



Ontology Summit 2026

Interoperability Track

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Summit Communique History

- Only 2 summit communiques failed to mention 'interoperability' - 2013, 2014
- 2016 - 'Ontologies within Semantic Interoperability Ecosystems' (<https://www.ontologforum.net/index.php/OntologySummit2016/Communique>)

Interoperability - Definitions

New Oxford American Dictionary – (1) the ability of computer systems or software to exchange and make use of information; (2) the ability of military equipment or groups to operate in conjunction with each other

Wikipedia - a characteristic of a product or system to work with other products or systems.

- While the term was initially defined for information technology or systems engineering services to allow for information exchange, a broader definition takes into account social, political, and organizational factors that impact system-to-system performance.

Ontology Summit 2016 Communique - the ability for two or more entities to operate together to attain or meet a set of goals or operational objectives; while integration is a tight coupling or binding of entities, again (usually) to meet some operational objectives (e.g., functionality, speed, cost reduction, risk management, etc.).

Interoperability Scope

What needs to be interoperable

- Physical Entities
- Organizational Operations
- Communications / Interactions
- Language
 - Syntactic
 - Semantic
- Information
- Data

Interoperability Scale

- Who or What needs to be interoperable?
- How much needs to be interoperable?
- Where is interoperability needed?
- When is interoperability needed?

Semantic Interoperability Scope

- Domain Interoperability
 - Usually concerned with data and information in or about some domain
- Cross Domain Interoperability
 - If using ontologies, required interoperability of metadata and domain ontologies

Semantic Interoperability

SCOPE Model for Exploring Interoperability (version 2)

The ability to use the information communicated by a sender so that receivers' interpretation of the information is sufficiently similar to the intended interpretation of the sender for the purposes of the communication based on sufficient (a priori) context(s) shared among sender and receivers.

Interoperability Track Speakers

- Will Sobel
- Ravi Sharma
- Mike Bennett