W3C Semantic Sensor Network Incubator Group

Presenter: Luis Bermudez (SURA/MMI)
SSN invited expert

Presentation Contributors: John Graybeal (MBARI/MMI), Holger Neuhaus (CSIRO)

OGC TC Meeting, MIT, Cambridge, MA
June 24, 2009

W3C Incubator Activity

- Rapid start of work in an Incubator Group (XG)
- Lightweight process, initiated by W3C Members
- Rapid finish to produce an XG Report in under one year
- Smooth transition to the W3C Recommendation Track, if desired and approved
- Use of W3C infrastructure (mailing lists, communications tools, Web site) and consensus-building within W3C culture.

W3C Semantic Sensor Network Incubator Group

End date	2 March 2010
Confidentiality	Proceedings are public
Initial Chairs	Amit Parashar, Amit Sheth and Kerry Taylor
Initiating Members	• CSIRO • Wright State • OGC
Usual Meeting Schedule	Teleconferences: Every week Face-to-face: Once Annually

W3C Semantic Sensor Network Incubator Group

- Started March 1, 2009
- Develop **best practices** for harmonizing OGC Sensor Web Enablement (SWE) Technologies with sensor and sensor network ontologies.
- Begin the formal process of **developing ontologies** that define the capabilities of sensors and sensor networks

Best Practices
Semantic Mark up

1. Define mapping of concepts in SWE to concepts in SSN-XG Ontology
2. Define syntax/structure of semantic annotations in SWE
3. Define translation algorithms to convert annotated-SWE to RDF

We have identified sensor ontologies

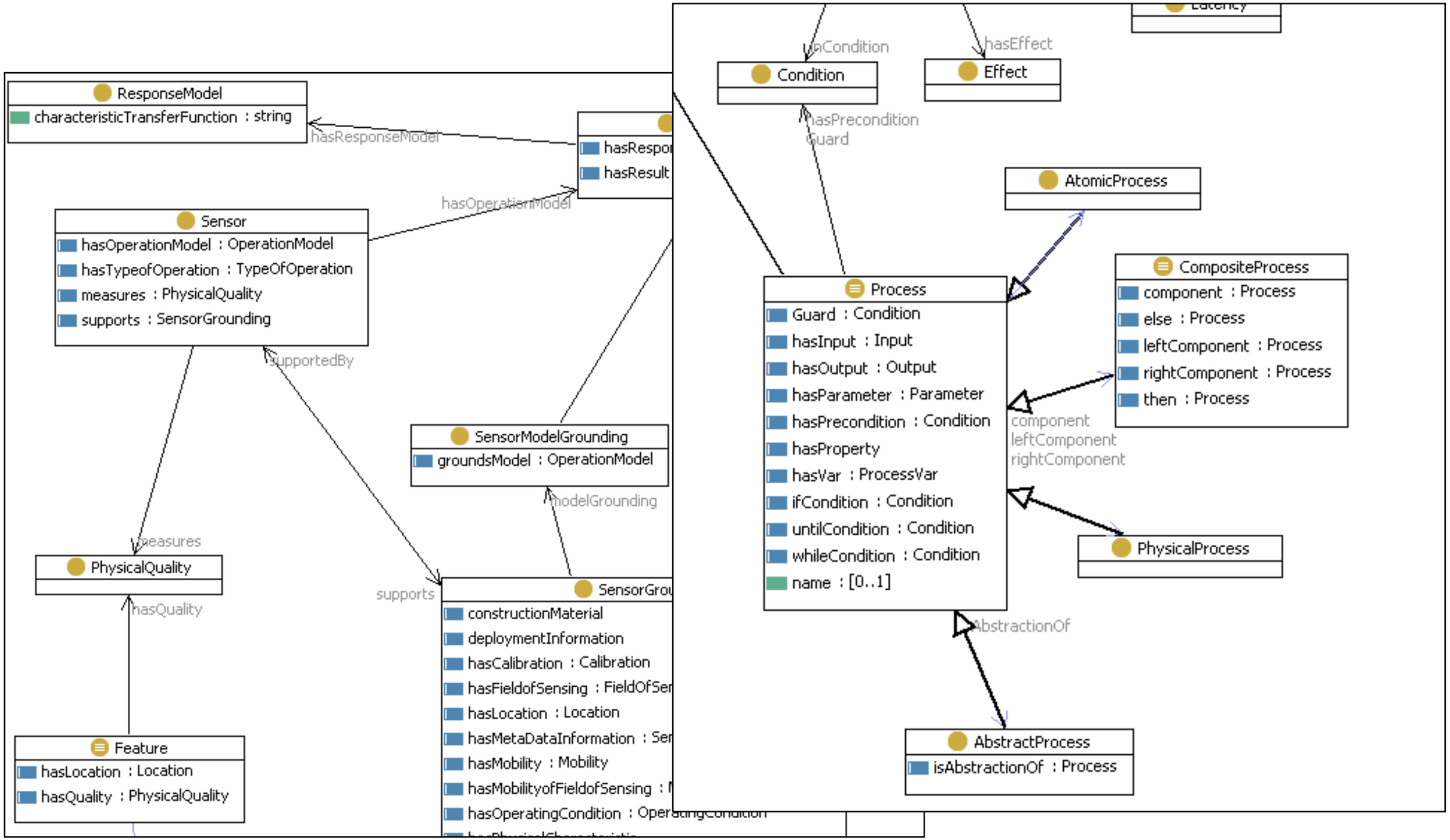
.. from these we will build, merge, copy, squash etc...

Available at MMI Device Ontology Working Group

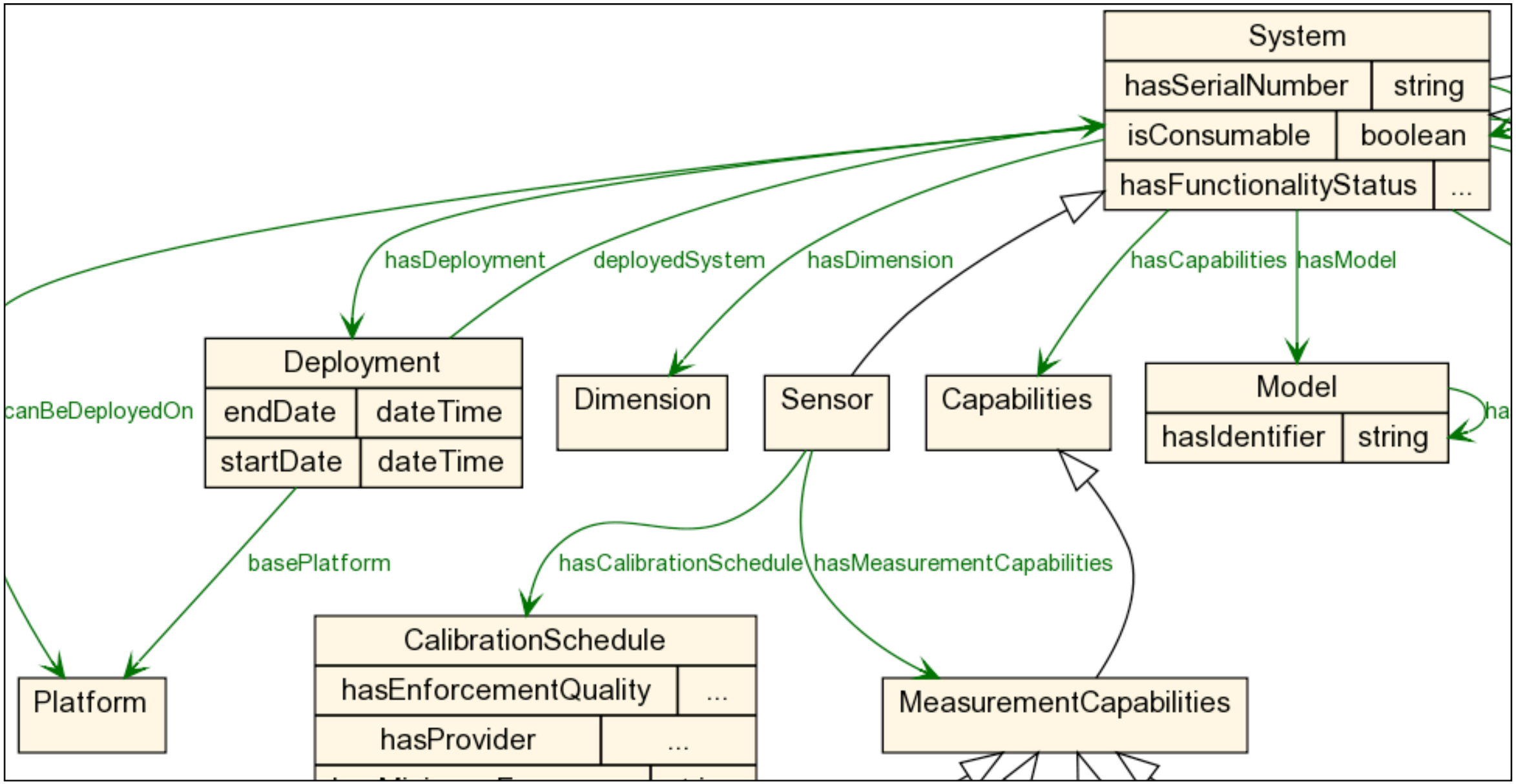
Marine Metadata Interoperability

http://tinyurl.com/sensor-onts

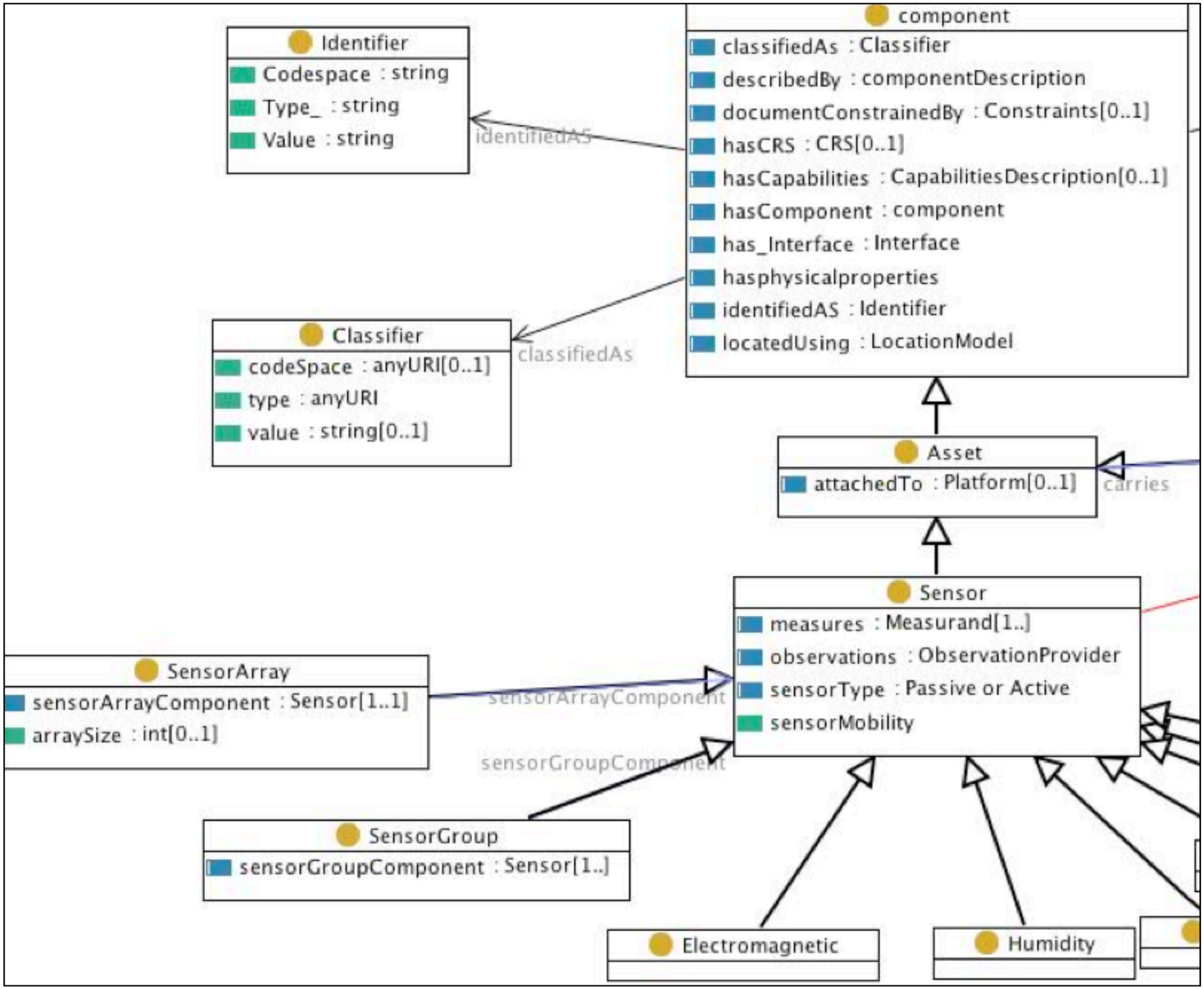
http://marinemetadata.org/community/teams/ontdevices



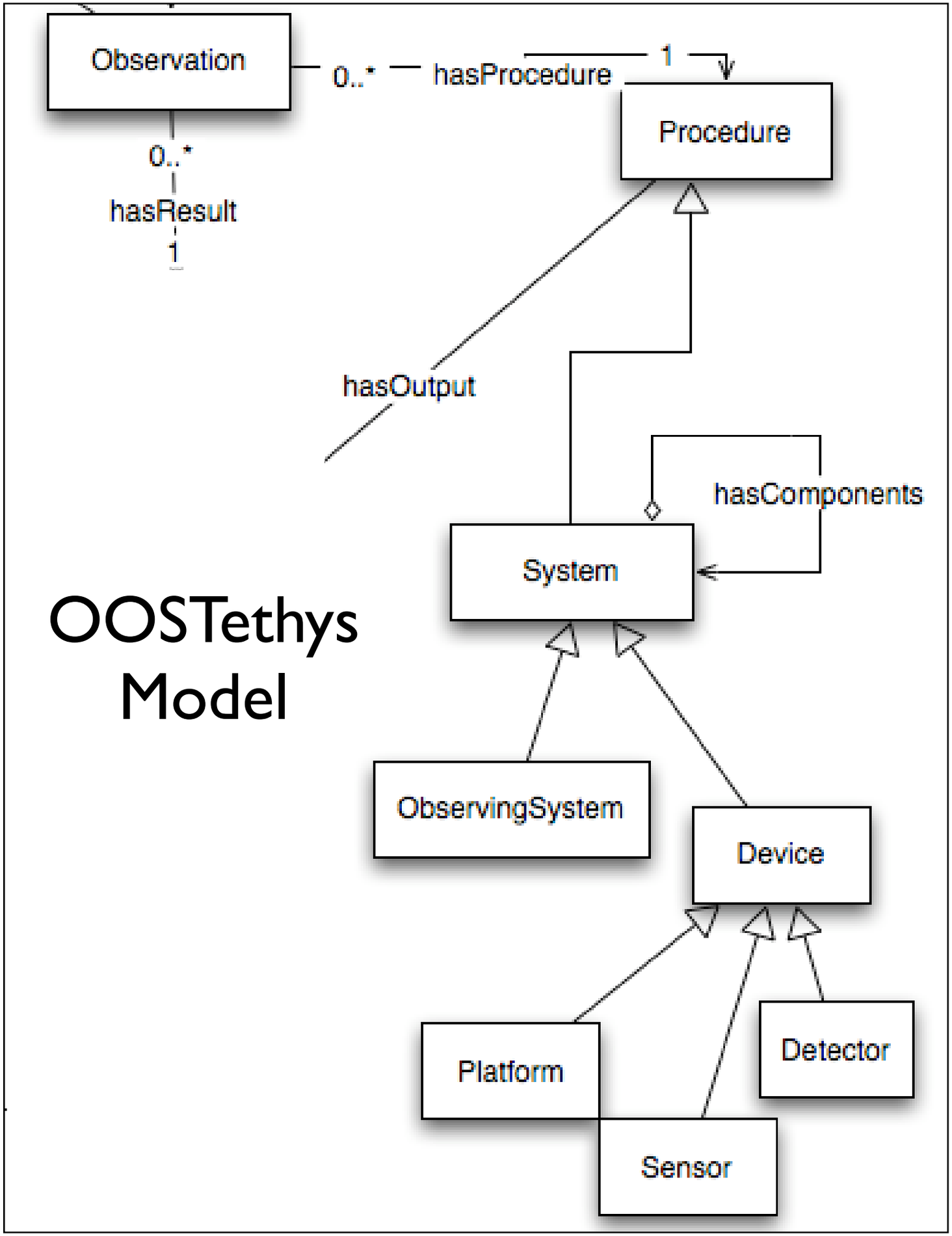
Semantic Sensor Network Ontology, Michael Compton and Holger Neuhaus (CSIRO Australia)



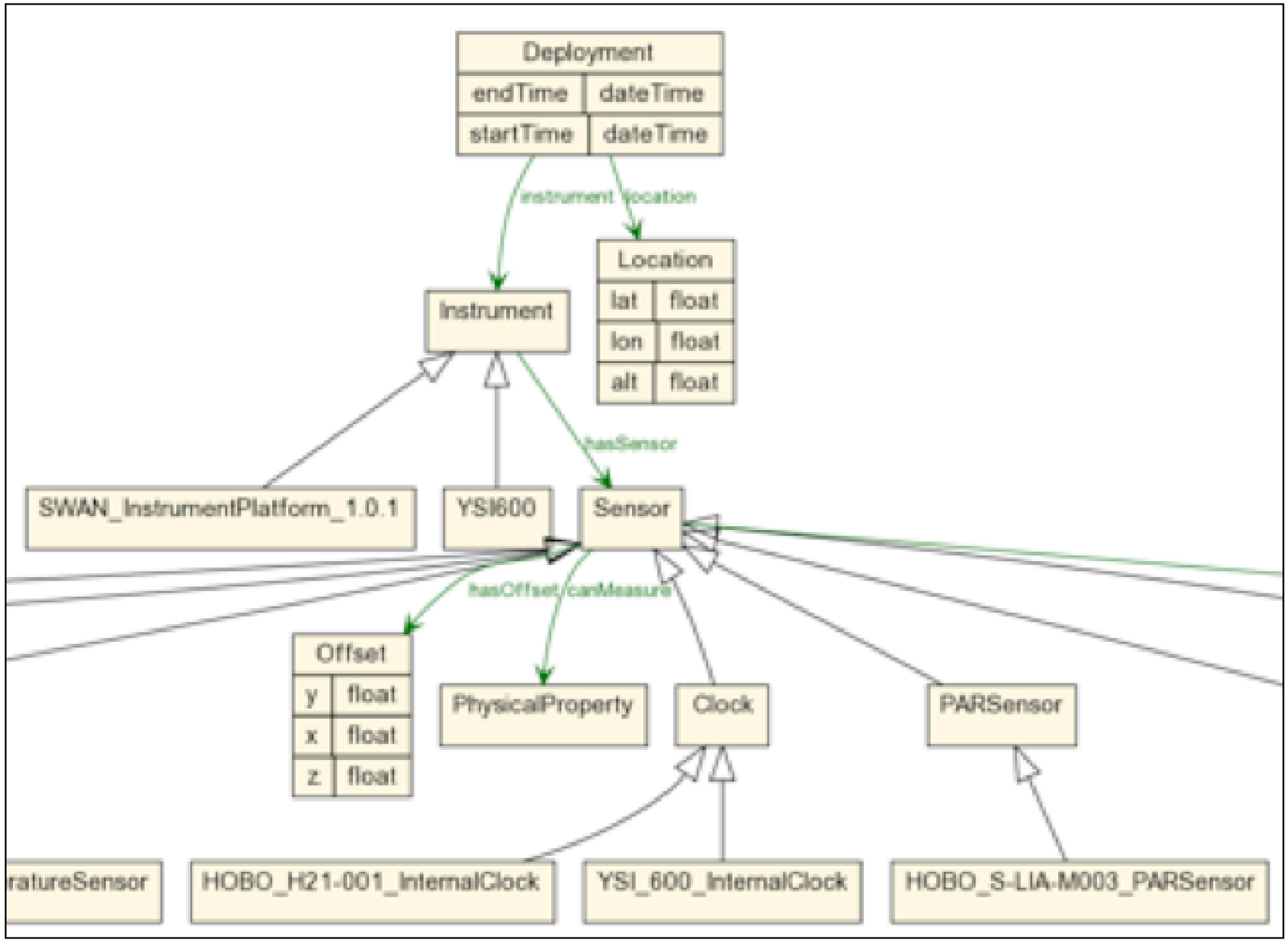
Device Ontology MMI



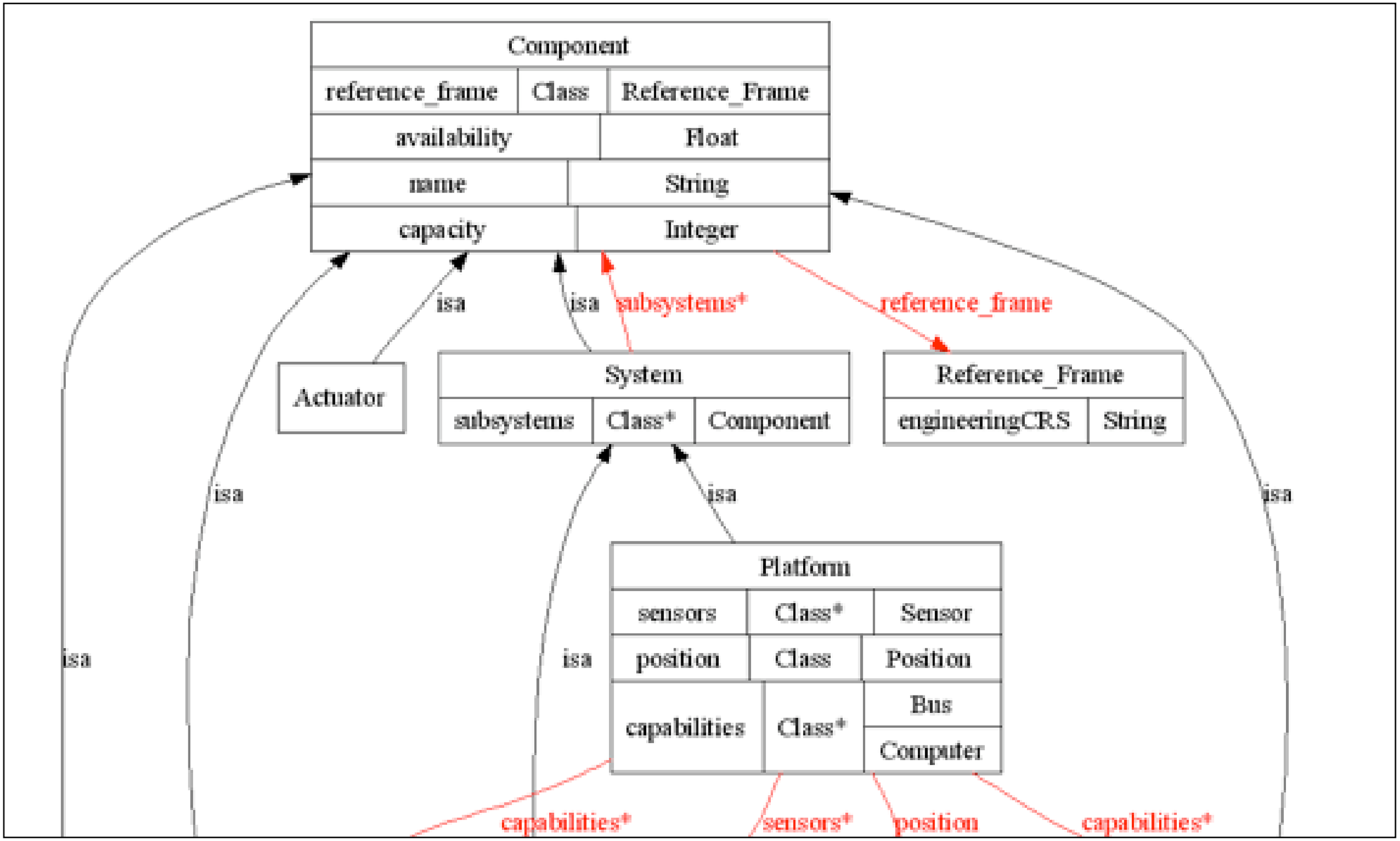
OntoSensor - U of Memphis - Center for Advance Sensor



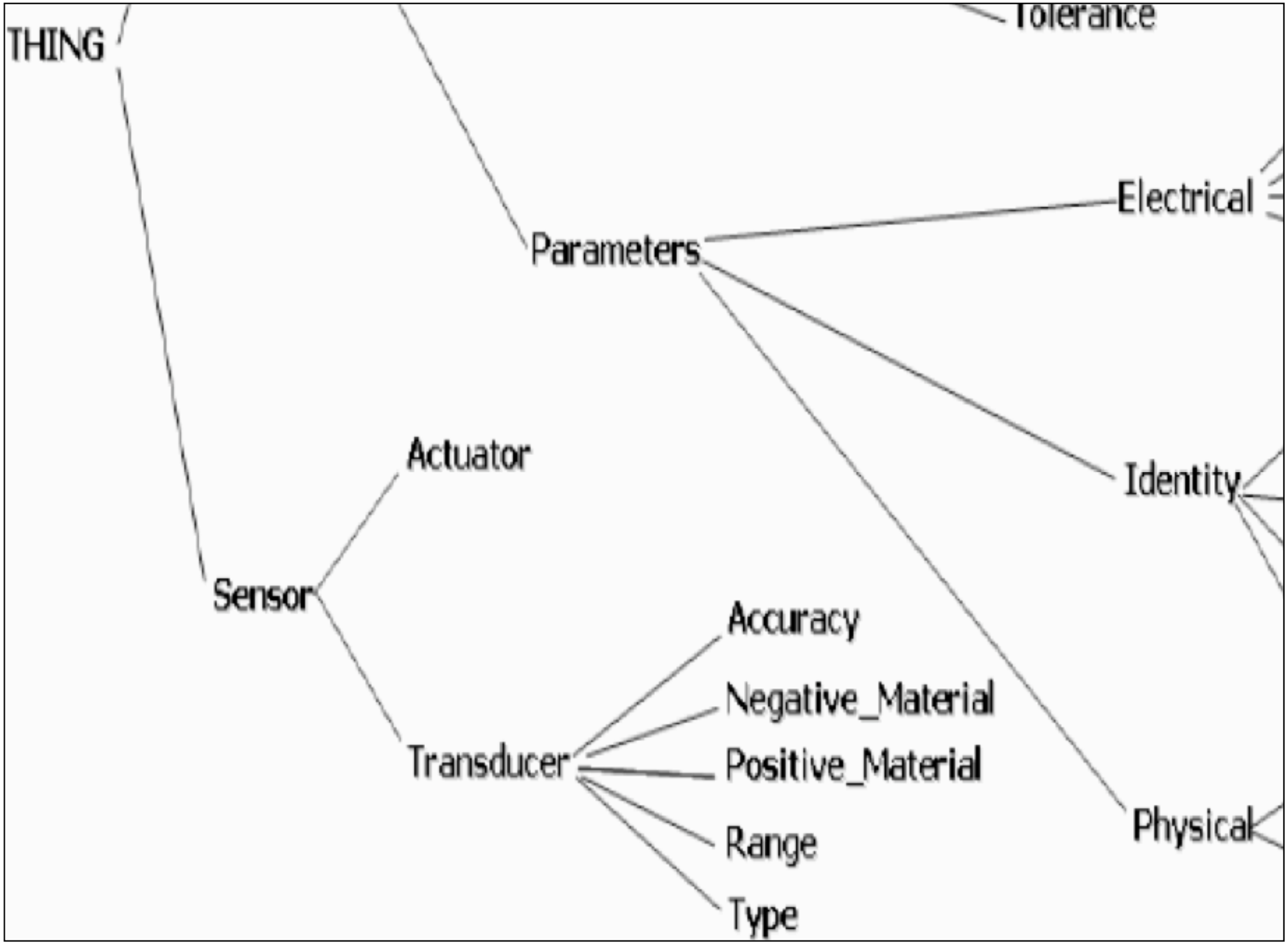
OOSTethys Model



CESN Ontology - CESN at UMass Boston



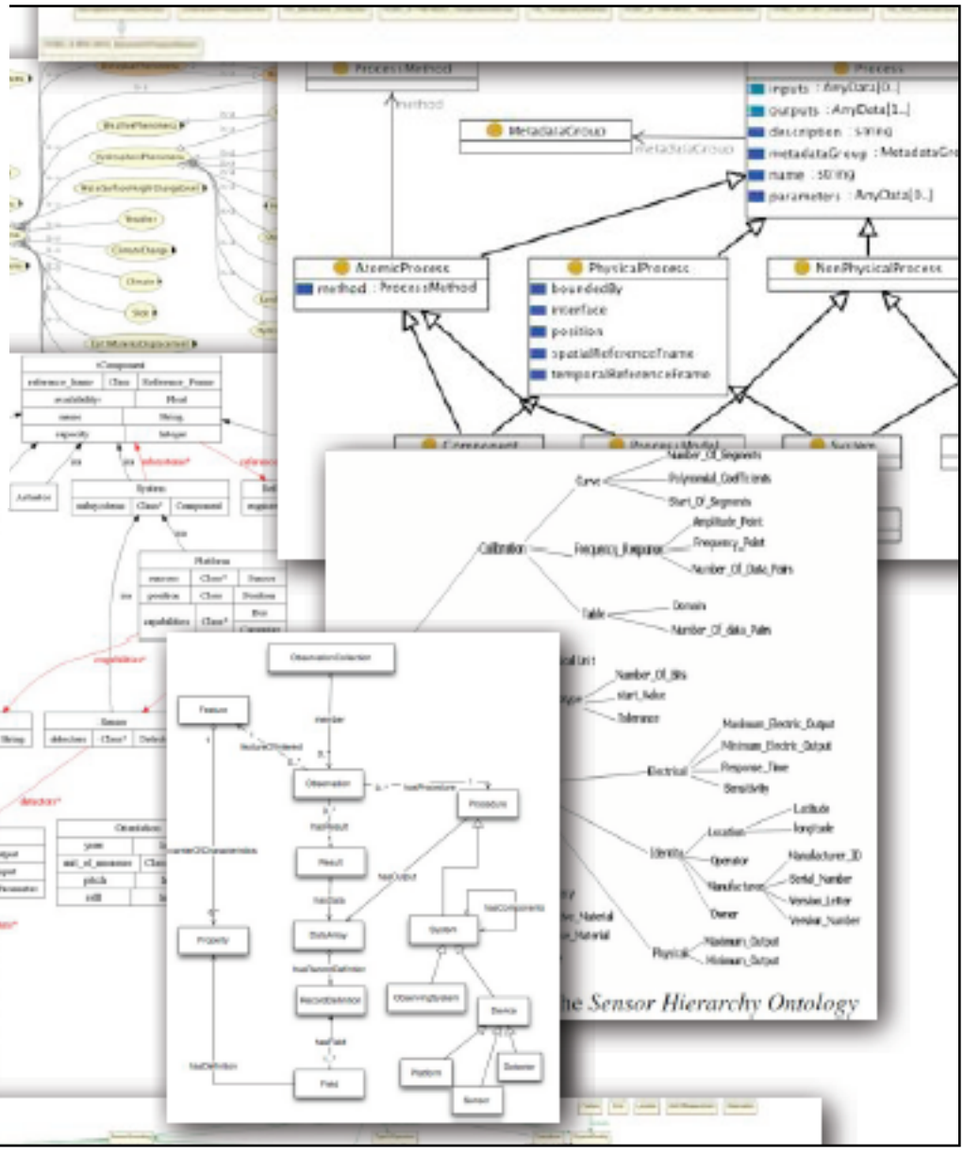
SWAMO Sensor Platform - Al Underbrink's



Sensor Hierarchy Ontology - Eid1 et. al., MCRLab, U. of Ottawa

Criteria to assess existing ontologies

- **Primary purpose/target**
- **Status**
- **Key concept**
- **Range of subject matter**
- **Level of sophistication**
- **Adoption**
- **Incorporation Concepts**



Main Participants

- Kno.e.sis Center: Cory Henson, Amit Sheth
- CSIRO: Michael Compton, Amit Parashar, Kerry Taylor and Laurent Lefort
- CSIRO: Holger Neuhaus and Michael Compton
- UPM Ontological Engineering Group: Oscar Corcho
- IAM Group, University of Southampton: Kevin R. Page
- CTIC Foundation: Rodrigo García, Víctor Peláez
- Institute for Geoinformatics at the University of Münster: Krzysztof Janowicz
- MBARI / Marine Metadata interoperability Project: John Graybeal
- SURA / Oceans IE: Luis Bermudez
- Others....

Face to Face Meeting

24th of October 2009
before the ISWC at
Washington DC

You are very welcome to Participate

Goggle search terms: ssn w3c

Wiki: http://www.w3.org/2005/Incubator/ssn/wiki

Charter: http://www.w3.org/2005/Incubator/ssn/charter

Current Co-Chairs

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