

# Introduction to oneM2M



## OMA - oneM2M Meeting, San Diego, Jan. 19th 2016

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Chairman of the Architecture Working Group at oneM2M

Senior Manager for Business & Innovation at Sierra Wireless

# oneM2M partnership project



Over 200 member organizations  
in oneM2M



# 200+ members organizations



Some of the 200+ active members of oneM2M



# oneM2M – Organization



## SC - STEERING COMMITTEE

Chairman: Fran O'Brien, Cisco

Vice-chairs: E. Scarrone, Telecom Italia - P. Jain, Intel - T. Li, Huawei

Finance Committee

Legal Committee

Marketing & Communication Committee

Methods & Processes Committee

## TP - TECHNICAL PLENARY

Chairman: Omar Elloumi, Alcatel-Lucent

Vice-chairs: R. Hechwartner, Deutsche Telekom; N. Yamasaki, KDDI; K. Young Kim, LG Electronics

Coordination Team

Work Programme Management Group

Methods of Work Group

**WG1 – REQ**  
Requirements  
S. Kiewel (iconectiv)

**WG2 – ARC**  
Architecture  
N. Damour (Sierra W.)

**WG3 – PRO**  
Protocols  
P. Niblett (IBM)

**WG4 – SEC**  
Security  
F. Ennesser (Gemalto)

**WG5 – MAS**  
Mgt Abst. & Sem.  
Y. Zhang (Huawei)

**WG6 – TST**  
Test  
J. Song (KETI)

# Purpose, Work & Deliverables



## Purpose

To specify and promote a  
**Standard for an M2M/IoT Common Service Layer**

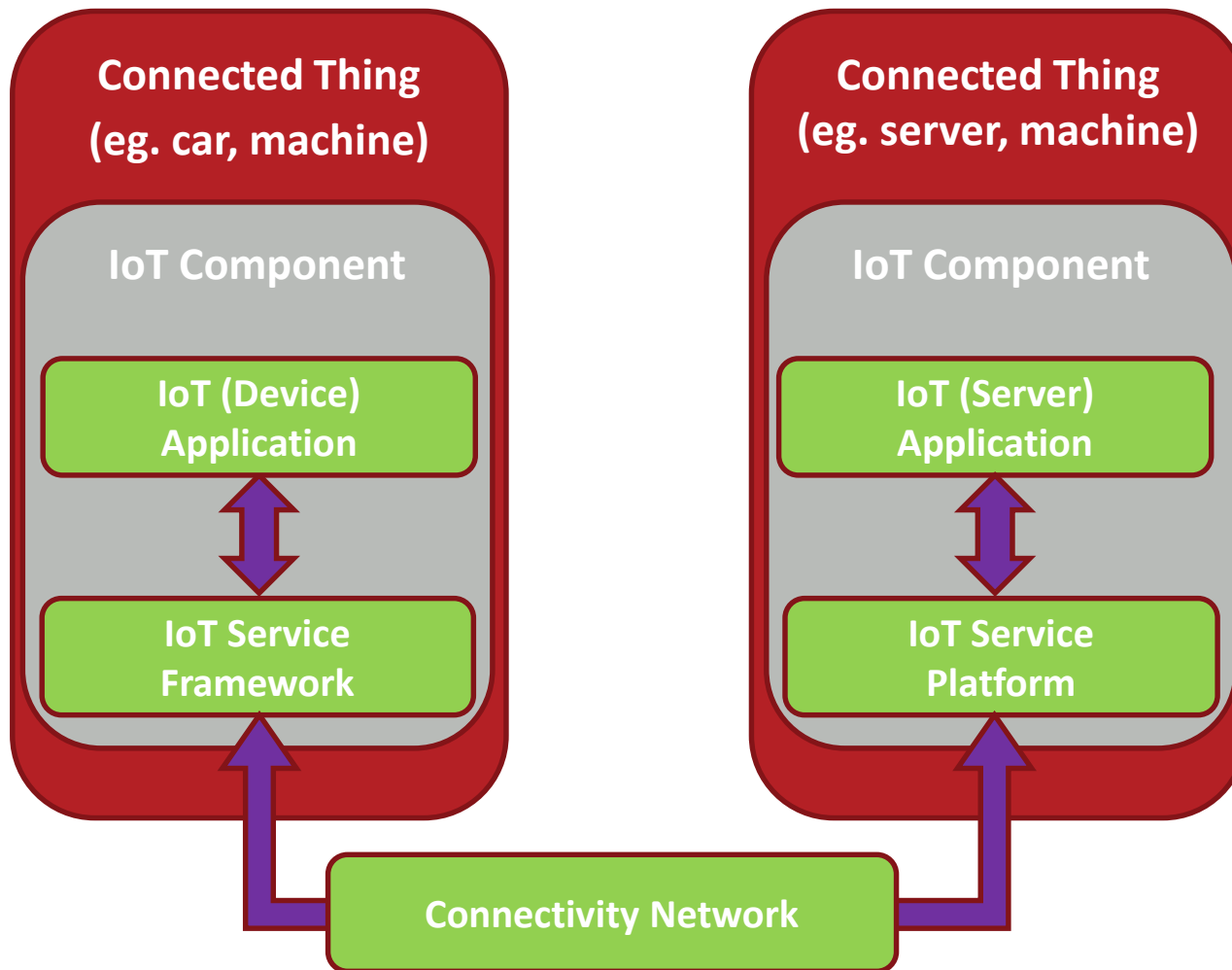
## Work

Six physical 1-week meetings per year with ~100 attendees  
200+ documents produced and discussed at each meeting  
**3800 docs in 2013    4400 docs in 2014**

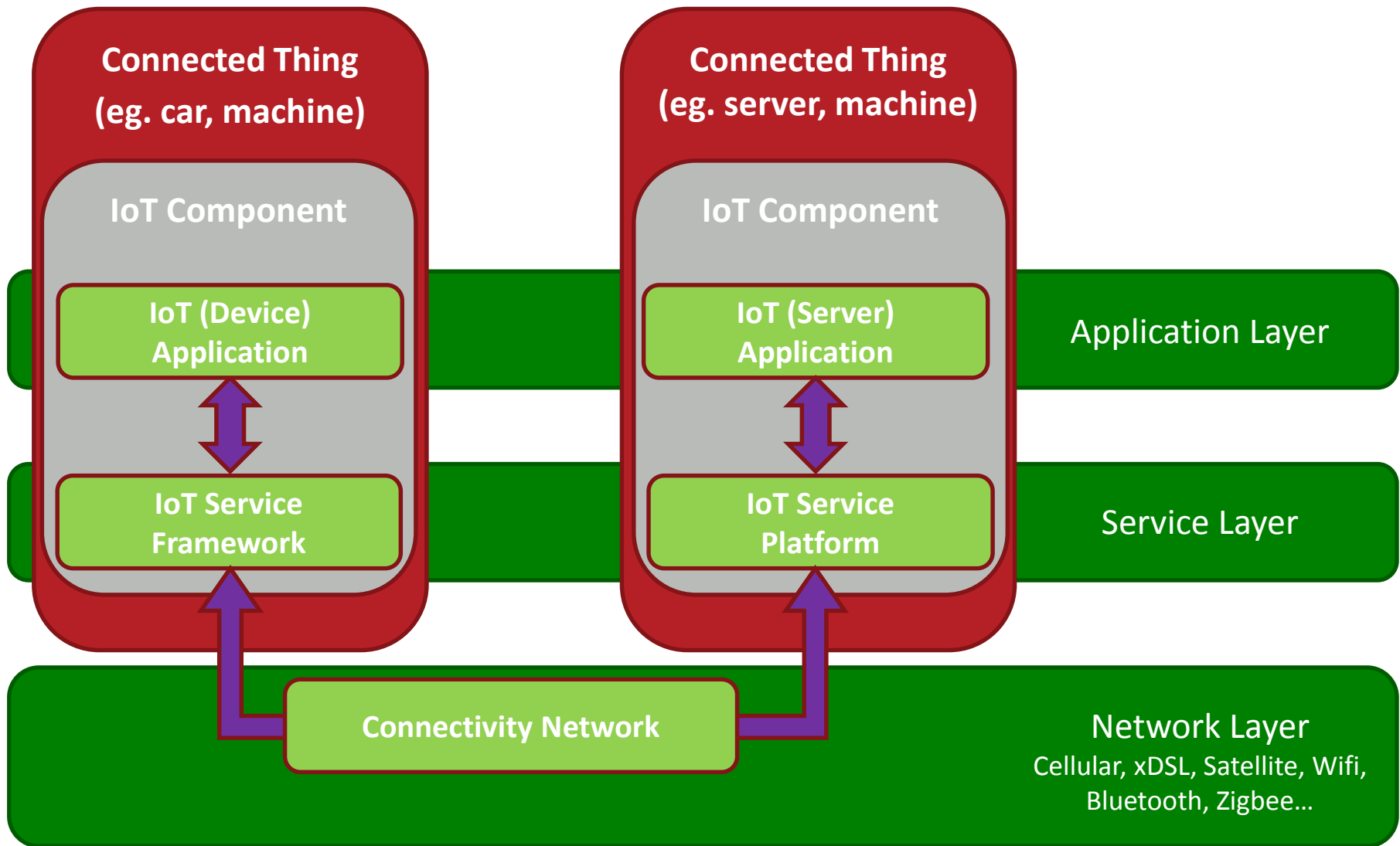
## Deliverables

Technical Reports (TRs) and Technical Specifications (TSs)  
**Release 1 published in January 2015 – 10 TSs + 5 TRs**  
**Release 2 planned for mid-2016**

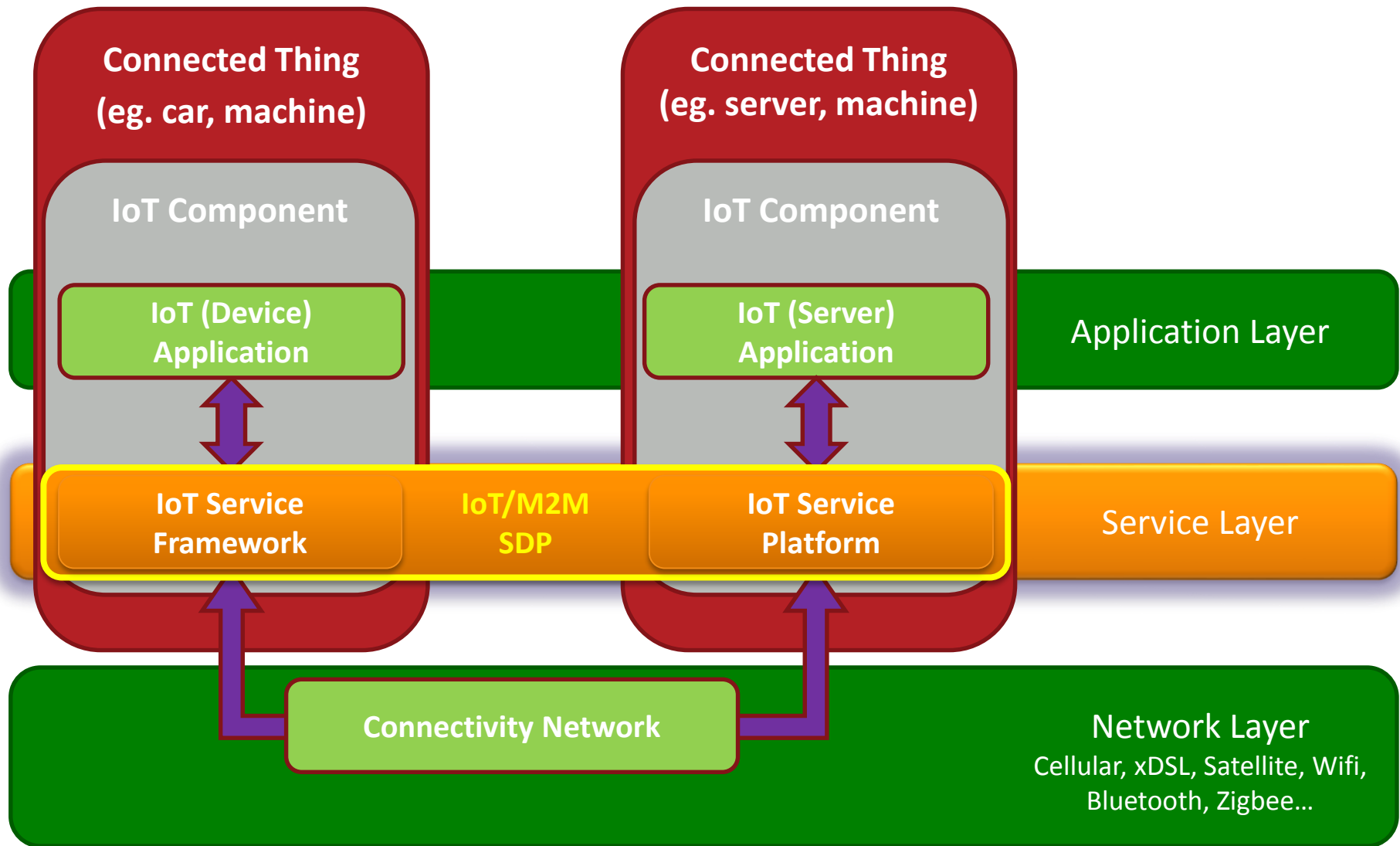
# M2M Service Delivery Platform



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# oneM2M Work Programme



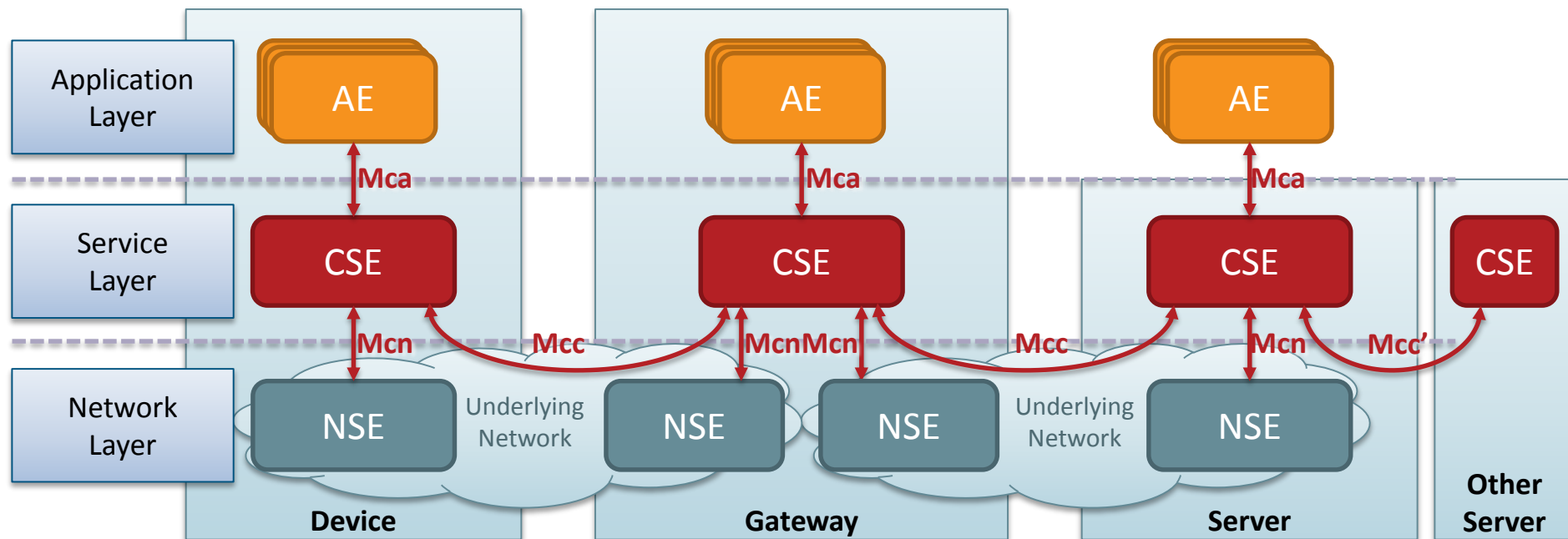
## Release 1 (publ. Jan. 2015)

- WI-01 - Requirements
- WI-02 - Architecture
- WI-03 - Vocabulary
- WI-04 - Study of Managt Capability
- WI-05 - Abstraction & Semantics
- WI-06 - Device/GW Classification
- WI-07 - Security
- WI-08 - Protocol Analysis
- WI-09 - Protocols
- WI-10 - Management Enablement
- WI-11 - Service Components Arch.
- WI-12 - RESTful COAP Protocol
- WI-13 - RESTful HTTP Protocol
- WI-14 - MQTT Protocol

## Release 2 (target ~mid. 2016)

- WI-15 - Use Cases v2
- WI-16 - E2E Security & Groups
- WI-17 - Home Domain Enablement
- **WI-18 - oneM2M & AllJoyn IWK**
- ...
- **WI-24 - LWM2M Interworking**
- **WI-25 - Area Ntwks Gen. Interwrkg**
- WI-26 - Efficient Communications
- ...
- **WI-37 - 3GPP Rel.13 Interworking**
- ...
- WI-43 - Contin. of HGI Smart Home
- **WI-44 - oneM2M & OIC IWK**
- ...

# Technical View



**Entities** AE (Application Entity), CSE (Common Services Entity) and NSE (Network Services Entity)

**Reference Point** One or more interfaces - Mca, Mcn, Mcc and Mcc'

## EXAMPLE REQUEST

```
GET http://provider.net/home/temperature/la
HTTP/1.1
Host: provider.net
X-Orig: /CSE-1234/WeatherApp42
X-M2M-RI: 56398096
Accept: application/vnd.onem2m-res+json
```

## EXAMPLE RESPONSE

```
HTTP/1.1 200 OK
X-M2M-RI: 56398096
Content-Type: application/vnd.onem2m-res+json
Content-Length: 94
{"ri":"28375964","cnf":"application/json:0",
"con":{"timestamp":1413405177000,'value':25.32}}
```

# Mature and active standard

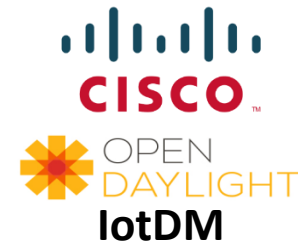


- Work started in 2012, leveraging 3+ years of experience
- 3800 docs produced in 2013, 4400 docs in 2014...
- Release 1 published in Jan 2015 with 10 Technical Specifications
- 23 Technical Specifications in the works
- 82 Technical Reports in the works
- Hundreds of documents produced every month
- Corrections to release 1 actively maintained
- Release 2 with new features planned for 2016

# Strong implementation base



## Open source implementations



## Commercial implementations and demos



## First interoperability event right now (Sept 14-16)

With 30 participating organizations and 75 people

# Interoperable standard

Guidelines  
& Ref. Arch.



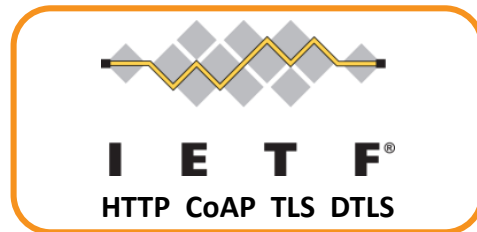
collaborations



uses



uses



uses

Protocols



interworks with



interworks with



Platforms