



2019
Annual **INCOSE**
international workshop
Torrance, CA, USA
January 26 - 29, 2019

Bill Chown, OASIS OSLC Steering Committee Chair

OSLC Overview



Goals of OSLC

The OSLC (Open Services for Lifecycle Collaboration) initiative supports integration between a heterogeneous set of tools and components from various sources using an architecture that is minimalist, loosely coupled, and standardized.

OSLC is based on World Wide Web and Linked Data principles, such as those defined in the W3C Linked Data Platform [[LDP](#)], to create a cohesive set of specifications that can enable products, services, and other distributed network resources to interoperate successfully.

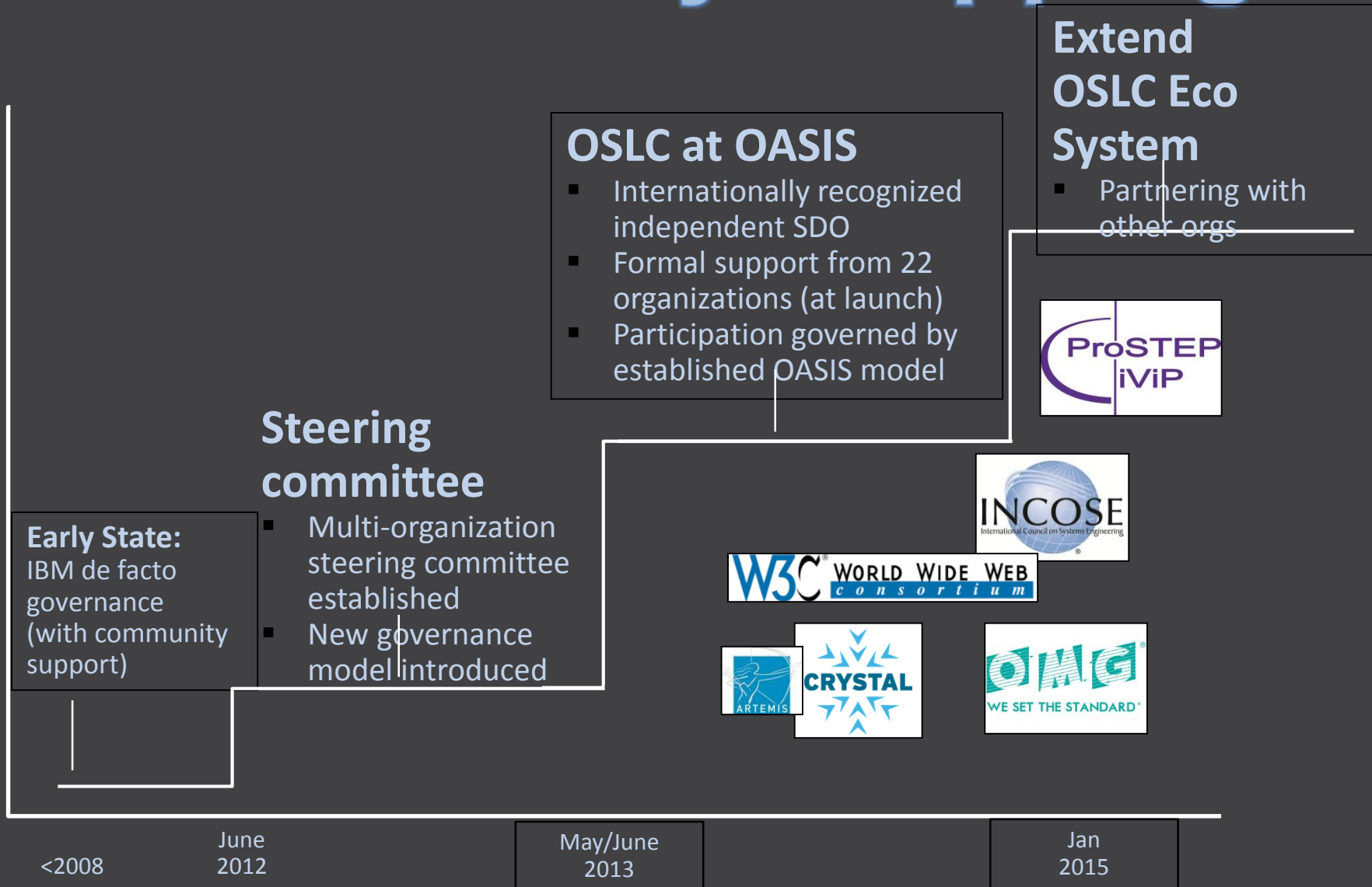


OSLC History

- Over 10 years old – Nov 2008
- OSLCFest in Sweden – Nov 2018
- OASIS Open – 2013
- OSLC 3.0 Specification – April 2017

OSLC Community Stepping Up

Community governance of OSLC





OSLC Architecture

Layered architecture builds on Linked Data

Domains of interest that maintain separation of concerns and establish collaborative value streams through integration

OSLC Domains Vocabularies Constraints
RM DM CCM QM Automation

OSLC Change Management 3.0 and OSLC Configuration Management 1.0 Specifications, OASIS

Discoverability through Minimal, discoverable, self-describing capabilities to *enable* application integration

OSLC Core Resource Preview Query
Discovery Delegated UI Attachments

OSLC Core 3.0 Specification, OASIS

Reducing Variability through Self-describing, semantically rich, linked data resources leveraging HATEOAS

LDP Containers, Accept-Post Link Relations Paging
Open-World Assumptions JSON-LD Turtle Patch

LDP 1.0 Specification, LDP.next Working Group, W3C

Address Complexity through HTTP and REST as the standard mechanism for distributed, loosely coupled APIs

HTTP POST GET PUT DELETE REST
Authentication Resource MIME Types Content Negotiation

HTTP 1.1 Specification, IETF



Applicability of OSLC

- Domain-driven scenarios inspire standardization of common capabilities across disciplines
 - Disciplines include Change Management, Requirements Management, and Quality Management
 - Cross-domain scenarios such as Application Lifecycle Management (ALM) & DevOps, Product Lifecycle Management (PLM), and Integrated Service Management (ISM)
- The OSLC approach focuses on software lifecycle management to ensure it meets a core set of scenarios and requirements



Key Interactions in the Flow

- Data

- E.g. netlist, schematic to cabling, etc. Bulk data transfer



Not the focus of OSLC today
Netlist or Transform

- Behavior

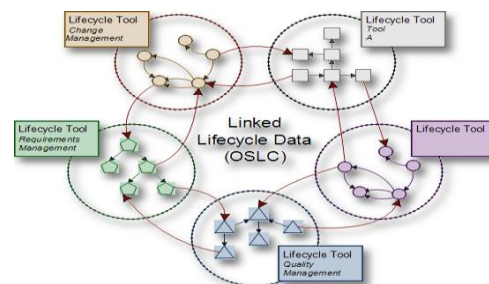
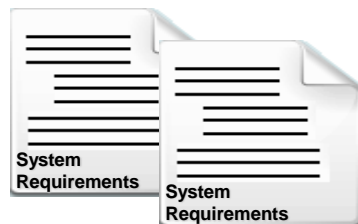
- Executable models, run time code, functional co-simulation



Not the focus of OSLC at all
FMI, SVX, Codelink

- Intent

- Requirements, work items, dependencies, meaning



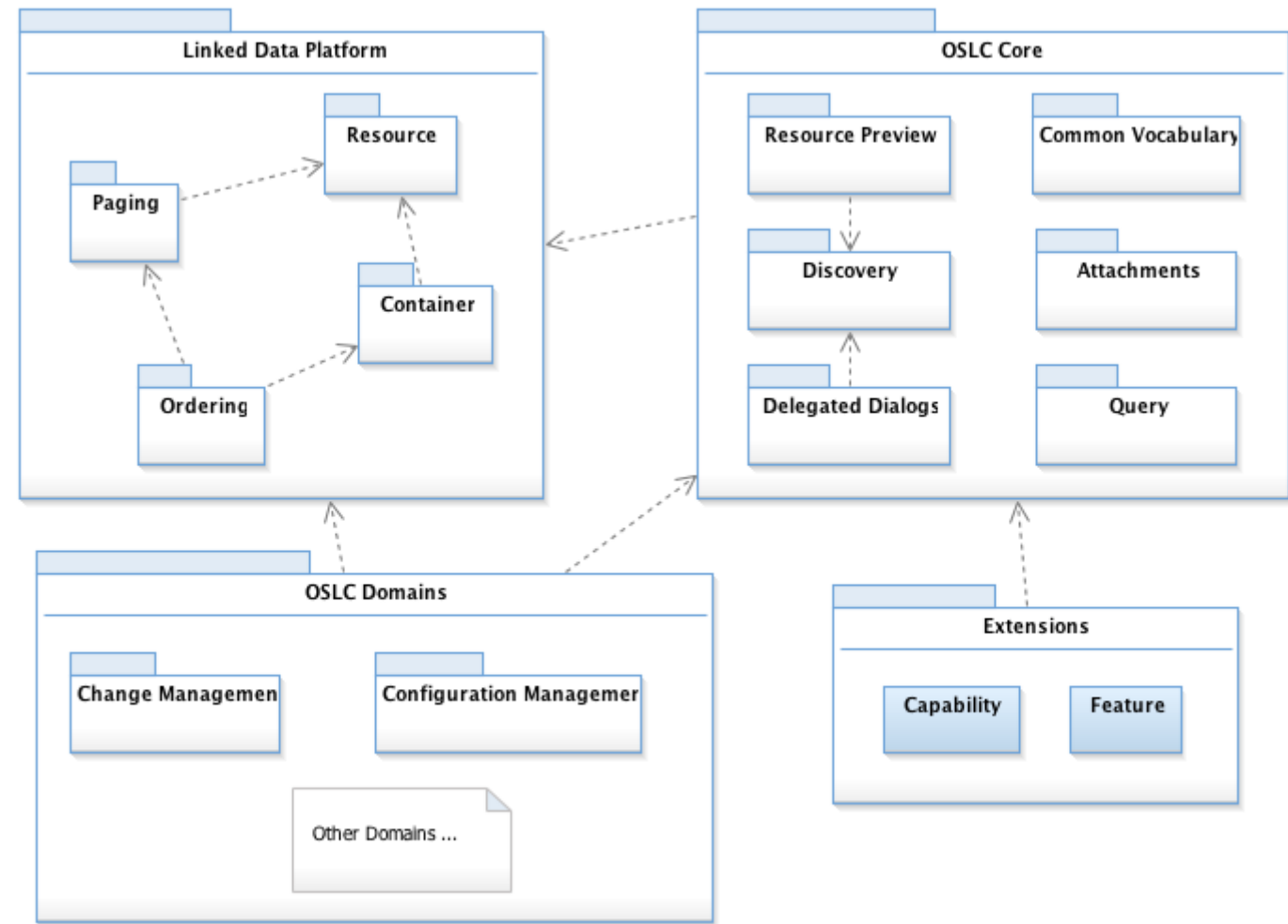
Linked Data,
Shared Information





OSLC Core 3.0

- OSLC Core 3.0 builds on capabilities developed in different standards organizations, TCs and working groups





Goals of OSLC Core 3.0

- Integration is based on an open standard, and not controlled by any single vendor
- OSLC 3.0 is based on the new W3C Linked Data Platform standard which provides a solid foundation for reading and writing linked data resources
- The specifications are simpler, more consistent and will potentially be more attractive to, and easier to consume by new integrations
- There are some new capabilities specified, including Attachments, inverse link labels, traceability and impact types
- Domain vocabularies can be improved for data consistency and removing data gaps
- All Resource Shapes are provided in machine readable *Turtle* files



OSLC Domains

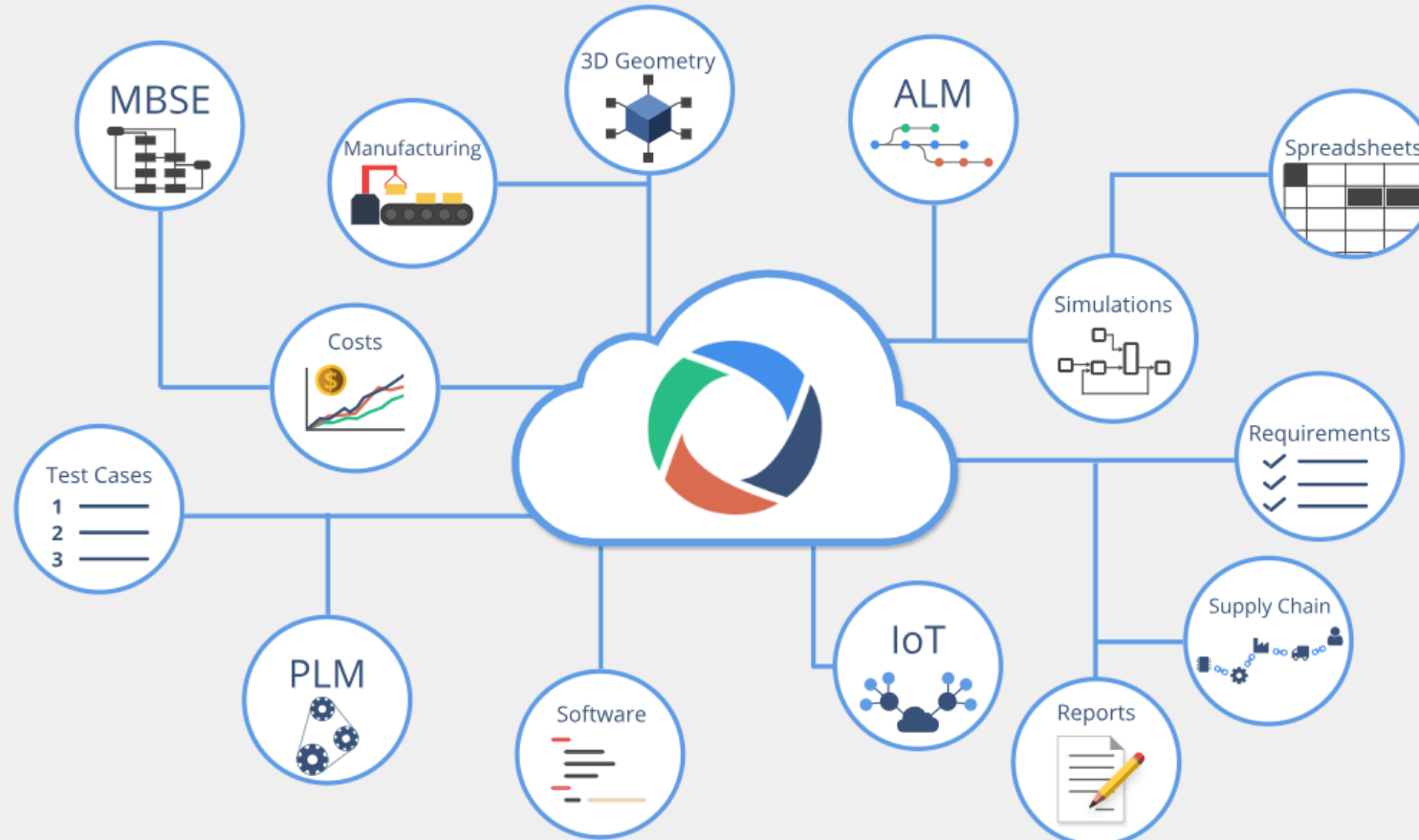
A new Domains WG (TC) is formed within OASIS-OSLC

- Combined attention to the various domains, rather than separate domain groups
- Migrate existing finalized OSLC v2.0 domain specifications
 - Tracked Resource Set 2.0,
 - Architecture Management 2.0
 - Asset Management 2.0
 - Automation 2.1
 - Performance Monitoring 2.0
 - Quality Management 2.0
 - Requirements Management 2.0
- Capture requirements and use cases for other related domains



Achieving the Digital Thread

Use OSLC to connect your data and achieve the digital thread across domains, applications, and organizations





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www.incose.org/IW2019