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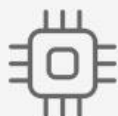
**BLOCKCHAIN, SMART CONTRACTS AND
CURRENCIES BEYOND BITCOINS**

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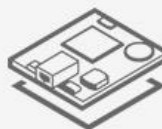
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SENSORS



ELECTRONICS



**EMBEDDED
SYSTEMS**



**EDGE
COMPUTING**



SECURITY



CONNECTIVITY



**CLOUD
INFRASTRUCTURE**



BIG DATA



ANALYTICS



**SOFTWARE DEV
TOOLS & PLATFORMS**

Setting The Stage, What is this talk about

- The future of businesses based on the internet of things [2020-2025-2030] is to be built during the years preceding –paving the way for sustainable goals akin to UN SDG globally
- If you have worked on Rasp Berry Pie's, Ardiunio Boards and a dozen other boards-great. Nano Tech, PCB designs to be made keeping system on the chip, network on the system, including multiple intellectual properties chips or modules in same small form factor
- Intels, Qualcommms, Analog Devices, TI and likes have already many collaborative frameworks and understandings to build things together than in 'silo's-for instance OSA and several other consortia

Current World

Industry consortiums

- 1. [AllSeen Alliance](#)
- 2. [Open Interconnect Consortium](#) (OIC)
- 3. [COMPOSE](#)
- 4. [Eclipse](#)
- 5. [Open Source Hardware Association](#) (OSHWA)

Protocols

Advanced Message Queuing Protocol (AMQP)

Constrained Application Protocol (CoAP)

Extensible Messaging and Presence Protocol (XMPP)

OASIS Message Queuing Telemetry Transport (MQTT)

Very Simple Control Protocol (VSCP)

Operating Systems

Operating systems (OS)

[ARM mbed](#)

[Canonical Ubuntu and Snappy Ubuntu Core](#)

[Contiki](#)

[Raspbian](#)

[RIOT](#)

Spark

[webinos](#)

Horizontal platforms

- [Canopy](#)
- [Chimera IoT](#)
- [DeviceHive](#)
- [Distributed Services Architecture](#) (DSA)
- [Pico Labs](#) (Kynetx open source assigned to Pico Labs)
- [M2MLabs Mainspring](#)
- [Nimbits](#)
- [Open Source Internet of Things](#) (OSIOT)
- [prpl Foundation](#)
- 31. [RabbitMQ](#)
- 32. [SiteWhere](#)
- 33. [webinos](#)
- 34. [Yaler](#)

EXISTING STATE OF THE ART

Middleware

- [IoT SyS](#)
- [OpenIoT](#)
- [OpenRemote](#)
- [Kaa](#)

In-memory data grids

- [Ehcache](#)
- [Hazelcast](#)

Collaborators

Node flow editors

- [Node-RED](#)
- [ThingBox](#)

Toolkits

- [KinomaJS](#)
- [IoT Toolkit](#)
- **Data visualization**
- [Freeboard](#)
- [ThingSpeak](#)

Eco-system

Robotics

[Open Source Robotics Foundation](#)

Mesh networks

[Open Garden](#)

[OpenWSN](#)

Health

[e-Health Sensor Platform](#)

Air pollution

- [HabitatMap Airbeam](#)

Water

- OCEO INDIA

HOME AUTOMATION

PUB SUB SOAP ML RESTful framework-APIs

Operational Framework

MODUS OPERANDI TO BUILD THE NETWORK

1 IDENTIFY THE SOLUTION PARAMETERS

2 INFRA

3 FRAMEWORKS FOR PLATFORMS, DATA, EXCHANGE OF INFORMATION, GDPR

4 PERMISSIONS, BUILDING BLOCKS OF ASSETS, MESSAGE TAGGING, CIA TRIAD, OTHER 'INFOSEC' ADHERANCE –BEST PRACTICES

5 POC, PROTOTYPE

6 GO TO MARKET

7 WIRELESS-IOT-BEYOND INTERNET

Tokens and no cyber currencies of current parlance, and use regular Fiat or normal currencies instead



SMART CITIES

CLOUD INTEROPERABILITY

INTERNET CONNECTIVITY

IoT ACROSS MULTI VENDOR-IoT

IoT POLICY GUIDELINE COMPLIANCE

DEVICE ATTRIBUTION

PARTICIPATORY DISTRIBUTION

DECENTRALIZE IT, MAKE IT AUTONOMOUS

Use the federated collaborative tools including open source automation platforms

Characteristics of SMART Products



INTERACTIVE



SENSE, COMPUTE &
REACT CAPABLE



ENERGY EFFICIENT



LIGHTER & SMALLER



NETWORK CAPABLE



SECURE



Characteristics of INTELLIGENT Products



CAN LEARN & IMPROVE



AUTONOMOUS

OneM2M, IIOT insights ..IOTA..BC



Latest Components &
Embedded Systems



Innovative
Design



Smart
Manufacturing



Hi-tech Testing
Equipment



M2M-friendly
Networks



IOT-ready IT
Infrastructure



AI & ML Delivery
Infrastructure



Industry Ready
Academia

Future of 5G IoT & Blockchain

- SDN,NFV
- 'Network Slice' per each Context
- Low Latency, Long Battery Life, Low Cost, Low Power
- Cognitive Radios and CRPA powered Smart Grids-Smart Cities
- Transactional Analysis with collapsed stack for Regulatory Compliant, Safe,Secure Interactions built with bottom up from electronics that is intelligent