

Current Progress on MFI-5

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Outline

- Background
- Progress on MFI-5
- Future work

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In the open network environment...

- Across-organizational collaboration and integration are blooming to
 - Coordinate business process within/across organizations
 - Facilitate business cooperation and process integration within/across enterprises
 - Provide better services to discriminating customers

Challenges for interoperation between processes

- Heterogeneity of processes caused by
 - Different description languages
 - Different modeling tools
 - Different developers
 - Different application domains
 -

Unify registration of process model

What is a process?

- Process is defined as
 - a set of **work items**, scheduled according to **constraints**, which all participate in fulfilling a common **purpose**.
[Breton, 2001]

Process is identified as a set of activities and resources, organized according to constraints, which all participate in fulfilling a given purpose.

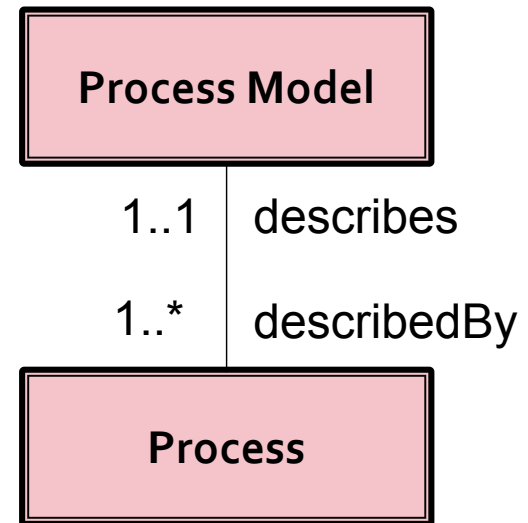
- one or more **activities** that occurs over a period of **time** in which **objects** participate. [Cutting-Decelle Anne-Francoise, 2005]

What is a process model?

- Process model is deemed as
 - carriers of process knowledge, concerning how to do things [John, 2006]
 - a specification that is the result of modelling one or more processes, adopting a specific process modelling language to describe features of a process. [draft text for 2nd CD of MFI-5]
- Process model shows what the process does and how it is done.

Process V.S. Process Model

- A process model can be used to describe one or more processes.
- A process can be described by only one process model.



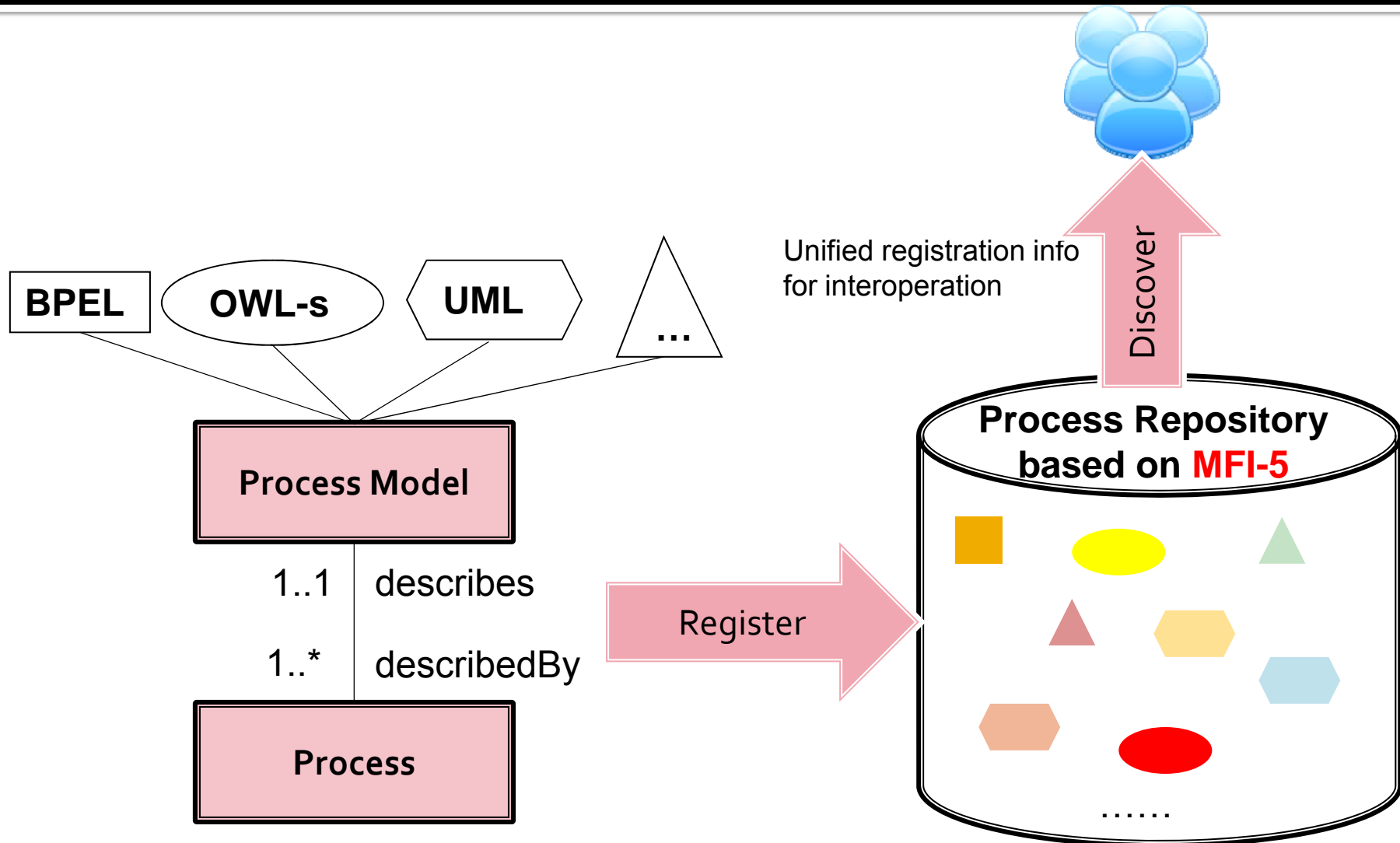
Related work(1/2)

- PSL(Process Specification Language)
 - **Structured set of activities involving various enterprises entities**, that is designed and organized for a given **purpose**. [ISO 18629-1, 2004]
 - Key elements in PSL Core: activity, activity_occurrence, timepoint, object
 - Key elements in PSL Out Core: Occurrence Trees, subActivity, Discrete States, Atomic Activity, Complex Activity, Activity Occurrences

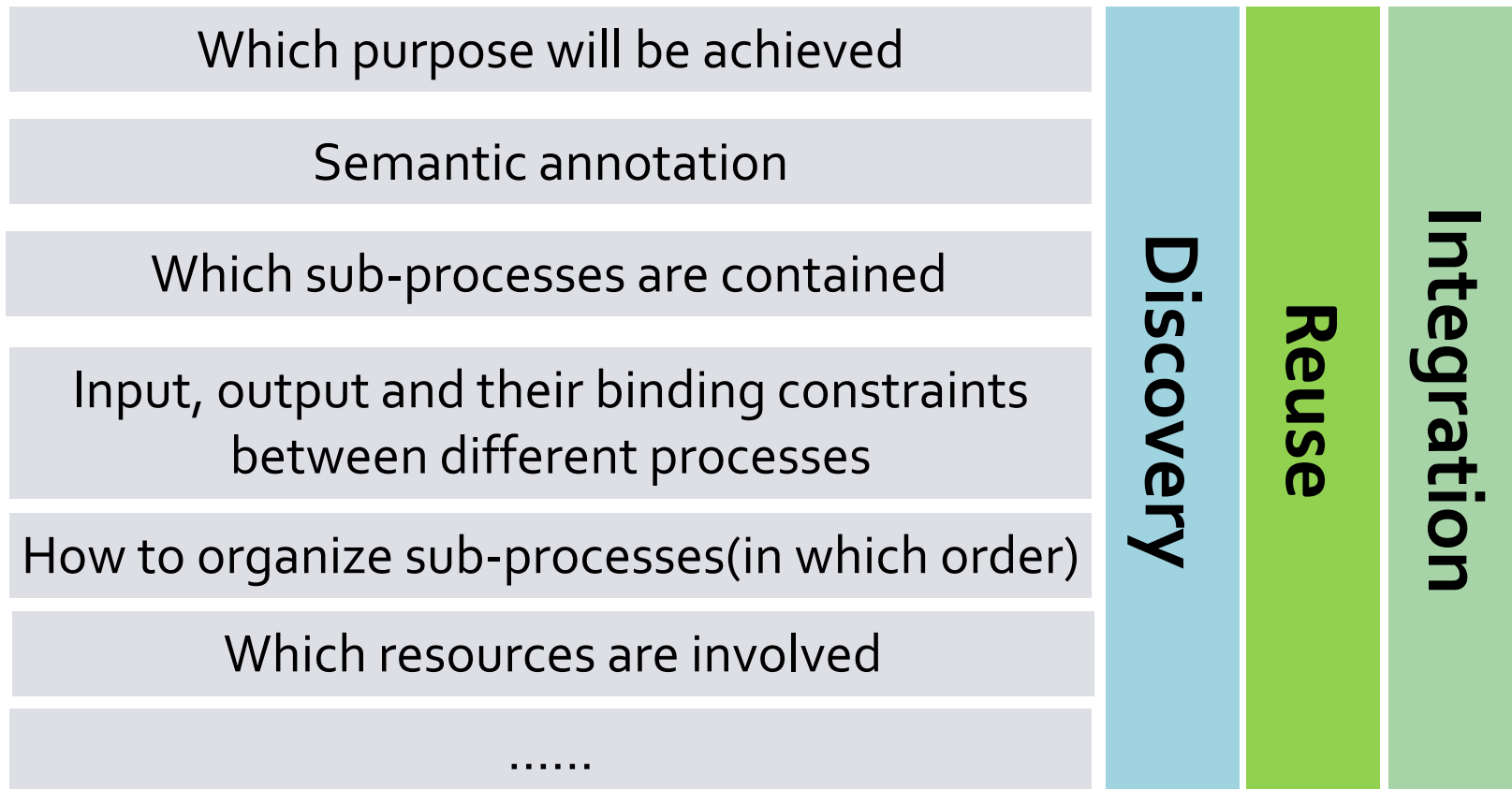
Related work(2/2)

- OPEN Process Framework (OPF)
 - Creates a process metamodel from which various processes can be constructed to individual needs
 - Five major metaclasses: work products, producers, work units, stages, languages[Brian, 2002]
- Open Provenance Model(OPM)
 - Aims at establishing inter-operability of systems, by exchanging provenance information based on a shared provenance model.
 - Three primary entities: Artifact, Process and Agent

Focus of MFI-5 (1/2)



Focus of MFI-5 (2/2)



MFI-5 provides a metamodel to register and manage process models described with different modeling languages in a unified manner.

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Status of MFI-5

- Discussing 1st CD
 - Bugzilla and email
- Preparing disposition of 1st CD and text of 2nd CD

NBs	Disposition	Joining Discussion
Australia	Done	N
Canada	Underway	N
Japan	Underway	Y, Bugzilla
UK	Underway	Y, email
U.S	Underway	Y, Bugzilla and email

Scope of MFI-5

- Objective of MFI-5
 - Provide a metamodel to unify registration info of various kinds of processes
 - Support registration of processes described with popular modeling languages
 - Promote interoperability between processes

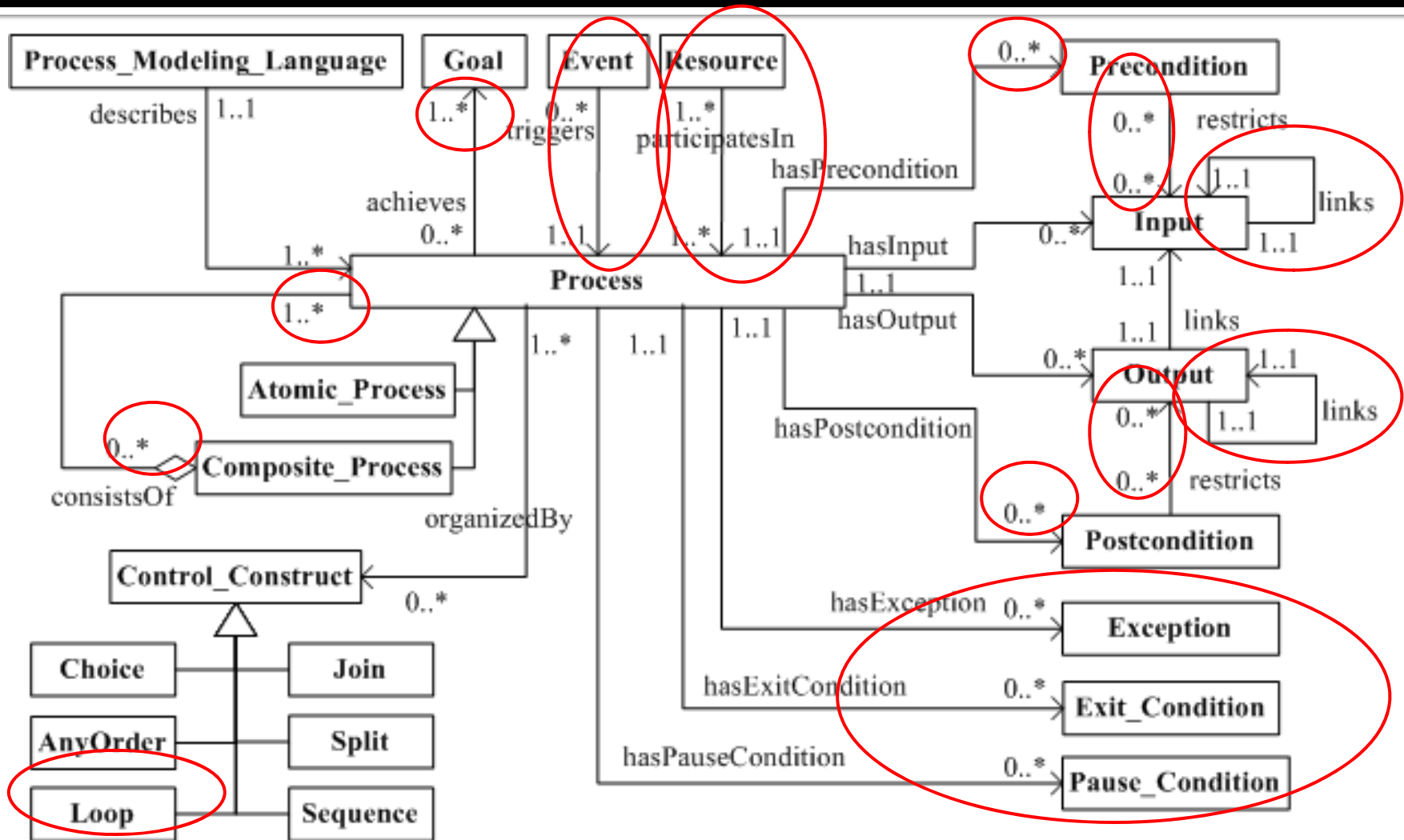
Scope of MFI-5 (1/2)

- Typical processes to be registered in MFI-5
 - business process
 - workflow
 - process on physical things
 - process by human

Scope of MFI-5 (2/2)

- To be registered
 - goal, modeling language, ...
 - subprocess, input, output, ...
 - I/O binding constrains, ...
- Not to be registered
 - language specific details
 - implementation level details

Overall Structure of MFI-5



NOTE Metaclasses whose names are italicized are abstract metaclasses.

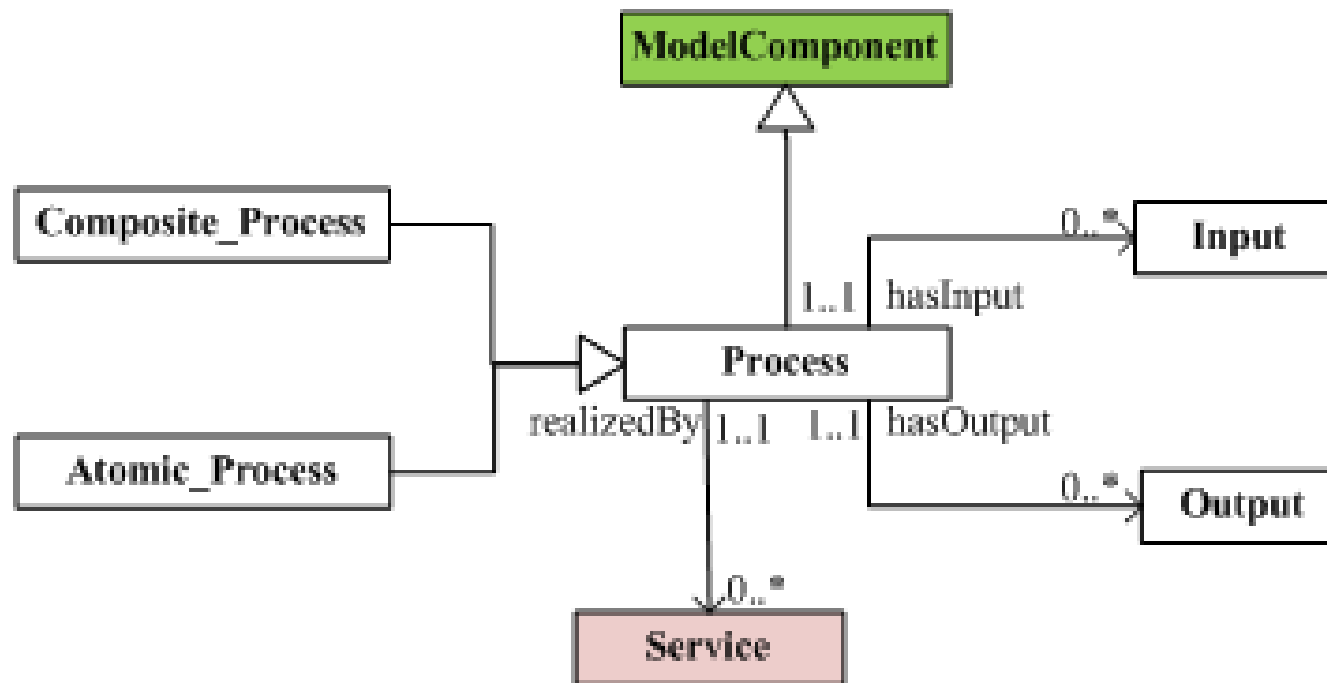
Current progress on MFI-5

- What has been done
 - Terms and definitions
 - Revised the metamodel (need further discussion)
 - Attributes of metaclasses (need further discussion)
- What is underway
 - Registration examples
 - Relations between MFI-5 and the other parts

Issues under discussion

- Names of some metaclasses
- Cardinalities of some associations
- Precondition and Postcondition related issues
- Bindings between I/O of a composite process
- Relationship between MFI-5 and other parts

Relationship with other parts in MFI



Input/Output in MFI-5 can be annotated by the concepts from ontology that is registered based on MFI-3.

Service vs. Process in MFI (1/2)

- Services can be used to realize process.
 - A process can be realized by zero or more services
 - A service can realize only one process, which can be either atomic or composite
- Services emphasize the encapsulation of certain functionality.
 - Provide certain interfaces to outer space but hide its internal execution order
- Processes focus on achieving certain functionality by composing certain activities

Service vs. Process in MFI (2/2)

- Process considers implementation independent information.
- Service considers implementation specific information such as the invocation protocols.

Why we need separate two parts?

- The diversity of services (SOAP, Restful, Atom,...)
 - Restful and Atom services are resource-centric, and only use simple operations such as Put, Post, Get, Delete, rather than complex operations which are often described by processes.
- Process can be realized by human beings or local software systems, etc, other than services.

Part 7 includes services that do not have tight relation with processes.

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Future work

- Before London meeting
 - Submit disposition of 1st CD
 - Submit text for 2nd CD
- Coordinate with other standards

Thank You!

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