

# **ITU-T Y.Suppl.69**

## **Web based data model for IoT and smart city systems and services**

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# Y.Suppl.69\* (ex. Y.Sup.Web-DM)

- **Web based data model for IoT and smart city systems and services**
  - a general discussion on data formats and metadata;
  - basic concepts and types of data model;
  - microdata formats for Web data management; and
  - procedural metadata for semantic Web of things (WoT).



# Y.Suppl.69 (ex. Y.Sup.Web-DM)

- Metadata: common descriptions of devices and data
  - Descriptive metadata\*: information for finding or understanding a resource
  - Administrative metadata\*: information to help manage the data resource
  - Structural metadata\*: information on how the components are organized, including relationships

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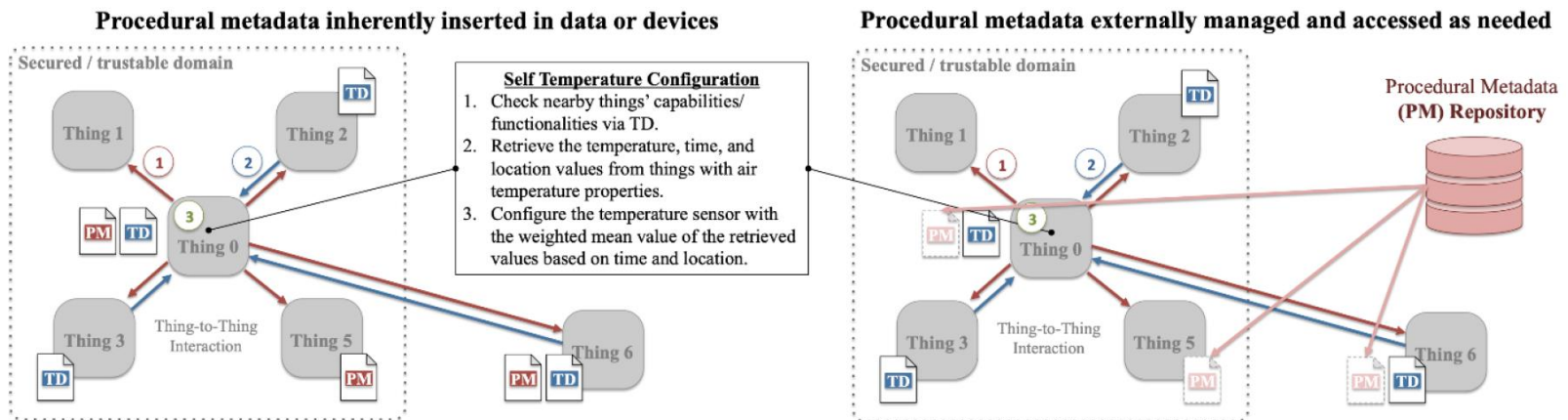
- Procedural metadata
  - to provide the common descriptions on composable procedures of not only individual devices but also smart systems as a whole based on existing data models and ontologies

**Table 4: Description, primary uses, and properties of procedural metadata**

Metadata	Description	Primary uses	Example properties
<b>Procedural metadata</b>	It includes information for common descriptions on procedures and/or processes by utilizing metadata and flags (tags/indexes).	<ul style="list-style-type: none"><li>- Navigation</li><li>- Interoperability</li><li>- Procedure automation</li></ul>	<ul style="list-style-type: none"><li>- Function</li><li>- Algorithm</li><li>- Work instruction</li><li>- Work flow</li></ul>

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- Procedural metadata: Example



– Share the same concept with

- process description with SensorML
- context information with NGSI-LD
- cross-cutting context information management