Session 4: Engineering Tracks 1 & 2

Summit Goal:

• foster collaboration between the ontology community, systems community, and stakeholders of some of the "big systems."

• exchange ideas on how ontological analysis and ontology engineering might make a difference, when applied in these big systems.
Ontology in Engineering

Started with engineering view of where ontology might provide value

- Integrating the results from multiple modeling languages
- Issues of sharing data within and between lifecycle stages
- Difference between requirements and delivered system
- Systems of systems vs systems
- The nature of system components, connections between components, and the difference between these and the parts installed
- The connections between system components and what they carry
- Social, legal, and value-related aspects in systems behavior
- Federated systems both as a big system, and as a solution to some of the challenges
- Construction of good quality reusable models (ontologies)
- The management of ontologies of and for large systems and the challenges in developing and maintaining them

Emerging issues and threads (tentative grouping)

- Composite system modeling including:
  Parts, components, roles, qua-objects, functions, part replacement and virtual individuals, Nominal values (bishop of Liverpool)
- Success and relevance of semantic issues in engineering
- Distinctions between natural and artificial systems
- Distinctions between system descriptions in different lifecycle stages and for different purposes
  - Semantic interoperability (?)
  - ......a lot of topics on left missing

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