

A comment to WSSG, JTC1

Requirements for Standardization on the Service Registries

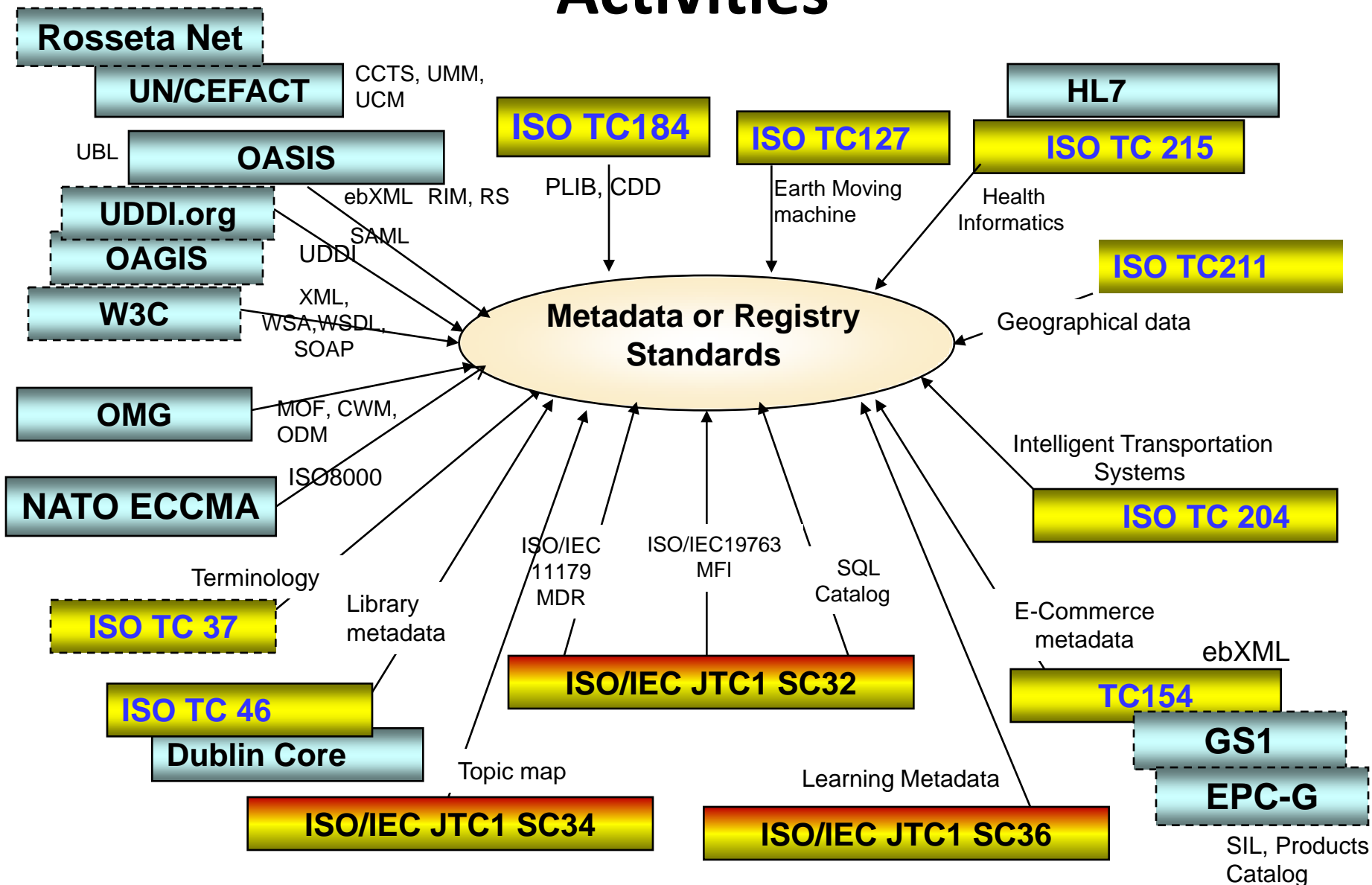
2008.11.10

ISO/IEC JTC1 SC32

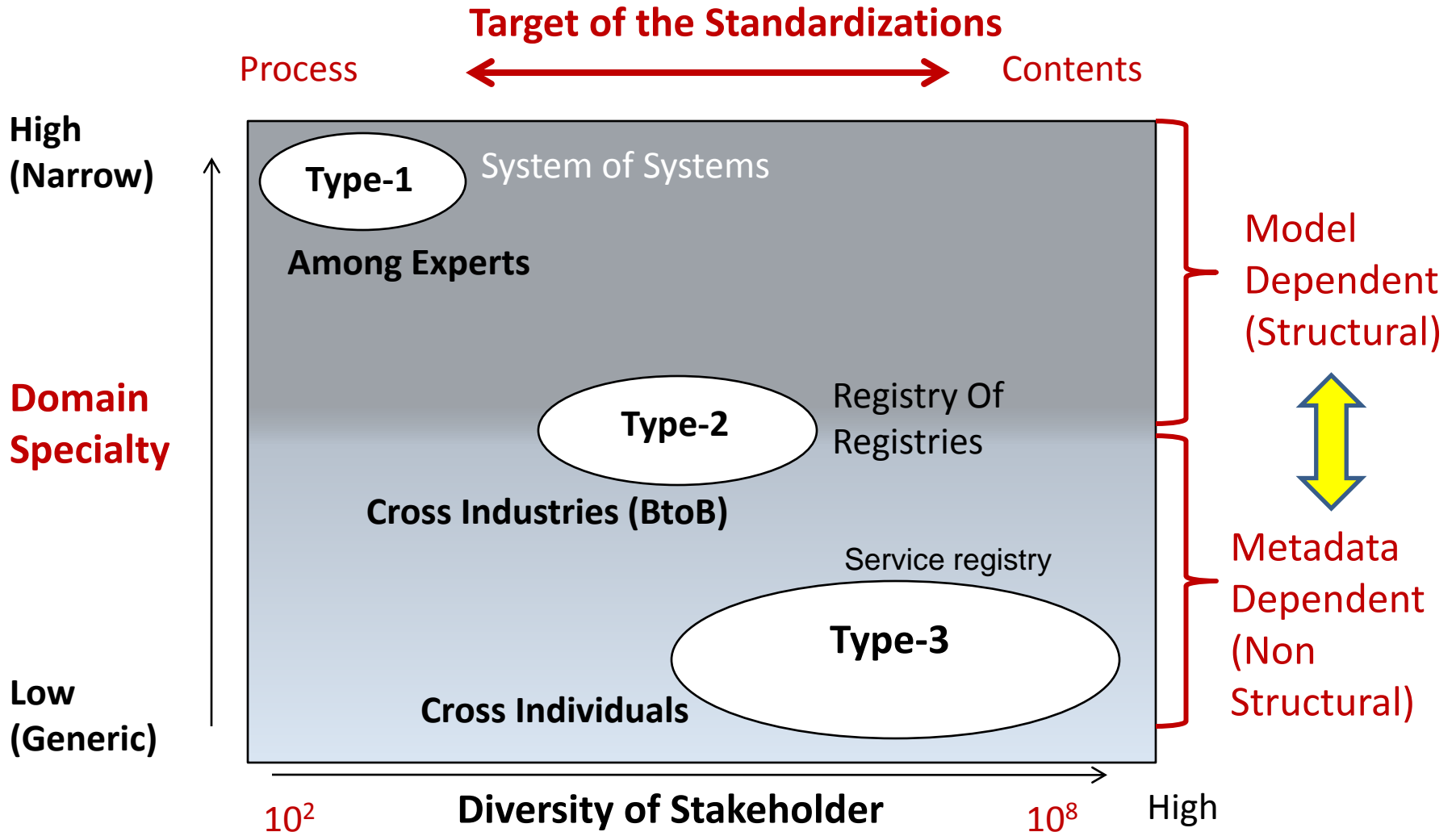
SC32 perspectives to the registry Standardization

- SC32 recognize that there are so many different registry or metadata standard activities in both ISO or outside of ISO.
- To clarify requirements to the Service Registry standards, A taxonomy of registry type should be investigated in the discussion of the those standardizations.

Registry or Metadata related Standard Activities



An Idea for Taxonomy of Registry Types



Type-1 Registry

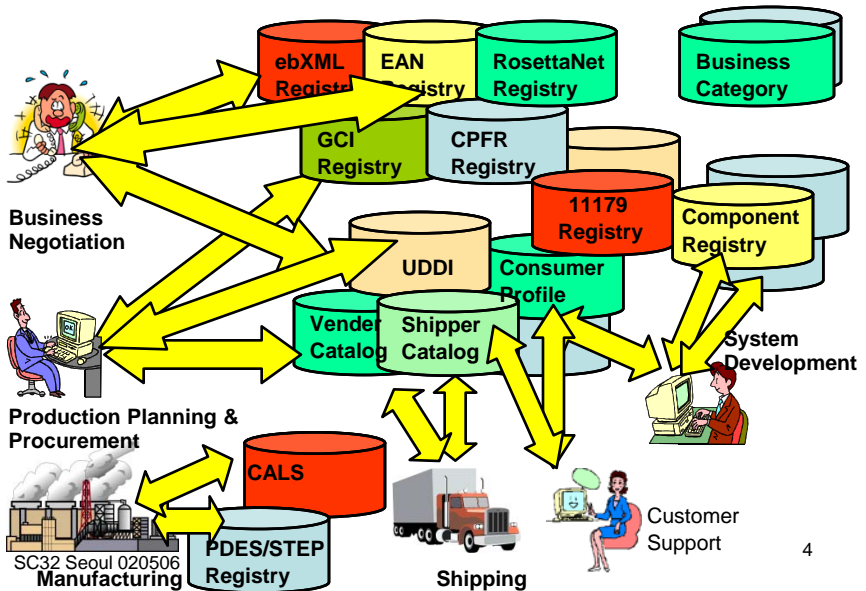
- Dedicated Registries for specialized closed domains such as Space & Air, Defense, Automobile or Medical industries to support high skilled engineer/experts like SOSE (System of Systems Engineering)
- Sharing models and process by domain experts.
- Registry User: limited experts.
- Example:
 - TC184: ISO13584 (IEC 60130) : Parts Library
 - TC184: ISO 22745 OTD (Open Technical Dictionary)
 - TC184: ISO29002: Concept dictionaries — Resolution services

Type-2 Registry

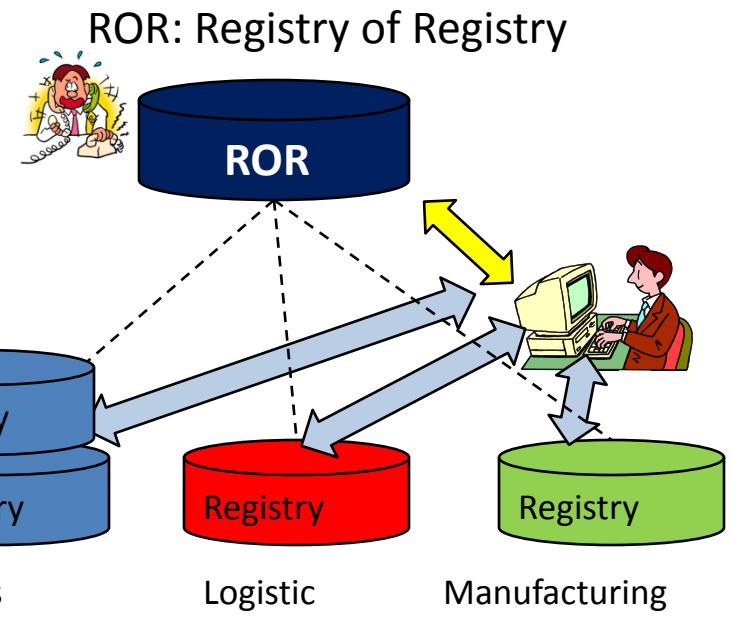
- Registries to support cross industries B to B business information sharing in the e-business such as the Supply Chain or Traceability.
- ebXML RIM & RS is a typical standard in this type.
- But, different registry standards or non standardized registries were implemented in each industry domains (Heterogeneous Registries)
- Registry User: various different business domain experts
- ROR (Registry of Registries) standard might be needed

ROR(Registry Of Registries) concept

- The UDDI 3.0 specification is addressing this ROR concept as Multi-Registries Environment featuring Root & Affiliate registries.
- ISO/IEC 19763 (MFI: Metamodel Framework for Interoperability) in SC32 is also addressing the ROR concept.



Heterogeneous Registries



Registry Interoperation

Type-3 Registry

- Registry for **discovery of services** and orchestration of services.
- the UDDI is typical registry in this type.
- Registry User: Unlimited

- Problems:
 - Who should be responsible in the contents maintenance
 - How to segregate from Google or Yahoo

Comparison of Registry Types

Registry Type	Type-1	Type-2	Type-3
Typical Example	<ul style="list-style-type: none"> • PLIB Registry 	<ul style="list-style-type: none"> • ebXML RIM & RS 	<ul style="list-style-type: none"> • UDDI
Purpose of Registry	<ul style="list-style-type: none"> • Integration of products in a specific industry 	<ul style="list-style-type: none"> • Cross Industries information interchange (BtoB) 	<ul style="list-style-type: none"> • Discovery of Service
Major Contents	<ul style="list-style-type: none"> • Models & Products Specification • Process & Regulations • Metadata 	<ul style="list-style-type: none"> • Business Information (MSG) • Metadata 	<ul style="list-style-type: none"> • Definitions of Service • URL/IRI • Access Protocols
Maintenance Responsibility	<ul style="list-style-type: none"> • Covered by Integrator Agencies 	<ul style="list-style-type: none"> • Covered by Agency in each industries 	<ul style="list-style-type: none"> • ??
Diversity of Stakeholder	10 ²	10 ^{3~4}	10 ^{8~9}
Problems to be Considered	<ul style="list-style-type: none"> • MDA/SOC capability • Complexity of contents 	<ul style="list-style-type: none"> • Inharmonic registries • ROR needed 	<ul style="list-style-type: none"> • Justification of registering

Summary of comparison

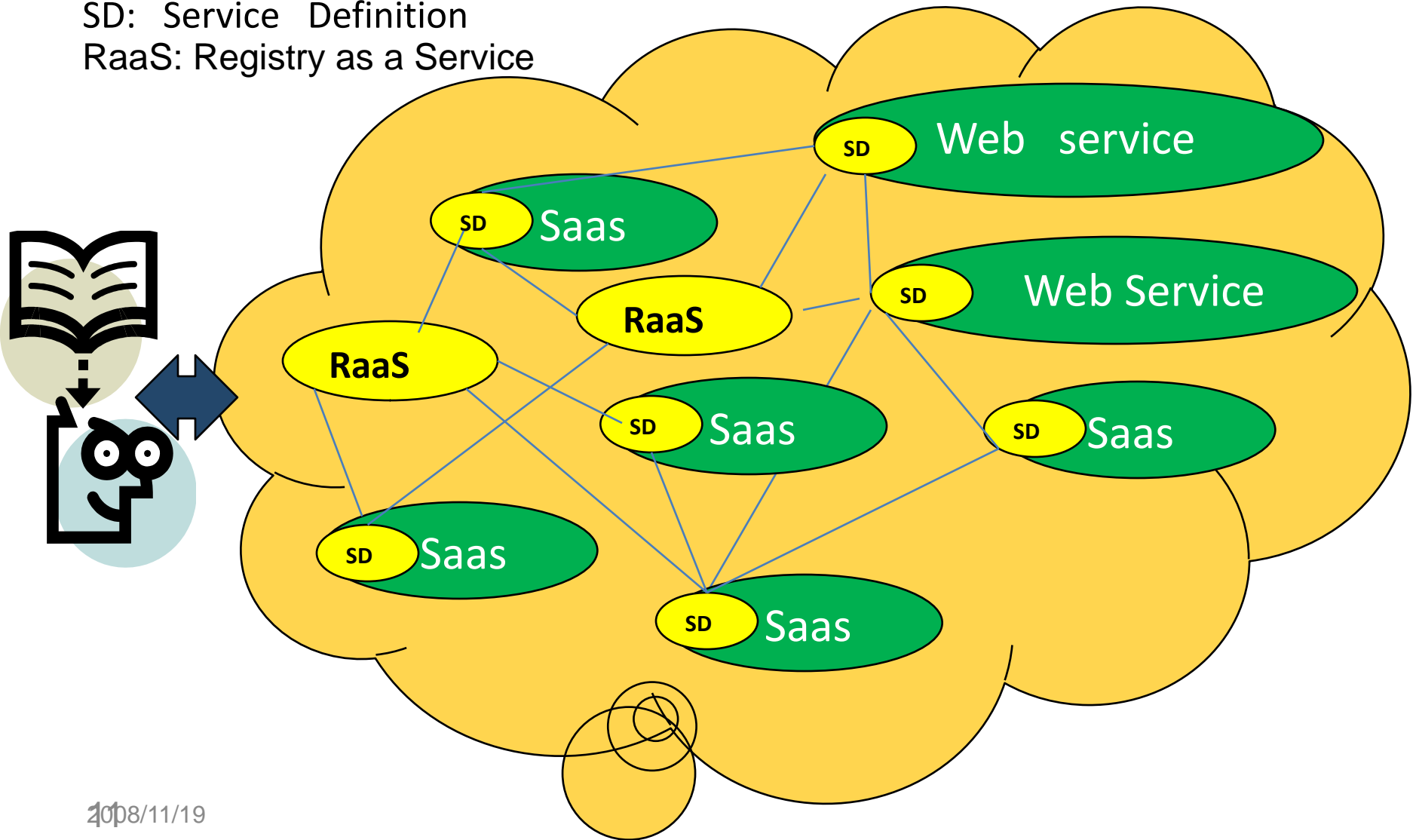
- Risk at Type-2 & Type-3
 - Concentration of Maintenance efforts
 - Concentration of RA(Registration Authority)
 - Difficulty on the tracking changes or versions
 - Difficulty on assurance of ID or URI persistency
 - Small returns on the registration efforts at users
 - How to differentiate from Google or Yahoo



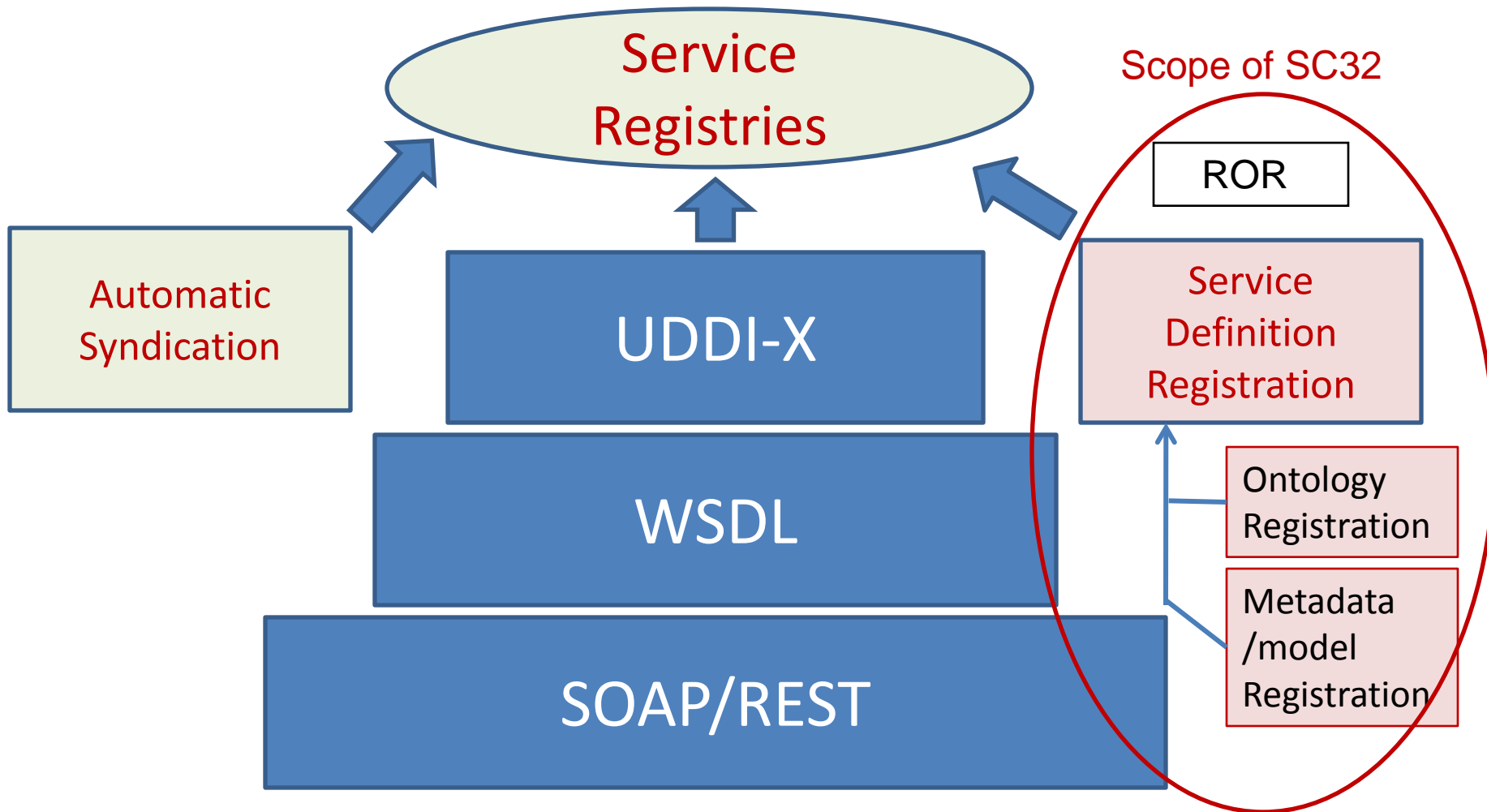
Needs for standards of registry content definitions that enable Automatic Syndication without any central maintenances.

An Image for Automatic Syndication of Service Definitions

SD: Service Definition
RaaS: Registry as a Service



SC32 Perspective



Recommendations for WSSG

- The Service Registry should be considered as a type of the registries
- It should be investigated that Registry Standards for type-2 still needed to ensure the integrity and the security in Business domains (BtoB) or not.
- To promote standardization by the PAS procedure at this area, it is needed to organize and coordinate SDOs in both ISO & Industrial consortia more widely.
- SC32 initiated study projects on ROR and Metamodel for Service Definition, then, SC32 appreciates to share study results with the WSSG.