Visit our 5G Team at the Mobile World Congress 2017!

Fraunhofer FOKUS will present the testbed 5G Berlin in Barcelona. With the help of the testbed companies and research organizations can try out and test their products for «5G Readiness», to see if within a 5G environment they work smoothly with other components, long before the commercial use and the completion of the standardization processes.

Learn more about 5G Berlin and schedule your personal appointment already today and directly with our team! Contact: Dr. Marius-Iulian Corici

Date: Mon., Feb. 27, 2017 to Thu., Mar. 02, 2017
Location: Barcelona, Spain

Meet our 5G and SDN experts @ hall 7, booth #7 L51 (booth of Berlin Partner).

For more information visit the Mobile World Congress Homepage and www.5g-berlin.org.

Open Baton @ Canonical Booth at the MWC 2017

Meet our NFV experts at the MWC 2017 at the Canonical booth Hall P3 - 3K31. Experience the integration of Juju as Generic VNF Manager into the Open Baton NFV framework. Their powerful runtime management features, autoscaling and self-healing, will be demonstrated using Core Network Dynamics carrier-grade IMS and EPC VNFs.

Mobile World Congress (MWC) 2017
Date: Mon., February 27, 2017 to Thu March 02
The Transfer Center IoT Lab opens its doors

Put the future of the Internet of Things into practice today

In the IoT Lab one can experience the Internet of Things (IoT). Here we develop and test. The Transfer Center IoT Lab of the “Berlin Center for Digital Transformation” invites you to discover IoT applications from various domains.

What can you expect?

1. Talks from leading IoT experts in the industry (BOSCH, Relayr, DEKRA, CISCO)
2. Short overview of the Berlin Center for Digital Transformation
3. Overview over the IoT Lab offerings and its IoT technologies
4. Short presentations and live demonstrations of IoT systems and applications from Industry 4.0, Smart City, Health Care and transport

We cordially invite to a network session afterwards. Here you will have the opportunity to receive answers to open questions, join our IoT network and connect with our IoT experts.

Event Information:

Location: Fraunhofer FOKUS, Berlin
Date: 29. Mar. 2017
Time: 10:00 a.m. - 2:00 p.m.

Participation is free. Seats are limited. Presentations will be in German.

Register here.

#Berlin5GWeek2017:

Based on the big success of the #Berlin5GWeek 2016 we are committed to continue this event series in 2017. Thus reserve in your calendars the period of November 6th - 10th, 2017 for coming back to or joining the #Berlin5GWeek family and join the #Berlin5GWeek to Get your hands on 5G!

Besides the 8th FOKUS FUSECO FORUM the 3rd IEEE NFV-SDN conference will already be an integral part of this event series. For sponsoring and speaking opportunities contact us here.

The #Berlin5GWeek2017 will concentrate on the topics of Software
Networks: Challenges & Opportunities and the Role of 5G
- Understanding SDN, NFV, MEC, FOG, IOT, and 5G

Detailed information on the #Berlin5GWeek2017 can be found here: http://www.berlin5gweek.org

Watch the video with the #Berlin5GWeek2016 impressions and a view of what the future might have in store in 2017 by Prof. Dr. Thomas Magedanz: https://youtu.be/DuVFhhiTlU

The IIoT Forum 2017 will be part of the #Berlin5GWeek2017

On Wednesday, November 8th, the Fraunhofer Industrial Internet of Things (IIoT) Forum is co-located with the Berlin5GWeek and is supported by the Berlin Center for Digital Transformation. It will discuss current and upcoming IoT approaches used in Industrial Internet and Industry 4.0 application areas.

Further information coming soon on berlin5gweek.org

The 8th FOKUS FUSECO Forum 2017 - Part of the #Berlin5GWeek2017

Getting Business and Network Infrastructures Ready for 5G
- First experiences and the way forward

This year we will look on the benefits and risks of this emerging disruptively agile network and service environment driven by the integration of existing and new access network technologies, new software paradigms, like edge computing, network virtualization, network slicing, and programmable 5G Core networks. Together with leading operators, manufacturers, integrators as well as various solution providers we want to assess ongoing technology and business proofs of concept and related 5G testbeds around the globe.

For detailed information visit www.fuseco-forum.org.

FOKUS supports the first ETSI NFV interoperability Plugtest with Open Baton:

From 23rd January till 3rd February 2017, 40 commercial and open source implementations of the second version of the ETSI NFV (Network Function Virtualization) standard that was released in autumn 2016 were tested in Madrid. The Software-based
Networks (NGNI) business unit provided Open Baton, an ETSI NFV MANO compliant and vendor-neutral framework for management and orchestration of network functions.

“We have successfully tested the virtual network functions of 14 participating companies during the two weeks of the first ETSI NFV Interoperability Plugtest in Madrid. We gained a lot of experience managing and orchestrating carrier-grade Virtual Network Functions that will be drivers for further developments of Open Baton”, says Guiseppe Carella from the business unit Software-based Networks (NGNI). „The smooth integration of third-party VNFs and NFV Infrastructures was achieved thanks to the very extensible plug-in mechanisms provided by the Open Baton framework. Providing an extensible mechanism for integrating with different versions of OpenStack APIs, and VNF management system, is a key for success of NFV MANO frameworks.”

Open Baton allows for rapid prototype development of new network functions without the need for changing the orchestrating logic. The platform enables a virtual functional development on an NFV Infrastructure and thereby forms a bridge between infrastructure providers who want to know more about network services and service providers who require suitable infrastructures for the virtualization.

Preceding the Plugtest, a remote-test with 29 Labs was carried out in November 2016. The final evaluation report will shortly be published by ETSI.

For more information visit the NGNI website.

Contact: Guiseppe Carella

___

**OPEN BATON**

**Open Baton minor release 3.2.0 is available!**

The Open Baton team is happy to announce a new minor release of the Open Baton framework. With this minor release the OpenStack plugin provides support for Keystone V3 and the Newton release. Several bug fixes have been pushed, and a new set of features developed during the ETSI NFV Plugtest has been merged upstream. A new set of Open Baton libraries providing an SDK in Go has been published on the repository. The bootstrap process has been further improved to allow the installation of all components using a config file. Ongoing work includes the re-implementation of the Juju VNF in python, and a Docker VNF Manager to allow respectively the deployment of juju charms and docker containers.

In case of questions feel free to write to us: info@openbaton.org

For further information on Open Baton visit: www.openbaton.org
Fraunhofer FOKUS deployed IoT/M2M testbed at Institute for Information Industry Taiwan

Experts from FOKUS deployed an IoT testbed based on OpenMTC platform at III Taiwan. During three days on-site visit a tutorial was given that covered OneM2M standard introduction as well as an overview of OpenMTC platform with practical examples to get hands-on experiences. With the OneM2M standard compliant platform III Taiwan has the technical foundation to orientate further research activities towards M2M/IoT. The OpenMTC platform aggregates the data of connected sensor and actuator. Additionally, the OpenMTC dashboard is able to visualize the status of managed sensors as well as control actuators. Furthermore, an interface was integrated that supports vertical handover between Wi-Fi and LTE of gateways that support connection to an managed wireless core network (EPC).

More information on the IloT Center website and on the OpenMTC website.

OpenIoTFog – Connectivity, Communication, Data and Programmability in the Industrial Internet

With the OpenIoTFog toolkit the Fraunhofer FOKUS Industrial Internet of Things (IIoT) Center developed a vendor-agnostic solution of an Industry 4.0 component.

The middleware represents a so-called Asset Administration Shell (AAS) in order to integrate existing physical, industrial systems into factories of the future as a digital twin. Thus, customers can gain their first experiences with Industrie 4.0 and can already generate added values today. Based on concepts from consortia such as the Industrial Internet Consortium (IIC) and the Plattform Industrie 4.0, the plug-and-play framework gathers data from various sensors via industrial field bus systems and various (industrial) wireless technologies and standardizes, communicates and aggregates them through secured standard-compliant interfaces. In addition, functions can be orchestrated onto the devices for local data analysis and actuation.

More information on the IIoT Center, the OpenIoTFog and on the OpenMTC websites.
The Second International Workshop on Software-Driven Flexible and Agile Networking

**Date:** Mon., May 01, 2017 to Thu., May 04, 2017  
**Location:** Atlanta, USA

The Second International Workshop on Software-Driven Flexible and Agile Networking will be held in conjunction with IEEE International Conference on Computer Communications in Atlanta (USA). Giuseppe Carella is TPC member.

[More information]

5GMan 2017

**Date:** Mon., May 08, 2017 to Fri., May 12, 2017  
**Location:** Lisbon, Portugal

The Second IFIP/IEEE International Workshop on Management of 5G Networks (5GMan 2016) will be held in conjunction with the IFIP/IEEE International Symposium on Integrated Network Management. Giuseppe Carella is TPC member.

[More information]

7th IEEE Global Wireless Summit

**Date:** Sun., Oct. 15, 2017 to Wed., Oct. 18, 2017  
**Location:** Cape Town, South Africa

T. Magedanz is TPC Co-Chair: 7th IEEE Global Wireless Summit "Towards a virtualized communications world – Challenges and Opportunities", Cape Town, South Africa, October 15-18, 2017, Website coming up soon under [www.ieee-gws-17.org](http://www.ieee-gws-17.org)

[Call for Participation – Meet the FOKUS Experts]

Mobile World Congress (MWC) 2017

**Date:** Mon., February 27, 2017 to Thu March 02 2017  
**Location:** Barcelona, Spain

Meet our 5G experts @ hall 7, booth #7 L51 and our NFV experts @ the Canonical booth Hall P3 - 3K31.

[Visit the MWC17 Website]

Informa Network Virtualization Europe

**Date:** Wed., Mar. 29, 2017 to Fri., Mar. 31, 2017  
**Location:** Madrid, Spain,

T. Magedanz: "Lessons learned from the Fraunhofer FOKUS 5G ready Trial Platform within the Berlin 5G Testfield Initiative", Informa Network Virtualization Europe. Topics are: Understanding the relationships between Edge Computing, NFV, Network Slicing and 5G; Fraunhofer FOKUS 5G Playground, IIOT Lab, and Open Baton for flexible E2E MANO; Berlin 5G Testfield Initiative and the FOKUS 5G-Ready Trial Platform; Enabling Flexible E2E Slicing within the EU/Japan 5GPagoda Project and Introducing the IEEE SDNI Open Source Toolkits & Testbed Catalog

[Find out more here]

Opening Event Transfer Center IoT Lab

**Date:** Wed., Mar. 29, 2017  
**Location:** Fraunhofer FOKUS, Berlin

The Transfer Center IoT Lab of the Berlin Center for Digital Transformation invites you to explore IoT applications from different areas.
Informa 7th annual Policy Control

Date: Tue., Apr. 04, 2017 to Wed., Apr. 05, 2017  
Location: Maritim ProArte, Berlin, Germany

A. Corici, T. Magedanz: "Realizing the Promise of Policy Control in 5G", Informa 7th annual Policy Control  
"UNLEASHING DYNAMIC POLICY CONTROL FOR THE VIRTUALIZATION ERA", Maritim Pro Arte, Berlin, Germany

Get more information [here](#).

The Open Group, Smart Cities – Making Standards Work

Date: Mon., Apr. 24, 2017 to Wed., Apr. 26, 2017  
Location: Berlin, Germany

T. Magedanz: "The role of 5G technologies for the digital transformation and the Internet of Things in Smart Cities", invited speech, The Open Group, Smart Cities – Making Standards Work, Berlin, Germany, April 24-26, 2017

For further information, please visit the [event site](#).

building IoT

Date: Wed., May 03, 2017 to Fri., May 05, 2017  
Location: Heidelberg, Germany

Meet our IIoT experts at the building IoT!

More information (only in German)

IoT Forum

Date: Tue., June 06, 2017 to Fri., June 09, 2017  
Location: Geneva, Switzerland


Read more about this event [here](#).

Digital Economy Show (ES) 2017

Date: Thu., June 15, 2017 to Thu., June 15, 2017  
Location: Expo Guadalajara Convention Center, Guadalajara, Mexico


More informations soon [here](#).

Informa Evolved Packet Core World Forum
**Date:** Thu., Sep. 21, 2017 to Fri., Sep. 22, 2017  
**Location:** Berlin, Germany

T. Magedanz: “From OpenEPC to Open5GCore – enabling flexible 5G core network prototyping” Informa Evolved Packet Core World Forum, Berlin, Germany, September 21-22, 2017. Topics are: Understanding 3GPP 5G core Network design principles; Lessons learned from OpenEPC; Open5GCore enabling flexible 5G core network prototyping; A snapshot of international 5G Testbed roleouts and PoCs based on Open5GCore

[Learn more about this event here.](#)

---

**Network Virtualization and SDN Asia**

**Date:** Tue., Oct. 03, 2017 to Wed., Oct. 04, 2017  
**Location:** Marina Bay Sands, Singapore

T. Magedanz: “Flexible Edge Computing Implementations based on Open Baton as ETSI MANO Solution” Network Virtualization and SDN Asia, Topics are: Introducing the IEC Edge Computing White Paper; Understanding the relationships between Edge Computing, FOG, MEC, NFV MANO, and 5G; Open Baton for flexible E2E MANO within 5G and Edge Computing Infrastructures; Introducing the Fraunhofer FOKUS 5G Playground, IIOT Lab, and relevant OpenXXX Toolkits - Introducing the IEEE SDNI Open Source Toolkits & Testbed Catalog

[Learn more about this event here.](#)

---

**Sincerely Yours,**

Prof. Dr. Thomas Magedanz and the Fraunhofer FOKUS NGNI and TU Berlin/AV teams

---

**About Us**

If the content of this e-mail is not displayed correctly, please download this newsletter as a [PDF file](#).  
This and previous newsletters are available [here](#).