:20 - Photonic Technologies for Beyond 400G Ethernet 14:40 - Panel Discussion: Going Green/Green IT		14:00 - Achieving Higher Performance and Efficiency Using Coherent Pluggable Optics Supported by Automation 14:20 - Addressing Interoperability Issues and Preventing Vendor Lock-In 14:40 - Panel Discussion: Advances in Optical Line Systems and the Road to 100 Tbps
15:00	15:10 - The Impact of Cloud Computing on Data Centres 15:30 - Afternoon Coffee & Networking		15:10 - Use Cases, Architecture and Migration Steps for Open Optical Transport Networks 15:35 - Afternoon Coffee & Networking
16:00	16:00 - Building More Capacity to Power 5G Through Building Greater Numbers of Small Data Centres 16:20 - Free Space Optical Communication I A Market Overview 16:40 - Panel Discussion: To Infinity and Beyond		16:00 - Software Defining Fibre Broadband - What, Why and How? 16:20 - The Developments in New Fibre Optic Sensors 16:40 - Panel Discussion: Are Optics Indispensable for 5G Networks?

SCHEDULE

DAY 2 - 29/09/2021

NGON & DCI World

28 - 30 September, 2021

Hesperia Tower

Barcelona

TIME	DATA CENTRE CONNECTIVITY	KEYNOTES	OPTICAL NETWORKING
17:00	17:10 - The Importance of Zero Touch Data Centre Provisioning 17:30 - Chair's Closing Remarks		17:10 - Use Case: 5G Ready - Optical Networks 17:30 - Chair's Closing Remarks
18:00	18:00 - Drinks Reception	18:00 - Drinks Reception	18:00 - Drinks Reception
19:00	19:30 - Beach Party at CAN FISHER, BARCELONA	19:30 - Beach Party at CAN FISHER, BARCELONA	19:30 - Beach Party at CAN FISHER, BARCELONA

Breakfast Briefing

08:00 - 09:00

Workshop: Fixed 5G and the Evolution to 6G

09:00 - 10:00

Workshops & Submarine Cables

- Introduction to ETSI working group
- Overview of new trends coming up

Workshop: The TeraFlow Project

09:00 - 10:00

Workshops & Data Centres

- New generation of open source cloud-native SDN controllers
- Providing revolutionary features for flow aggregation, management, network equipment integration and AI/ML-based security and forensic evidence for multi-tenancy
- Integrated solution for tackling various B5G network challenges

Workshop: Attracting Next Generation of Talent

10:00 - 11:00

Workshops & Submarine Cables

- Recruiting from STEM backgrounds
- Understanding value system of millennials and Gen Z's

Workshop: The Importance of Secure Supply Chains Post-2020

10:00 - 11:00

Workshops & Data Centres

- Short term vs. long term measures
- Focusing on full scope of vulnerabilities and addressing those early on
- Building resilience through understanding and being transparent about full supplier network

Panel Discussion: Assessing Next-Generation, More Efficient Submarine Cables

11:00 - 11:30

Workshops & Submarine Cables

- Cables allowing for more traffic delivered, more connectivity in high-density subsea branches and reduction in cost per bit
- Larger spectral efficiency and lower power consumption can be achieved through low attenuation
- Subsea fibre cable monitoring trials: seismic monitoring and security
- Discussing the potential impact on the marine environment and ways of ensuring minimal damage is done

Addressing Data Centre Security

11:00 - 11:20

Workshops & Data Centres

- Why data centre security is so important
- The utilisation of access controls and biometrics
- New security surveillance measures
- The use of robotics to ensure zero-touch security

Three's UK £2 billion Data Centre Transformation

11:20 - 11:40

Workshops & Data Centres

- The creation of 20 new data centres across the UK
- Motivations behind the investment
- The applications these data centres will support

Exploring Subsea Architecture & Regulation

11:30 - 11:50

Workshops & Submarine Cables

- Initiative to get a regulator/authority on board to monitor submarine cable deployment
- What is the importance of classing subsea cables as "critical infrastructure"?
- Ensuring subsea communities and the Government maintain a relationship to advance the submarine cable industry

Panel Discussion: DevOps and the Cloud in the Data Centre - Finding a Crossroad

11:40 - 12:10

Workshops & Data Centres

- The limitations to automation of tasks
- Continuous integration and delivery
- Improving the software development lifecycle

Panel Discussion: A New Alternative to How Submarine Cables are Built - Spatial Division Multiplexing (SDM)

11:50 - 12:20

Workshops & Submarine Cables

- Examining the way in which SDM manages to boost capacity
- A closer look at recent successful deployments of SDM technology

Analysing the Nordic Data Centre Boom

12:10 - 12:30

Workshops & Data Centres

- Why Nordic countries are ideal places to invest in data centres
- How Nordic countries stay competitive
- Look at the link between climate change and the increase in renewable power sources to fuel data centre ecosystems

Chair's Closing Remarks

12:20 - 12:25

Workshops & Submarine Cables

Chair's Closing Remarks

12:30 - 12:35

Workshops & Data Centres

Networking Lunch ft. Awards Ceremony

12:35 - 13:30

Quickfire Research & Technology Showcase

13:30 - 13:50

Stay up to date with recent innovations in the industry by joining this session and listening to 4-5 hand-picked solution providers who will showcase their solutions in a quick-fire format. The participants will have up to five minutes to present their innovation, product or service within the Optical Network sector.

Boom in Cloud Adoption

13:50 - 14:10

- Evaluating the impact of the pandemic on the increase in cloud adoption
- Efficient ways in which to manage redundancy and restoration of lost data
- Addressing the importance of cloud cybersecurity

Covid-19 Sandwich Keynote

14:10 - 14:30

- How is the world going to emerge from this?
- Preparing for changes in the market
- Identifying expansion opportunities in this new reality

Chair's Closing Remarks & Close of Conference

14:30 - 14:40

SCHEDULE

DAY 3 - 30/09/2021

NGON & DCI World

28 - 30 September, 2021
Hesperia Tower
Barcelona

TIME	WORKSHOPS & DATA CENTRES	WORKSHOPS & SUBMARINE CABLES
08:00	08:00 - Breakfast Briefing	08:00 - Breakfast Briefing
09:00	09:00 - Workshop: The TeraFlow Project	09:00 - Workshop: Fixed 5G and the Evolution to 6G
10:00	10:00 - Workshop: The Importance of Secure Supply Chains Post-2020	10:00 - Workshop: Attracting Next Generation of Talent
11:00	11:00 - Addressing Data Centre Security 11:20 - Three's UK £2 billion Data Centre Transformation 11:40 - Panel Discussion: DevOps and the Cloud in the Data Centre - Finding a Crossroad	11:00 - Panel Discussion: Assessing Next-Generation, More Efficient Submarine Cables 11:30 - Exploring Subsea Architecture & Regulation 11:50 - Panel Discussion: A New Alternative to How Submarine Cables are Built - Spatial Division Multiplexing (SDM)
12:00	12:10 - Analysing the Nordic Data Centre Boom 12:30 - Chair's Closing Remarks 12:35 - Networking Lunch ft. Awards Ceremony	12:20 - Chair's Closing Remarks 12:35 - Networking Lunch ft. Awards Ceremony
13:00	13:30 - Quickfire Research & Technology Showcase 13:50 - Boom in Cloud Adoption	13:30 - Quickfire Research & Technology Showcase 13:50 - Boom in Cloud Adoption
14:00	14:10 - Covid-19 Sandwich Keynote 14:30 - Chair's Closing Remarks & Close of Conference	14:10 - Covid-19 Sandwich Keynote 14:30 - Chair's Closing Remarks & Close of Conference