Cutting edge cloud technologies: 5G, Cloud and IoT, Fog computing

Panel

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Premise

- The European Commission, in a recent communication (April 19th), has identified 5G and Internet of Things (IoT) amongst the ICT standardisation priorities for the Digital Single Market (DSM).
- PANEL on the emergence of the mobile edge computing paradigm to reduce the latency for processing - near the source -large quantities of data.
- Mobile Edge Clouds have the potential to provide an enormous amount of resources, but offer several research challenges related to the resilience, security, data portability and usage due to the presence of multiple trusted domains, as well as to energy consumption of battery powered devices.

Premise

- Large and centralized clouds have been deployed and have shown how this paradigm can greatly improve performance and flexibility while reducing costs.
- However, there are many issues requiring solutions that are user and context aware, dynamic, and with the capability to handle heterogeneous demands and systems.
- This is a challenge triggered by the **Internet of Things (IoT) scenario**, which strongly requires cloud-based solutions that can be dynamically located and managed, on demand and with self-organization capabilities.

Questions

1. **5G and fog computing** are meant to impact the vertical industries and contribute to provide new or enhanced services. Do you think that the European and Brazilian economy and technology infrastructures are ready to integrate such solutions? What are the main barriers to be addressed by 2020? and which are the opportunities?

2. Pushing computation and storage to the edge addresses potential infrastructure and connectivity limitations of cloud-only IoT architectures. Trust, service and application orchestration, resilience, and analytics still remain important challenges. In your opinion, what should be the role of industry in driving academia to address these challenges?

Questions

3. The EU sees 5G as the main driver for the Digitalisation of industry and society. But what are the main security challenges? Do you think 5G will change security and trust relationships and how?
4. Standardisation helps towards interoperable solutions. How is Brazil cooperating with Europe on 5G standardization and what is the status worldwide??
5. The standardisation landscape is very fragmented with many SDOs and standards proposed in cloud and even more in IoT. What policy makers and industry can do to avoid a fragmented market hindering interoperability?

Panelists

- **José Gustavo Sampaio Gontijo**, SEPIN/MCTIC, Brazil
- **Afonso Lamounier Jr.** Vice President Government Relations, SAP Latin America and Caribbean, SAP, Brazil
- **Flavio Lenz Cesar**, Central Bank of Brazil, Brazil
- **Carsten Oliver Schirra**, Head of Philips Research Brazil
- **Sergio Takeo Kofuji**, Assistant Professor at the University of São Paulo, Coordinator to FI WARE LAB in University of São Paulo, Brazil