Software & Standards for Smart Networks & Services Conference

Posters & Demos

Christos Tranoris

OSL Chair, University of Patras

13/11/2024

Welcome

- Showcase the usage of Open Source software within Standardization for Smart Network and Services
- Investigate synergies between OSS and standardization
- Offer end-to-end open solutions based on OSS

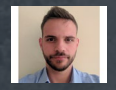
Overview of Demos

- 19 Demos Showcasing the usage of Open Source Software
- ETSI Software Development Groups (SDGs) solutions:
  - OpenSourceMANO – OSM
  - TeraFlow SDN - TFS
  - OpenCAPIF – OCF
  - OpenSlice – OSL
- OAI, prplWare, Open5GS, Free5GC
- EU Funded projects:
  - ACROSS, PRIVATEER, INCODE, Sunrise, ImagineB5G, NANCY, FIDAL, HEXA-X-II, ADROIT 6G
- Organizations:
  - Ubitech, Eurecom, Univ of Patras, UCM, Uni of W Macedonia, PSC-Eu, Nemergernt, Demokritos, 5G-MAG, Telefonica, Optare, Fraunhofer, CTTC, Huawei, FS-com, Nextworks

ETSI
The Standards People

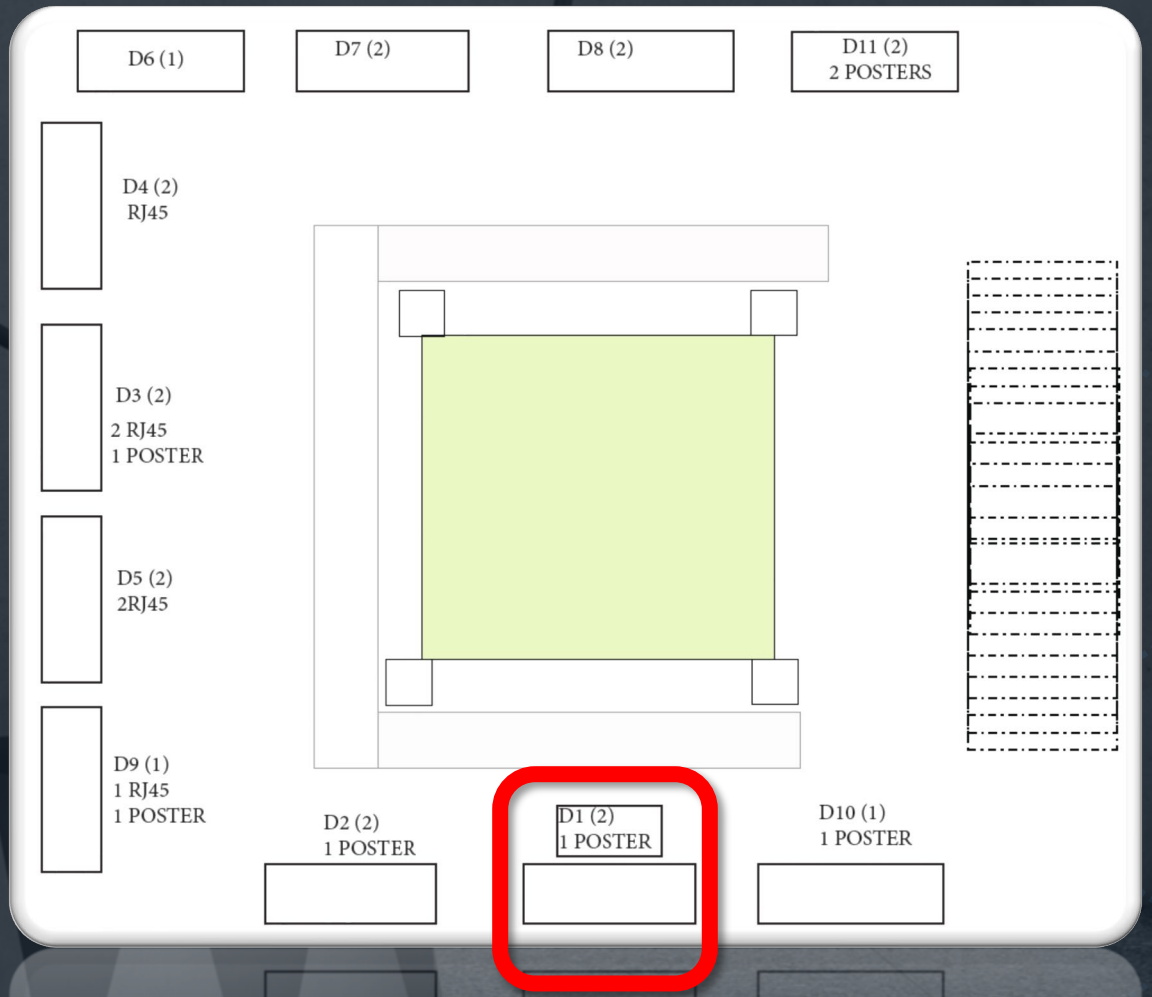
Stands

Stand D1



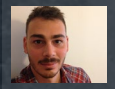
Open Source for Telco-Cloud: An ETSI SDG-based solution to facilitate zero-touch, multi-slice 5G deployments across the cloud-edge continuum.
Presented by Kostis Trantzas, University of Patras

Demonstrating Synergies between ETSI SDG OSL and LF Sylva
Presented by Cristos Tranoris, University of Patras



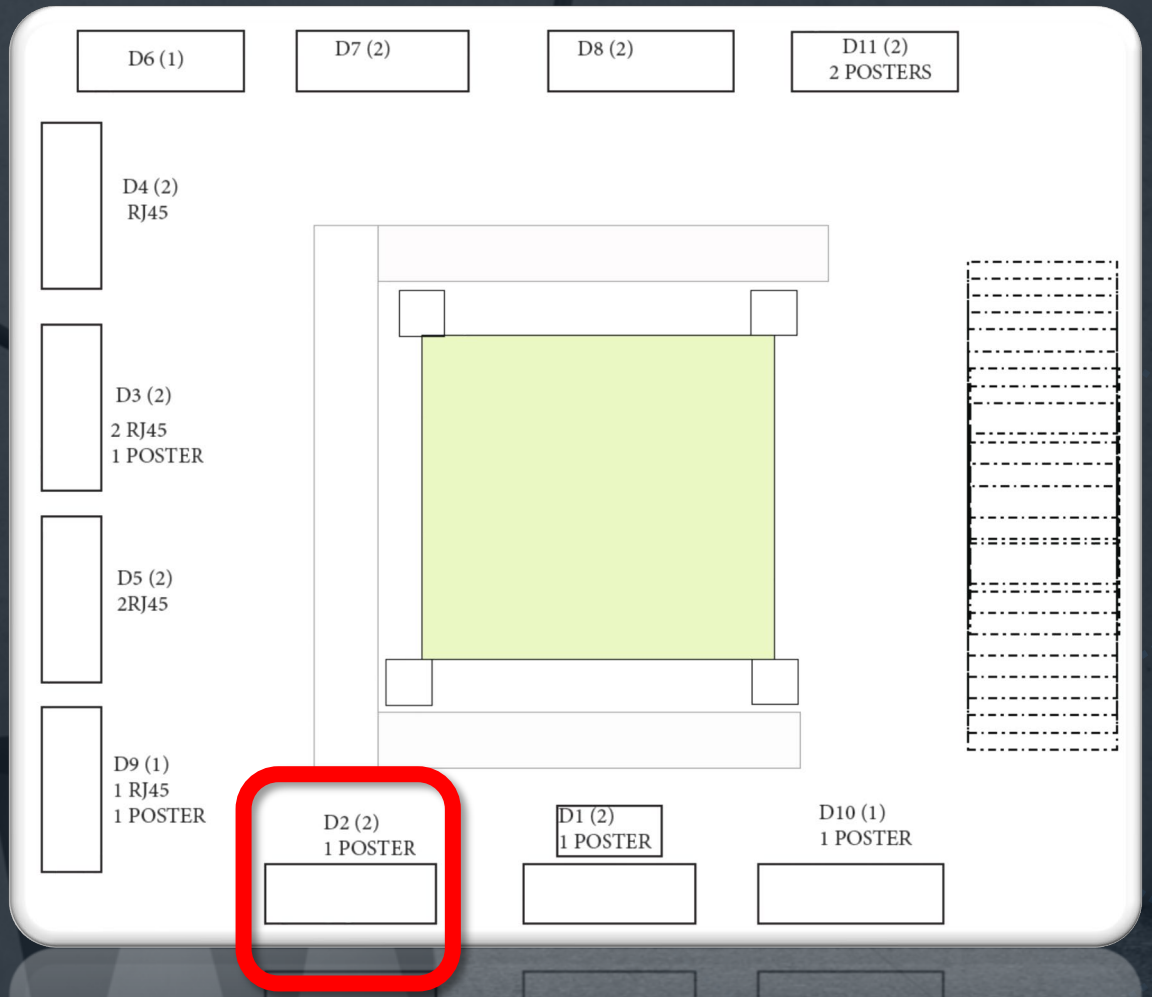
Stands

Stand D2



Joint End-to-End Service and Resource Orchestration with Built-In Telemetry Services
Presented by Alexandros Valantasis, Ubitech

Multi-dimensional Trust estimation for Trust-aware Slicing and Orchestration
Presented by Jesús Angel Alonso, Universidad Complutense de Madrid



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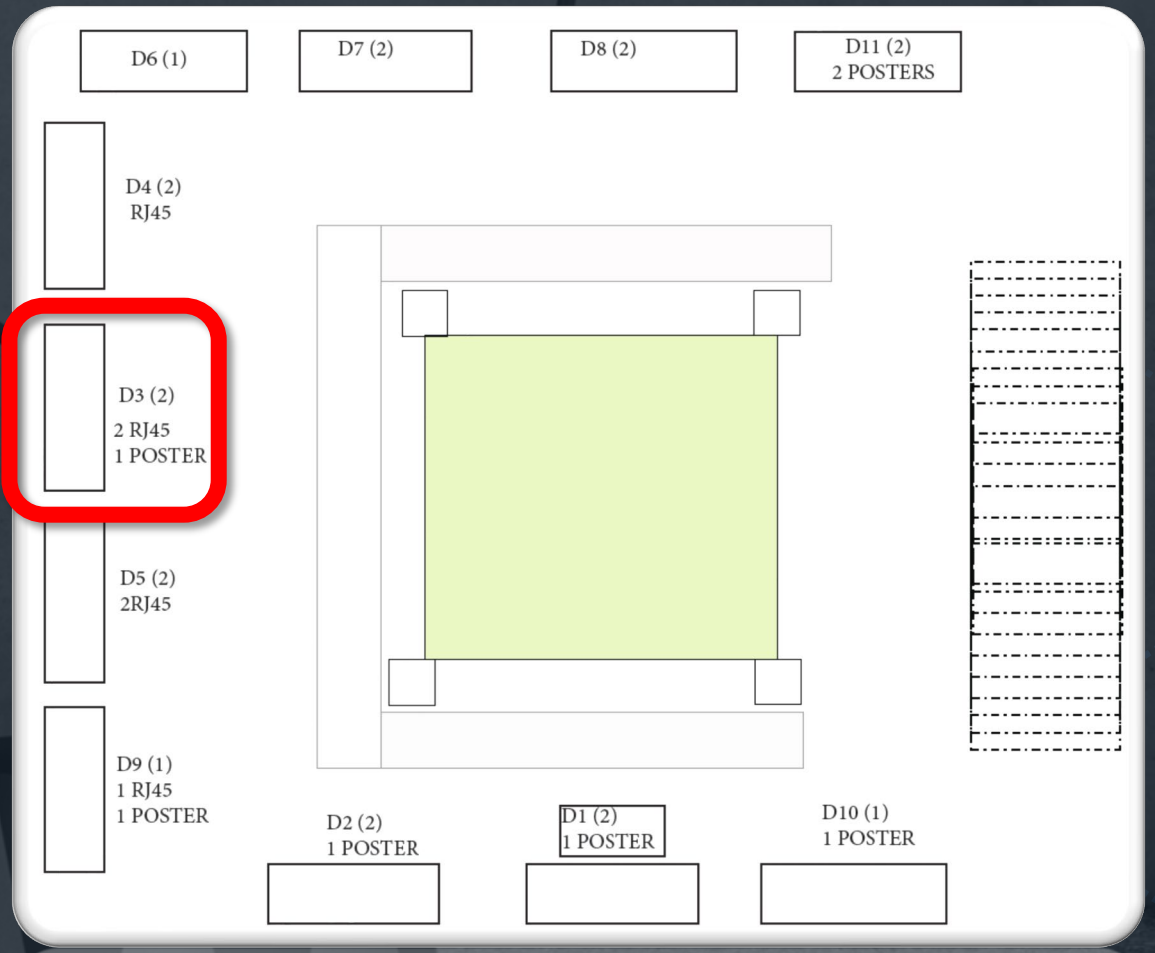
Stand D3

O-RAN-Based 5G Testbed for Public-Private Operator Communication
Presented by Dimitrios Pliatsios, University of Western Macedonia

CAPIF Integration with OAI Network Exposure Function
Presented by Giulio Carota, Eurecom



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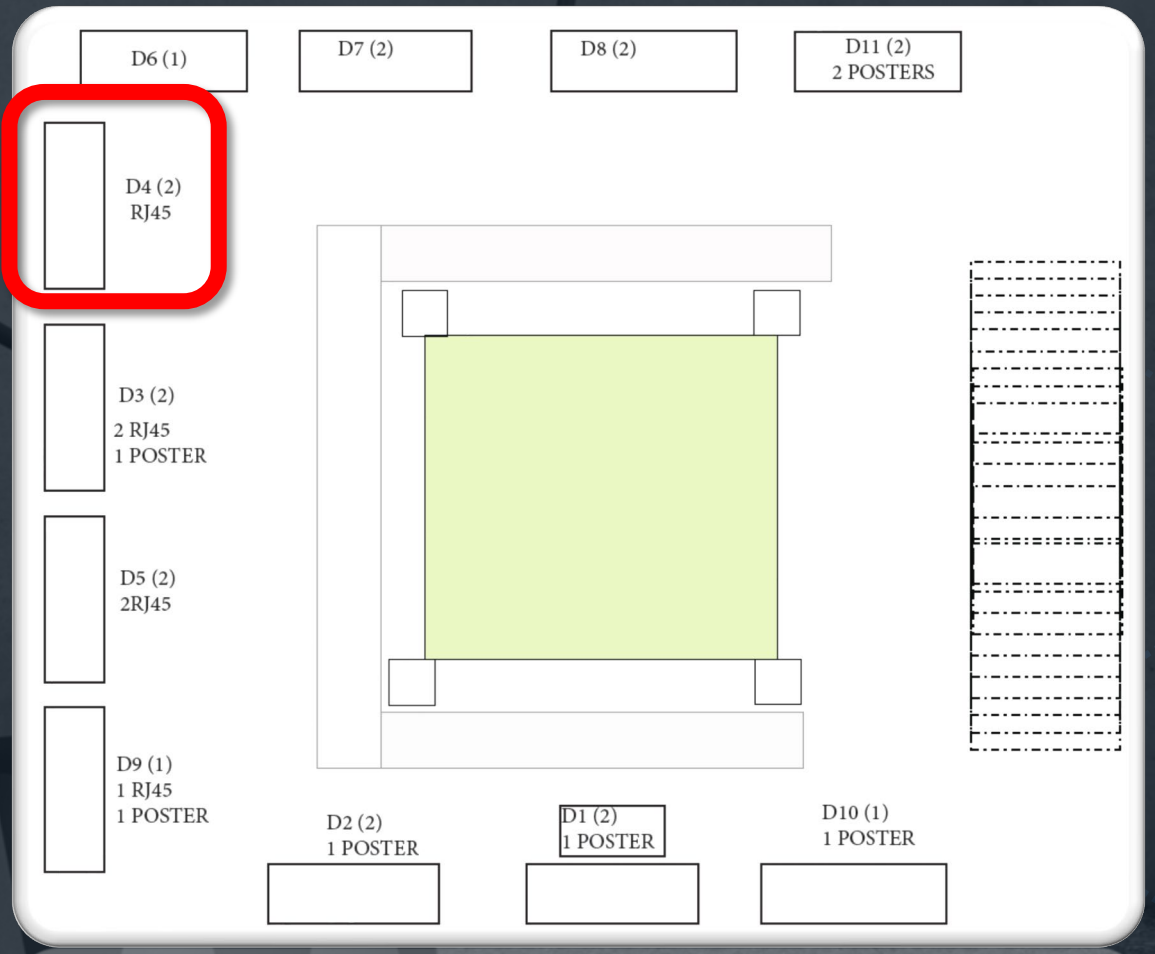
Stand D4

SEAL Exposure and Operation through OpenCAPIF - A Mission Critical Approach
Presented by Iván González Muriel, Nemergent Solutions

OpenSlice as an Enabler of the FIDAL Experimentation Framework
Presented by Vasileios Katopodis, Ubitech

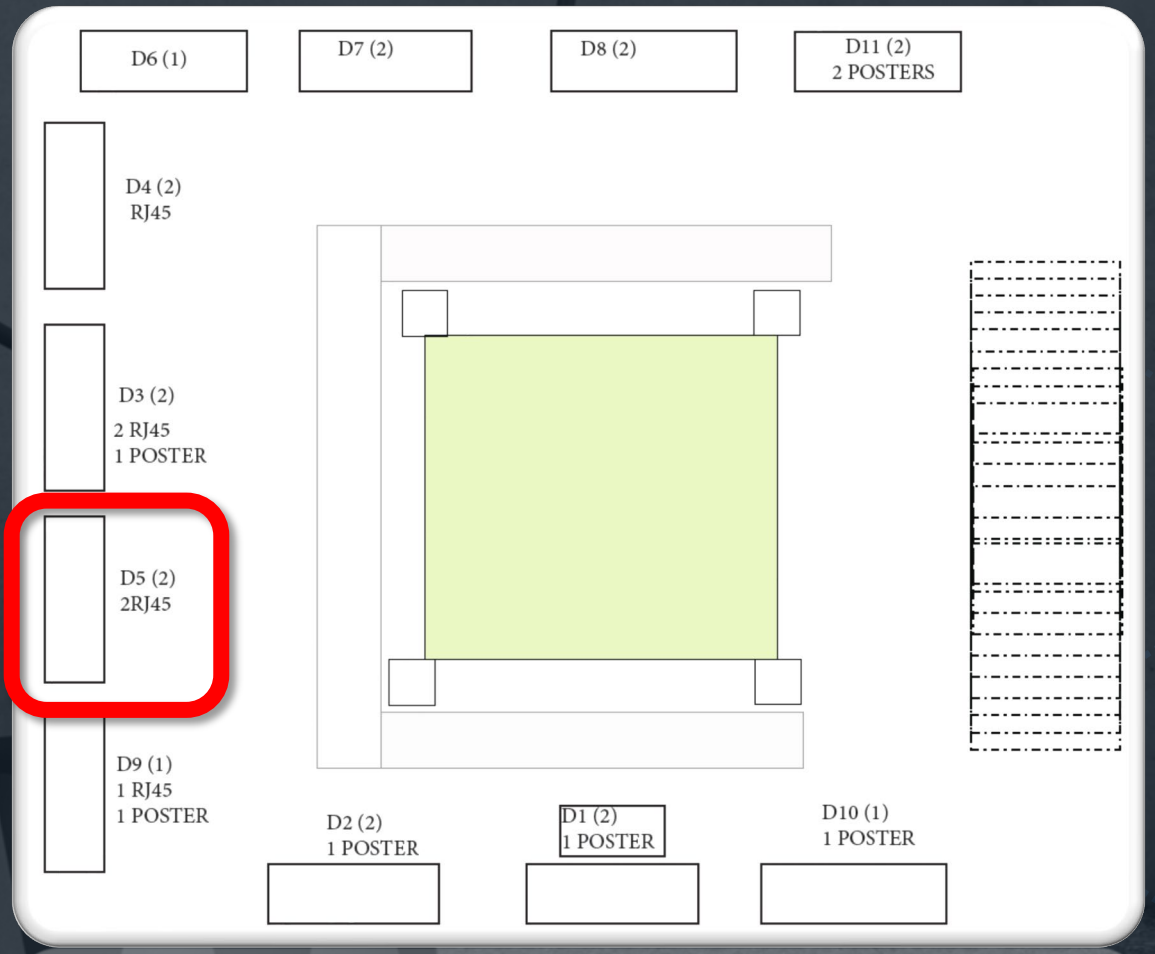


Stands

Stand D5

NEF and OpenCAPIF: Securing Exposed B5G Network Capabilities to Third-Party Apps
Presented by Dimitris Fragkos, Demokritos

Open-CAPIF integration in IoT-Edge-Cloud Continuum Meta Operating System
Presented by Andreas Sakellaropoulos, Demokritos



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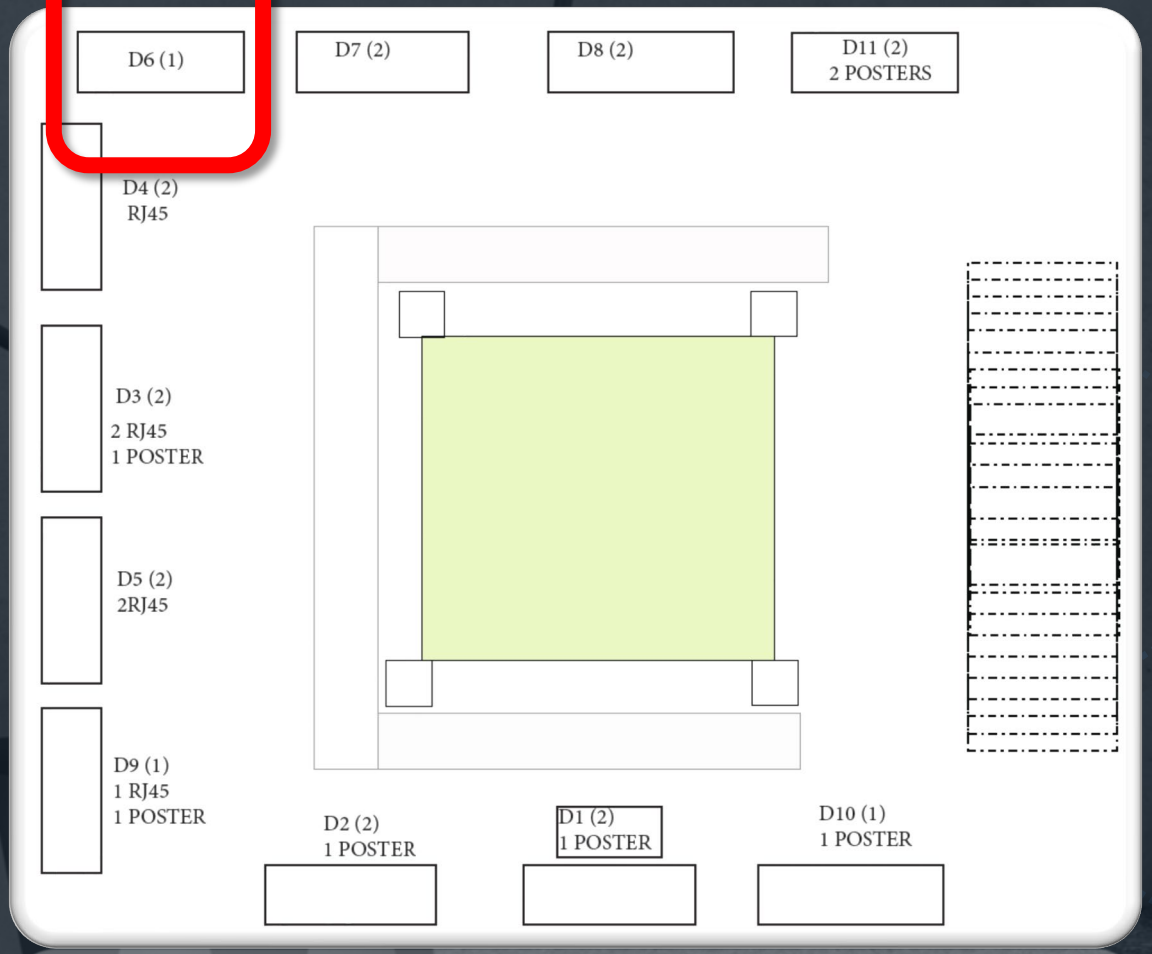
Stand D6

Open Standards & Open Source: Transforming Streaming and Immersive Media with 5G-MAG Reference Tools

Presented by Jordi Joan Gimenez, 5G-MAG



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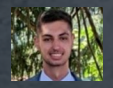
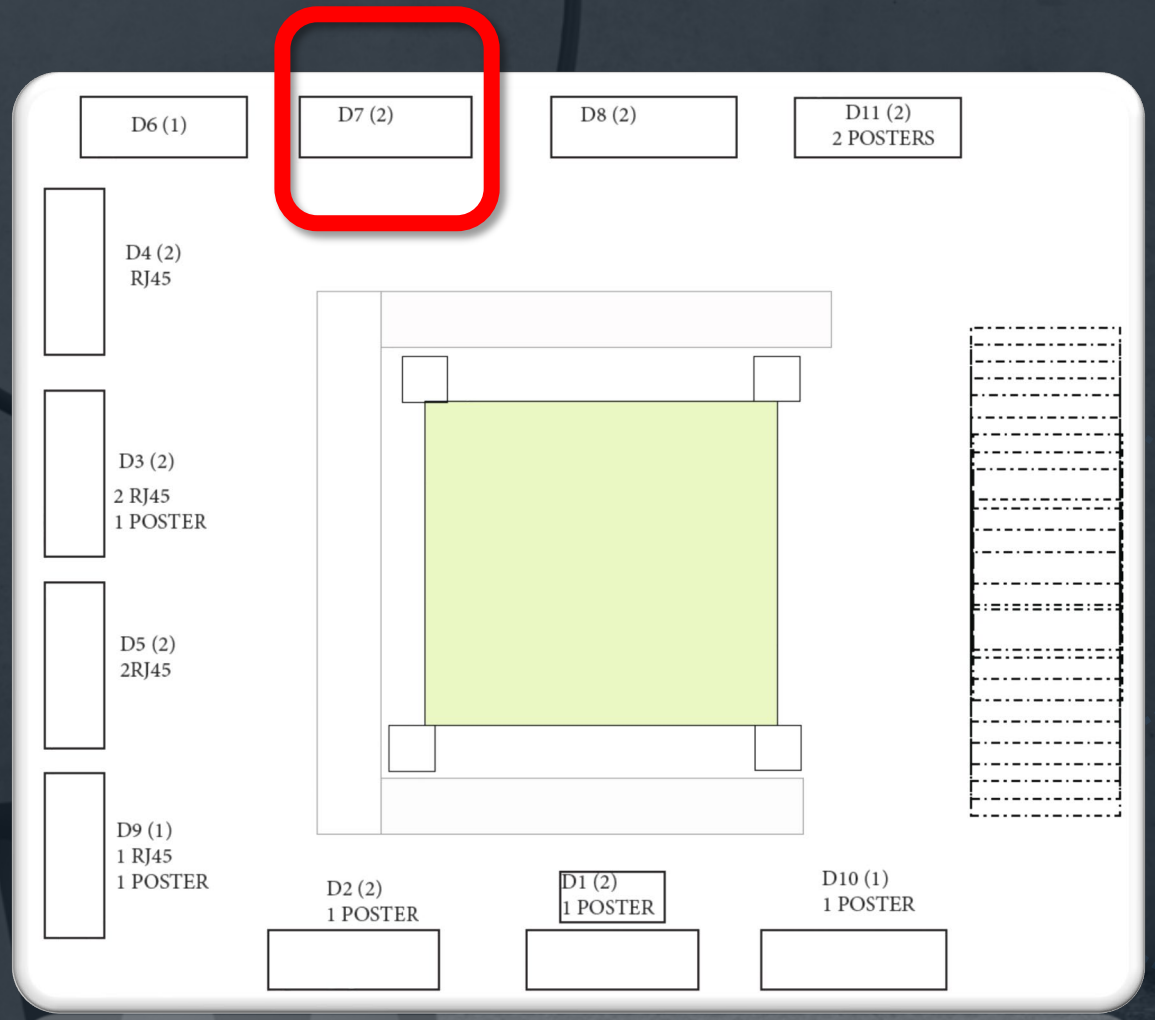
Stand D7

Implementation of Ordered Proof of Transit (OPoT) for traffic flow path verification in the TeraflowSDN ecosystem
Presented by Javier Velázquez Martínez, Telefonica



Multilayer Slicing Control in IP over Optical Networks Using TeraFlow SDN
Presented by Pablo Armingol Robles, Telefonica

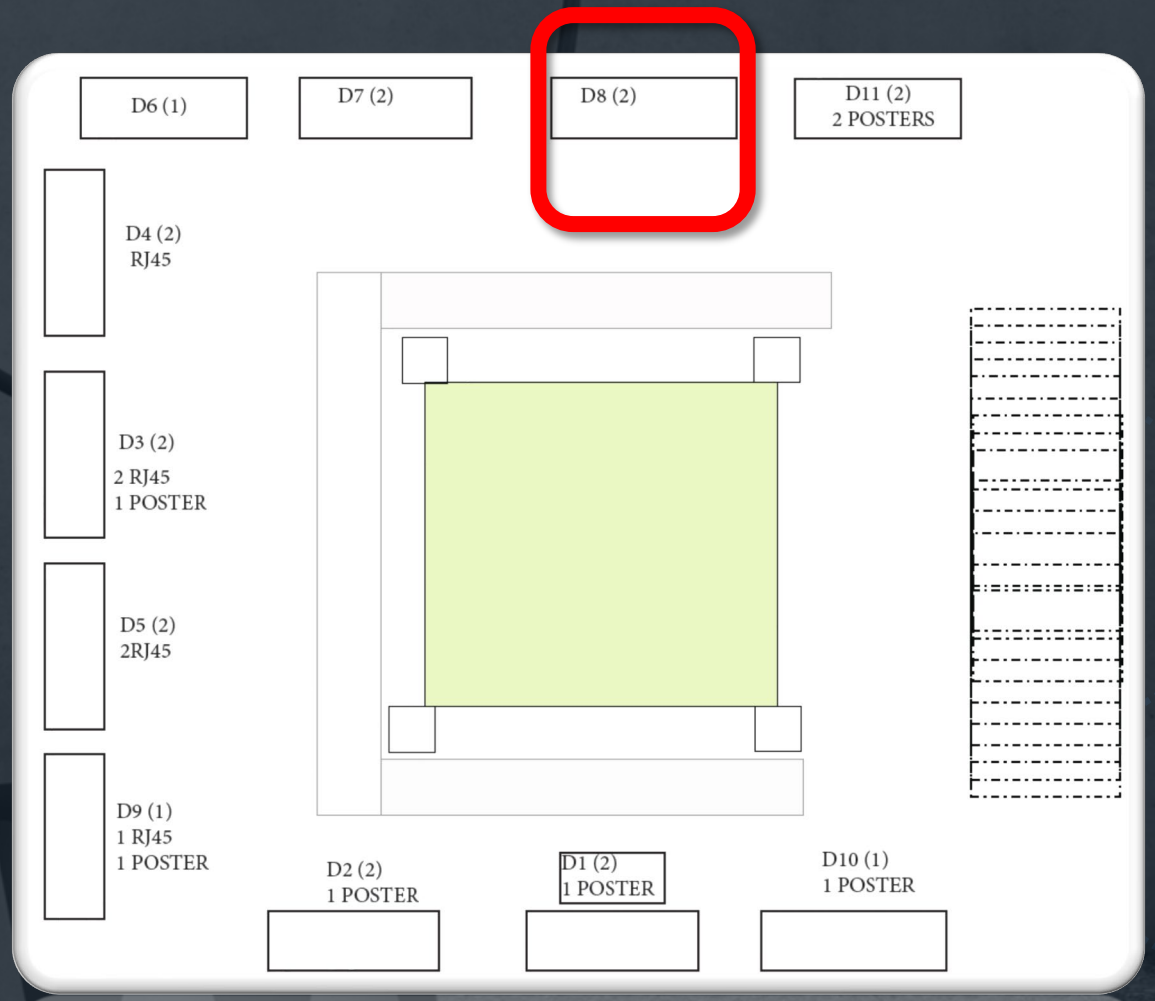


Stands

Stand D8

Integrating Quantum Key Distribution (QKD) with TeraFlowSDN
Presented by Alberto González Barneo, Optare Solutions

Autonomous Link-Capacity Adjustment using TeraFlowSDN Controller in a Disaggregated Optical Network Testbed
Presented by Behnam Shariati, Fraunhofer HHI



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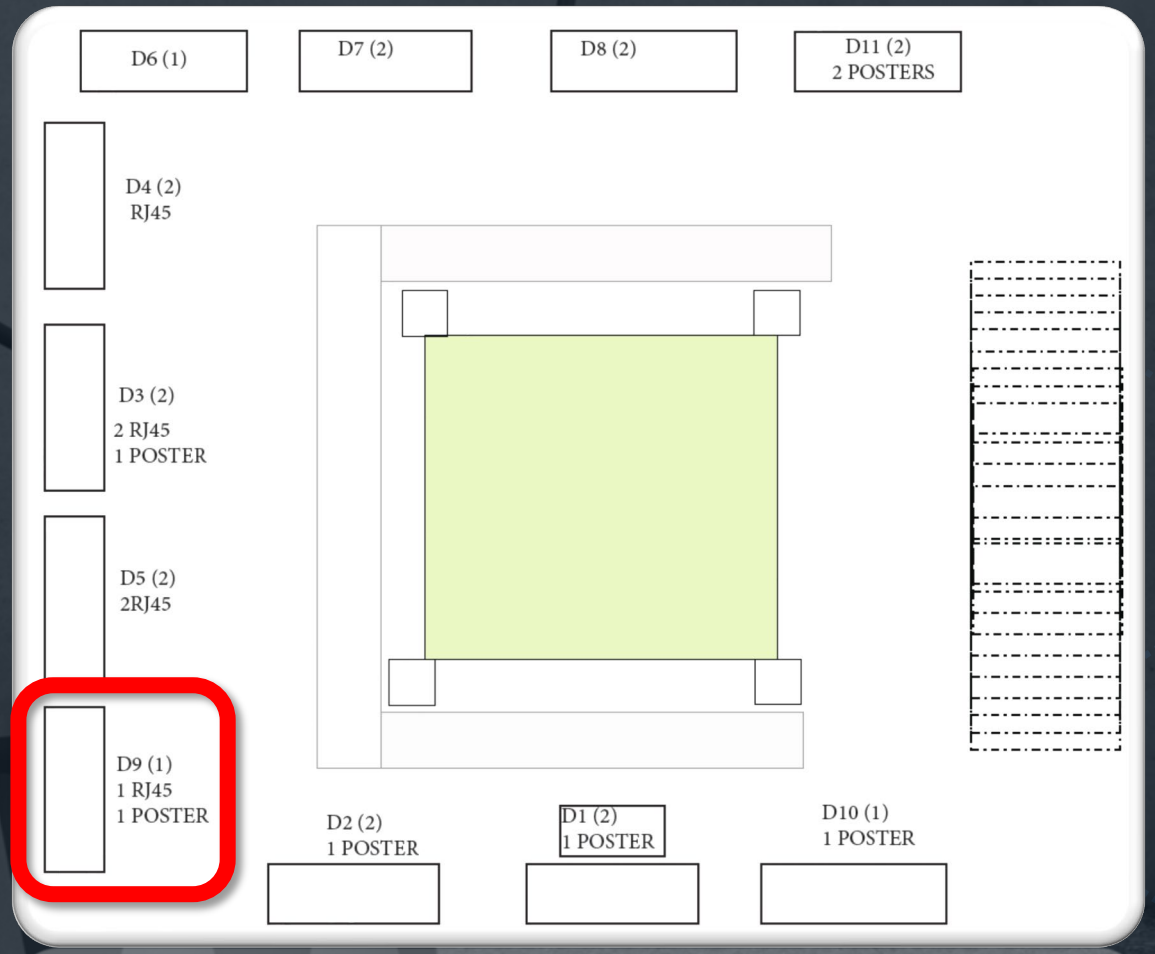
Stand D9

Network Resource Allocation for Gaming Using MEC API and TeraFlowSDN
Presented by Shayan Hajipour, CTTC



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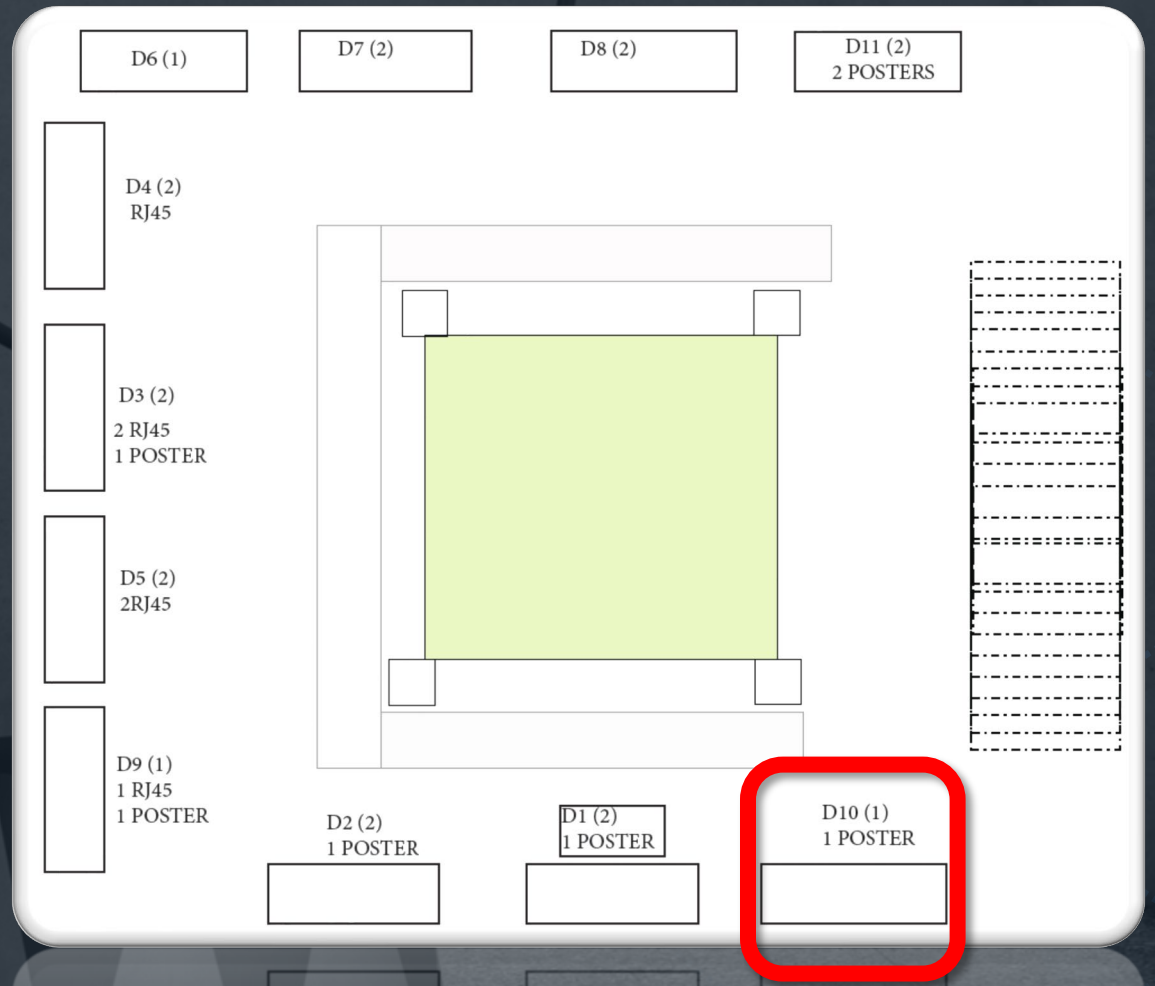
Stand D10

Enabling Cloud AR/VR Gaming Services by an Open-Source and Standards-Based Network-as-a-Service Platform for Control and Management of Optical Networks

Presented by Hesam Rahimi, Huawei



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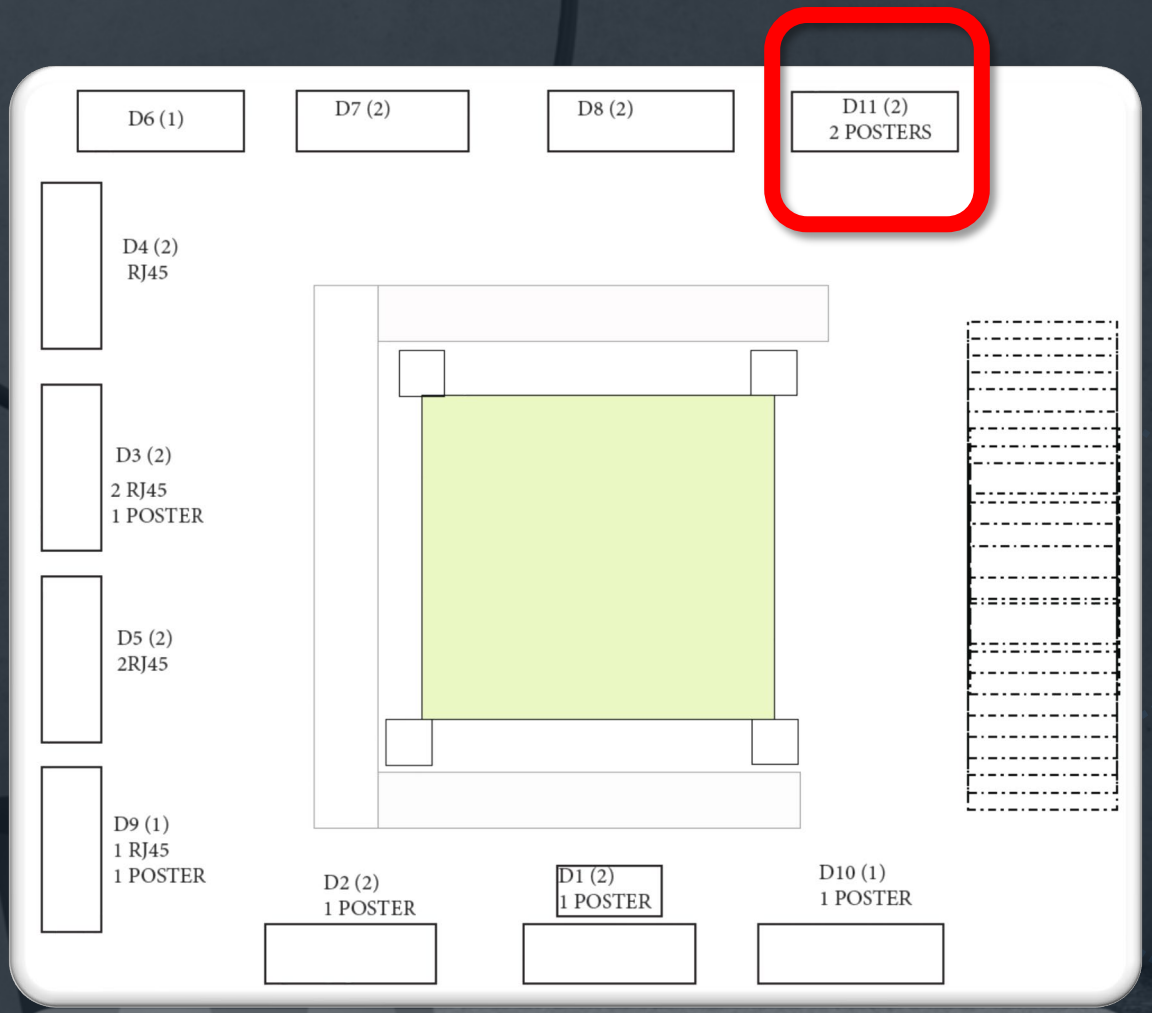
Stand D11

MLOps and zero-touch predictive closed loops for network slice performance optimization
Presented by Giacomo Bernini, Nextworks

API driven MEC Sandbox and Edge Native Connector Feature
Presented by Yann Garcia, FSCOM



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Overview of Posters

13 posters presenting architectures and solutions with OSS

EU Projects: ACROSS, RIGOUROUS UNICO 6G-OPENSEC-SECURITY, UNICO 6G-OPENSEC-TRUST, FLEX-SCALE, FIDAL, ORIGAMI, ETHER, VERGE

Using: TFS, OSM, OSL, OCF, F5G/ZSM, CAMARA, prplWare, Open5GS, Free5GC, OAI, Kubernetes, Prometheus, Thanos, Grafana

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OpenCAPIF Deployment and Integration in FIDAL's Use Case on Haptic Sensing
Presented by Pelayo Torres Alonso, Telefonica

Closed Loop Automation Platform for Intelligent Security Operations with TeraFlowSDN and OSM
Presented by Allen Abishek, CTTC

RIGOUROUS - Human-Centric Service Onboarding with OPENSLICE
Presented by Rafael Direito, Instituto de Telecomunicações de Aveiro, PT

F5G & ZSM PoC: F5G-advanced access and transport network with autonomous service management enabling End-to-end CAMARA QoD Services for Cloud AR/VR Gaming
Presented by Lluis Gifre, CTTC, ES

Multi-Domain Security and Trust Orchestration Leveraging TeraFlowSDN and Open Source MANO
Presented by Shayan Hajipour, CTTC, ES

ZSM-Based Automation for Dynamic Configuration and Monitoring of Packet and Optical Network Layers
Presented by Nikos Psaromanolakis, Ubitech

A Service-Mesh Platform for the Mobile Network Core
Presented by Dimitris Tsolkas, Fogus, GR

Closed-Loop AI/ML Orchestration: Crafting the Next-Gen of Cloud Services with NearbyOne
Presented by Michail Dalgitsis, Nearby Computing

Implementation of a Deep Reinforcement Learning Solution for Radio Access Network Slicing in an Edge-enabled Beyond 5G Architecture
Presened by Oriol Sallent, Universitat Politecnica de Catalunya

prplWare: Open Source Broadband Router Software Solutions
Presented by Wouter Cloetens, prpl

Appropriate Tunneling Protocol in 5G
Presented by Bilal Ghani, Telecom SudParis

Joint End-to-End Service and Resource Orchestration with Built-In Telemetry Services
Presented by Alexandros Valadasis, Ubitech

Experimenting Mission-Critical and UAV Applications over an Open 5G and Edge Testbed
Presented by Christian Grasso, University of Catania,IT

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Posters & Demos

Wednesday 13 November
10:20 - 11:00: Coffee Break, Posters & Demos Visit
12:40 - 14:00: Lunch, Posters & Demos Visit
15:30 - 16:00: Coffee Break, Posters & Demos Visit

Thursday 14 November
10:30 - 11:00: Coffee Break, Posters & Demos Visit
12:45 - 14:00: Lunch, Posters & Demos Visit

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Enjoy your Coffee Break!

While visiting our demos and posters!