



Sensor2Fog2Cloud2 Application Platform for Smart Implementations

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Abstract:

Create a concept for open distributed cloud platform based on the Internet of Things, 5G and fog/cloud computing that uses standard interfaces Smart solutions have to be circular and in equilibrium. The platforms are heterogeneous and should be scaled. Soil and water are critical resources for the safety of life IoT and ICT could support it. Requirements to the Smart Management Platforms Stakeholders and end-users need Key Performance Indicators (KPIs) definition Legislation national, international, regional Raw data collection, what and how. Do we need all the data to be stored? Data sharing – open data, data privacy, data customization Security at all levels Services - proprietary, customised, common Possibility to integrate existing platforms at all levels digitization means analogue and digital measurements converted to digital raw data and supporting digital management services Methodology for Requirements. Analyses Communication infrastructure is expected to be: Open, Hierarchical in layers and planes based on standard interfaces and protocols, Encapsulating data, Dividing management from the control and monitoring features, Interoperable by means of data sharing through gateways at different layers, integrable through gateways at different layers, Heterogeneous by default, capable to define services based on the end-user and stakeholder needs, capable to be support short-term and long-term plans for standardization, customised for smart management systems because the implementations are different Methodology for Requirements' Analyses In the cloud the platform should define Notion, positive and negative implementations, Features, Generic features, Abstraction, Interoperability, Classification, Feature dependencies This leads to the ontologies implementations. Sensor-to-Cloud Solutions Sensors for data access, collection and device management, Raw data collection, time stamping, position stamping, Raw data harmonization at different, cloud layers, Data storage, Data processing, Southbound interfaces at access/edge



networks ,Northbound interfaces at edge/core networks Micro and macro (monolithic) services at Cloud layers: Smart dust computing correlated to the access network, Dew computing correlated to the access network, Fog computing correlated to the edge network, Cloud computing correlated to the core network.

Biography:

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