ITU Kaleidoscope 2014
Living in a converged world - impossible without standards?

# TON SOFTWARE STANDARDS FOR SMART CITIES: API OR DPI

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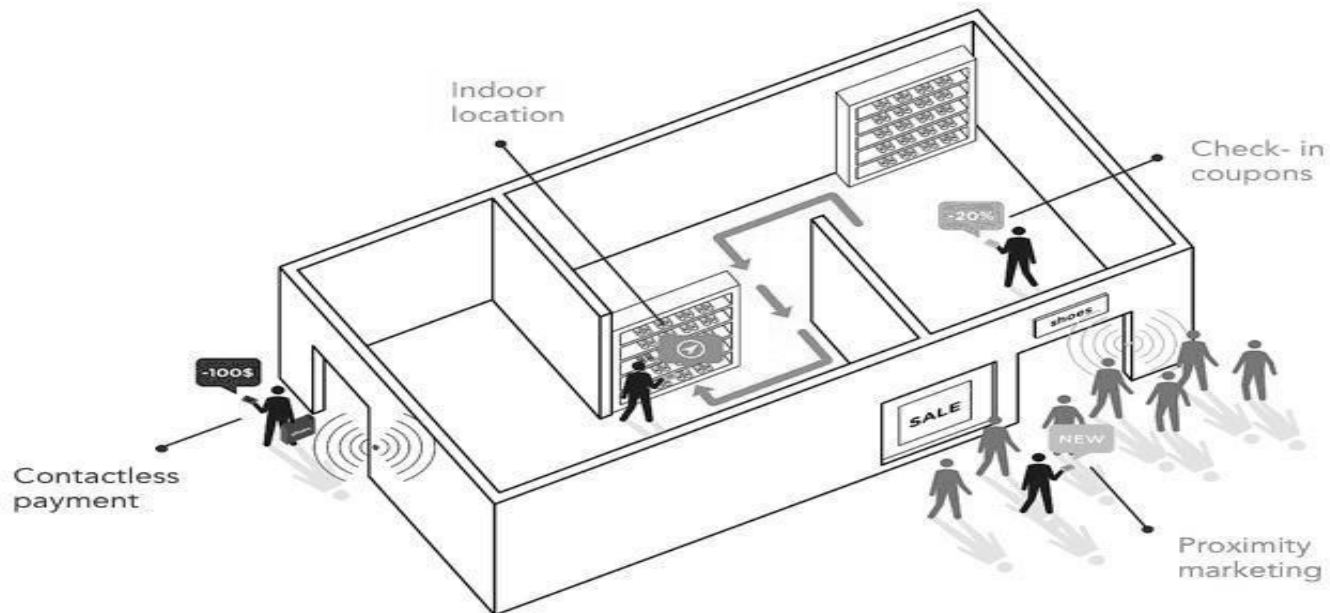Saint Petersburg, Russian Federation

# Agenda

- Discusses the global unified standards for software products and existing approaches (de-facto standards).

- Can a unified approach to the creation of services to cover all the possible use cases and scenarios for new services?

- Prevailing trends in the design to create a standard.

- Time to market for new applications and services as a key factor

# Defining standard

- The idea that underlies a standard may not be implementable (e.g. too comprehensive).
- The ideal of consensus decision-making may affect the standards process. It leads to too many options ("a camel is a horse designed by a committee").
- Different use of terminology may lead to problems of interpretation, implementation and interoperability.
- Modest user requirements and cost-constraints in the implementation process lead to partial standard compliance and incompatible implementations.

# API vs. DPI
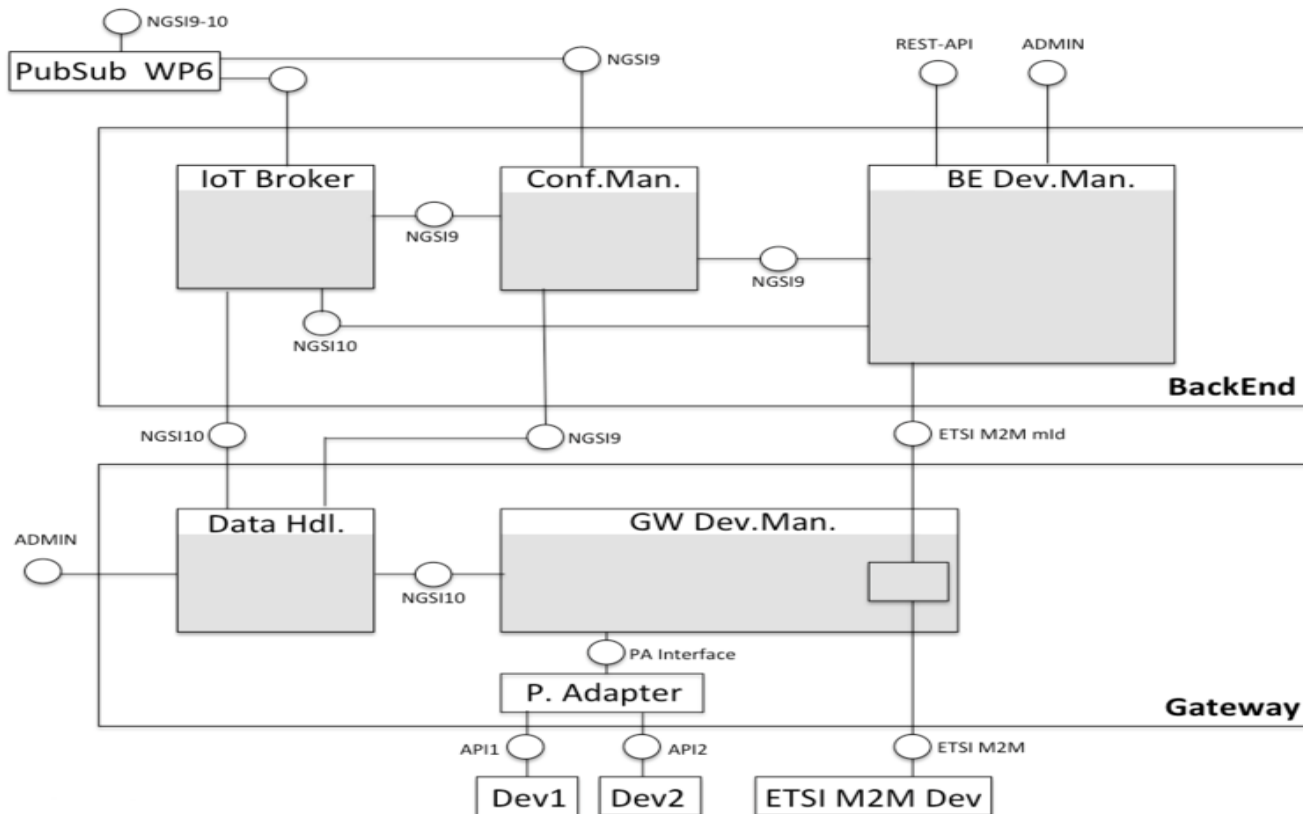
- Let us see iBeacon use case

# iOS API vs. FI-WARE

- Data poll
- Direct access from business applications to devices data streams
- Data requests only

❑ Cloud based
❑ Multi-layer application
❑ Universal API Supports many unused features
❑ Universal security system

# FI-WARE

- Service enablement

# An ideal framework

- Web-addressed (some URI) devices
- Asynchronous calls for getting data
- Callbacks as a way for inter-program communications
- JSON as a prevail data format
- Support for both modes: cloud and direct access to the devices

# Examples

- Web Intents

- Webinos project

- OpenRemote project

- Web of Sensors with linked data and HTTP based REST protocol

- MQTT (publish-subscribe)

# Conclusion

- All-encompassing standard can be a problem in conjunction with the developers.
- The need to address the prevailing trends in the design to create a standard
- The limits of acceptability for universal global standard
- Time-to-market as a key factor for software development tools