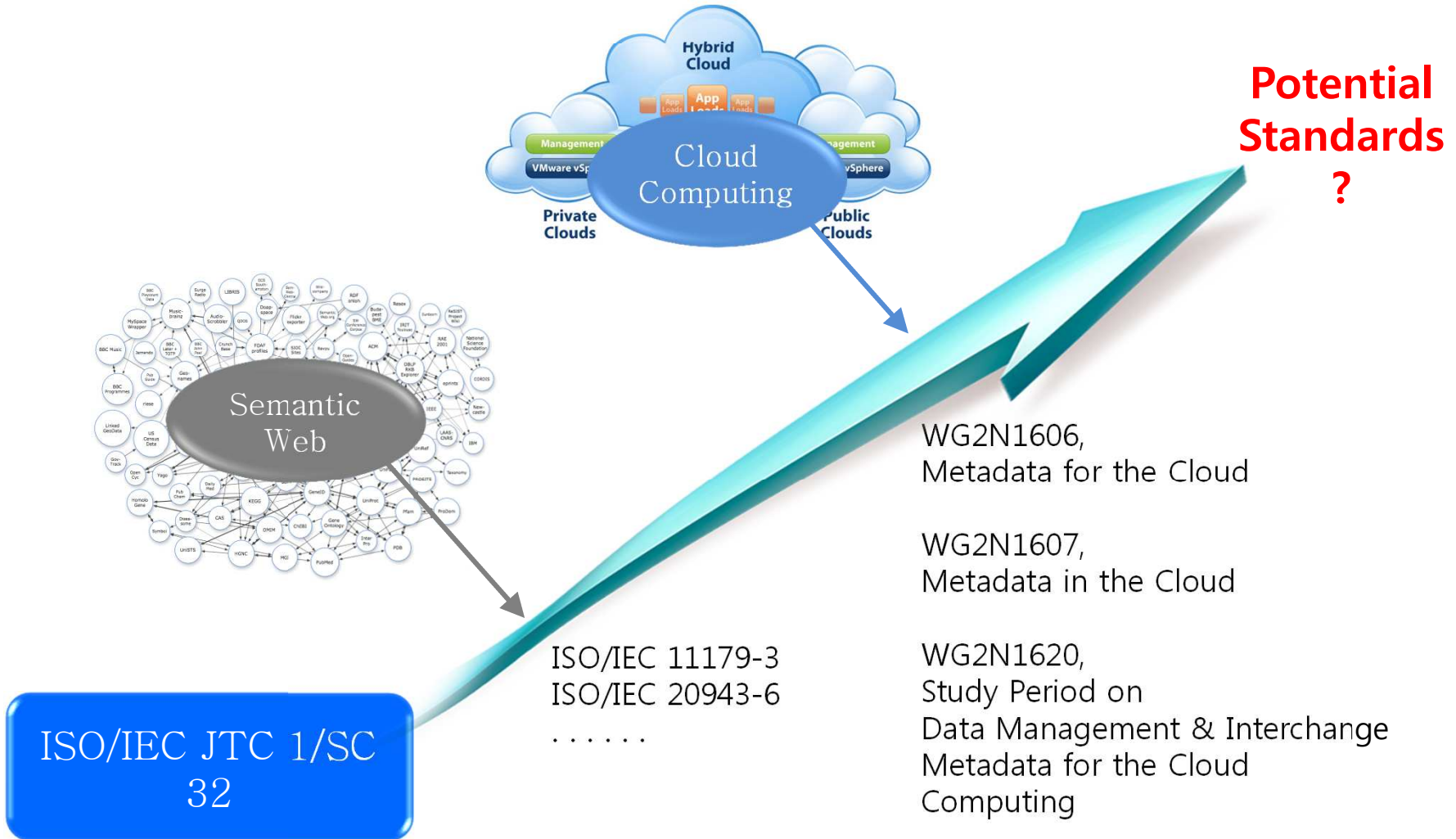


# Potential standardization items for the cloud computing in SC32

ISO/IEC JTC 1/SC 32 Plenary Meeting,  
Berlin, Germany, June 2012

Sungjoon Lim, Korea Database Agency (KDB)  
Dongwon Jeong, Kunsan Nat'l University (KNU)

# Current status of SC32



# Current status of SC38 - NWIP

- **ISO/IEC WD 17788, Cloud Computing – Vocabulary**
  - **Title:** Specification of Data Value Domain Distributed Application Platforms and Services - Cloud Computing – Vocabulary
  - **Scope:** This International Standard provides an overview of Cloud Computing along with a set of terms and definitions. It is a terminology foundation for the cloud computing standardization work
- **ISO/IEC WD 17789, Cloud Computing – Reference architecture**
  - **Title:** Specification of Data Value Domain Distributed Application Platforms and Services - Cloud Computing – Reference Architecture
  - **Scope:** This International Standard provides an overview of the general concepts and characteristics of Cloud Computing, Cloud Computing types, the components of Cloud Computing, and Cloud Computing actors and the relationships between these elements

# Current status of SC38

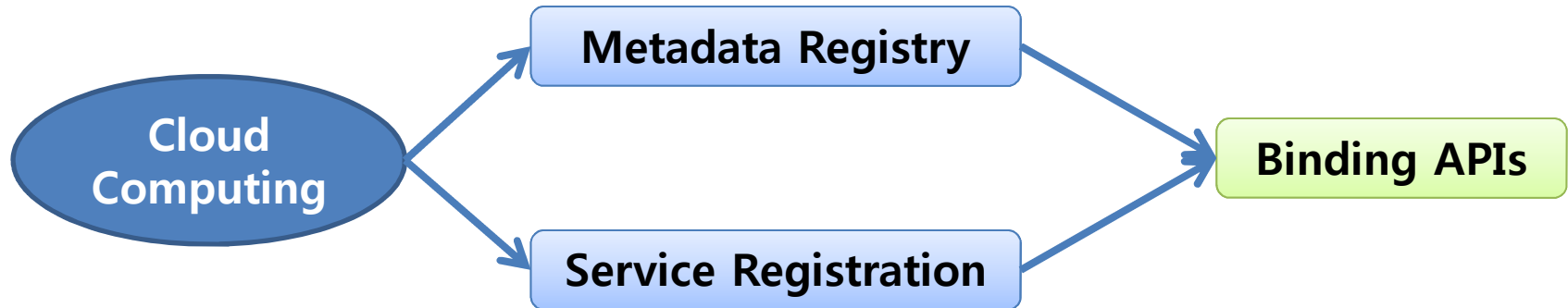
## – standardization items

- Standardization items for the cloud computing
  - Definition / Taxonomy / Terminology
  - **Metadata, Data exchanges**
  - **Common Interfaces (APIs, protocols)**
  - Service Interoperability
  - Monitoring, Auditing, Billing, Reports etc.
  - SLA (Service Level Agreement)
  - Security, & etc.

# Standardization concepts related to SC32

- based on ISO/IEC 11179 family
  - Registry metamodel and basic attributes in the cloud computing environment: 11179-3
  - Registration for the cloud computing environment: 11179-6
- based on ISO/IEC 20943 family
  - xml type metadata registration procedure and method : 20943-1: Data elements
- based on ISO/IEC 20944 family
  - Binding APIs for various languages : ISO/IEC 20944-3: API Bindings
  - Protocol binding standard : 20944-4: Protocol Bindings

# Standardization concepts



# Potential standardization items



- **Cloud metadata registry model for semantics exchange between clouds**
  - Cloud metadata registry model in order to resolve semantic heterogeneity and address semantic interoperability in the cloud computing environment reflecting the concept of 11179
  - Define metamodel reflecting the features of cloud services i.e., define classes and attributes considering cloud characteristics
- **Binding APIs for cloud metadata registry**
  - Develop various types of binding API for the standardized access to cloud metadata registry
  - Relevant standard : ISO/IEC 20944-3 API Bindings

# Potential standardization items



- **Cloud service registration model**

- Standard for registering Cloud services and offering the services quickly and exactly
- Relevant standards : ISO/IEC 19763-3: Metamodel for ontology registration and 19763-7: Metamodel for service registration

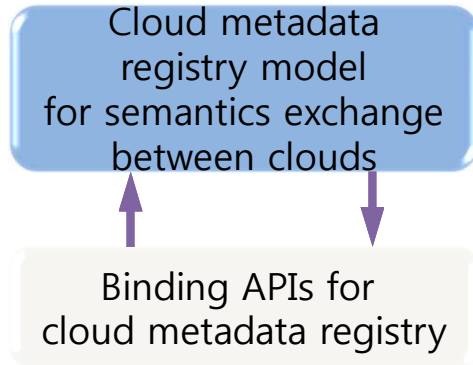
- **Binding APIs for cloud service registration**

- Develop various types of binding API for the consistent access to cloud service registration system
- Relevant standard : ISO/IEC 20944-3: API Bindings

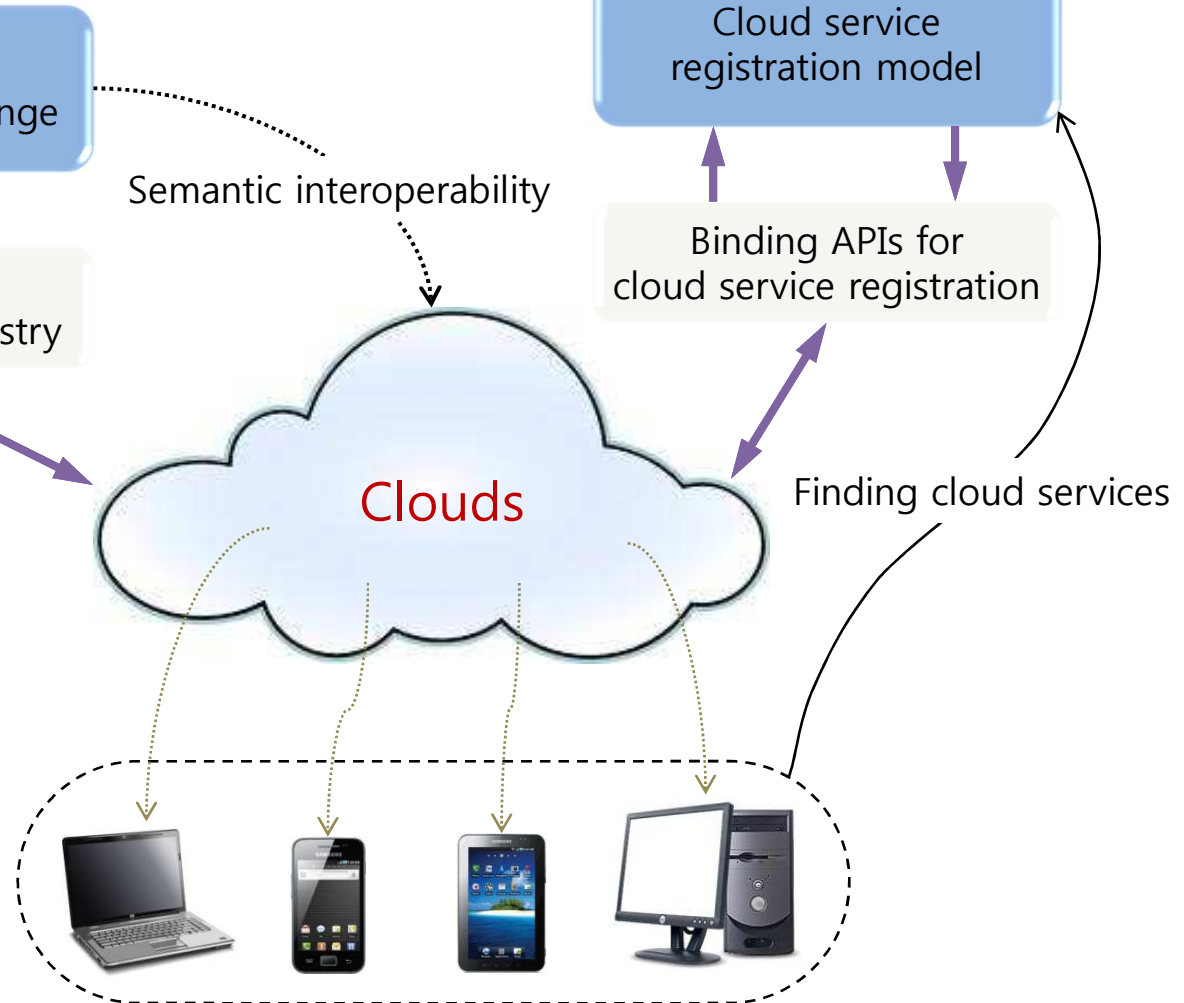
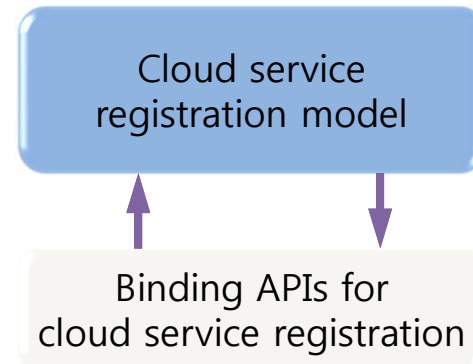


# Potential standardization items

## Cloud metadata registry



## Cloud service registration



# Tentative Schedule

- 2011.11 ~ 2012.05
  - Identifying standard issues and defining the role of SC 32/WG 2
- The 2012 Plenary Meeting and WG 2 Meeting
  - Discussion on standard items
- 2012.06 ~ 2012.11
  - Refining the standard items and additional discussions with SC 32/WG 2 and relevant standard groups
- The 2012 SC 32/WG 2 Interim Meeting
  - Discussion on the refined standard items
  - Submission of NWIP