IFIP IoT 2021
Special Session

Integration of IoT in Critical Systems

Scope

The IoT artifacts are essential parts of systems responsible for critical processes or services. How to organize them as composing or shared elements is challenging. Despite the paramount importance of how IoT active things plug a communication network, namely which protocols and safety mechanisms they use, it is further essential to formalize which system abstraction is responsible for the IoT things and how other systems share them. With the trend for total integration as a critical requirement for industry 4.0, smart cities, and other complex systems, there is a need to position the IoT elements under clear “responsibility borders”, structuring the complex system of systems technology landscapes. The proposed session aims to discuss approaches and strategies to develop such systems. Despite significant standardization efforts, e.g., by the European Telecommunications Standards Institute (ETSI), the ongoing digital transformation needs novel models and open standards for integrating IoT components as active elements of multi-supplier technology landscapes. Among others, a critical question is how to model and construct a (critical) system of systems based on multi-vendor (product) and multi-supplier (product and services) IoT, clearly identifying the responsibility of each part.

Session Organizers

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Topics / Keywords

- Responsibility and Governance Models.
- Integration Architectures.
- IoT Bus.
- IoT as a Service.
- Cyberphysical System (CPS).
- Informatics System (ISystem) System of Systems (SoS).
- IoT and Cloud Computing.
- Mobile Computing and IoT.
- IoT Open Standards.
- IoT Protocols and Applications
- Industry IoT and Control, OPC-UA.
- Systems of Systems and IoT Open Architectures.
- Critical Systems and IoT.

All papers must be written in English. Full papers should be at most 18 pages long in total including references and appendices. The paper should be intelligible without having to read the appendices. Poster presentations should be at most 4 pages. Submissions should not be anonymized.
Authors must follow the Springer formatting instructions. For paper submissions go to https://easychair.org/conferences/?conf=ifipiot2021

Deadlines:

Abstract Due - 15 May 2021
Full Paper Due - 15 June 2021
Notification of Acceptance - 31 August 2021
Deadline for final version - 15 December 2021