ETSI
World Class Standards

2nd Indo-European Dialogue on
ICT Standards &
Emerging Technologies
4th November 2015 • Shangri-La's - Eros Hotel, New Delhi, INDIA

IN THE FRAMEWORK OF
Project
SESEI
http://eustandards.in/

New Developments – Emerging Technologies
Mobile Edge Computing

Presented by Chamakura Varaprasad

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What if we could bring some elasticity and flexibility of cloud native architecture to edge computing?

Why for telco ?

- Agile and Flexible
- Elastic and Simple
- Optimized TCO
- Realtime customer experience & insights
- Rapid introduction of new services
- New business partnerships

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What methods

- Caching
- RAN sharing
- CDNs
- Video/TCP Optimization
- Network APIs
- IOT
- Http 2.0 proxy
- Tollfree services
- …

- Customer experience
- Effective resource sharing
- Latency
- Reducing signaling overhead
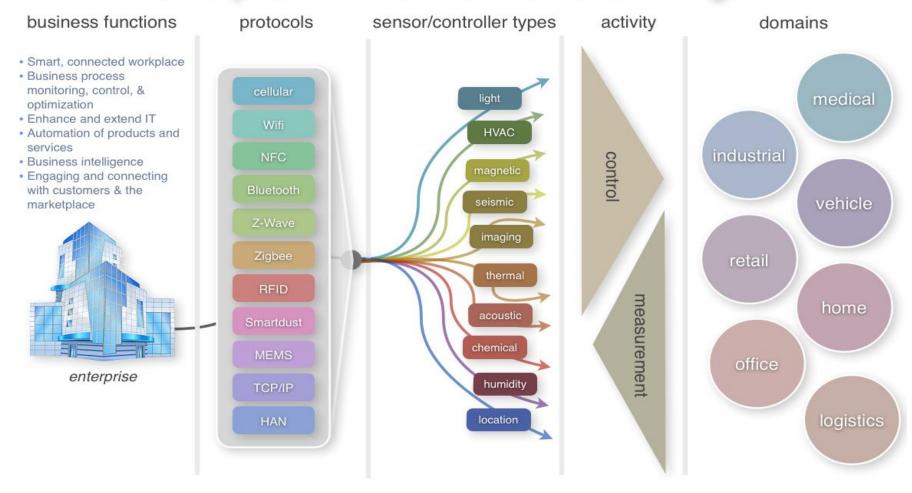- Lower cost per Mbps
- Bundled offers
- ….

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Lets see one use case

Enterprise View of the Internet of Things

business functions | protocols | sensor/controller types | activity | domains

- Smart, connected workplace
- Business process monitoring, control, & optimization
- Enhance and extend IT
- Automation of products and services
- Business intelligence
- Engaging and connecting with customers & the marketplace

enterprise

protocols: cellular, Wifi, NFC, Bluetooth, Z-Wave, Zigbee, RFID, Smartdust, MEMS, TCP/IP, HAN

sensor/controller types: light, HVAC, magnetic, seismic, imaging, thermal, acoustic, chemical, humidity, location

activity: control, measurement

domains: medical, industrial, vehicle, retail, home, office, logistics

What is it here

- Intelligent Systems - Intelligence comes from SW & Analytics

- Need for crunching huge amount of sensor data and respond in real-time

- Needs humongous computing infrastructure in edge with dynamic load varying from application to application

- Another option is to distribute computing load to the edge devices like mobile phones !

How

Data Connectivity	Delivers content where users connect
Hardware	Maximizes speed and interactivity through close proximity to the customer
Software	Contextualizes applications with real-time data
Analytics	Analyzes data at the source before it expands

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Inter-related Computing

CLOUD Computing

Non–realtime data, storage intensive
Telco grade robustness ?
Middle ware ?

EDGE Computing

Data response- latency
Complex middleware for highly distributed environment

FOG Computing

Filtering
Using powerful processors when in idle and use for filtering

Cloud Native Architecture

Need	Solution
Servers	Cloud Servers
Database	Various vendors, scale
File Storage	File and Object storage
Interfaces	More standard
Stack Definition	Structured

Edge Computing Architecture

Need	Solution
Servers	Hardware installed ahead of time
Database	Limited footprint, Replication, Sync
File Storage	Limited storage
Interfaces	Need for flexibility
Stack Definition	Infrastructure is hardware

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How do we facilitate to start new revenue streams launch new services cases, lower cost of data pipes