# Towards A Quantities and Units of Measure Ontology-based Standard

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#### Agenda

- Frank Olken Overview
- StanHuff -- "Experience and Requirements for Units of Measure in Patient Data Exchange"
- David Price -- "OASIS PLCS Committee Requirements for a Units Ontology"
- DaveMcComb -- "The gist Unit of Measure Ontology"
- RobertDragoset -- "Units Markup Language"
- Rob Raskin -- "SWEET 2.0 Scientific Units Ontology"
- Pat Cassidy -- "Aligning NASA SWEET sciUnits Ontology with COSMO"
- Howard Mason -- "Units of Measure How many standards?"
- Pat Hayes -- "Making Distinctions"
- Discussion

### Scope of the UOM Ontology?

- Units of measure (meter, foot)
- Dimensions (Mass, Length, Time, ...)
- Dimensional Analysis
- Units conversion
- Interval measures vs. coordinates
- Newton\*meters = torque or work?
- Physical units only or also currency?

#### **Encoding the UOM Ontology**

- How to encode the UOM ontology?
- How to encode units conversion (arithmetic)?
- How to encode dimensional algebra?
- What about dimensionless ratios for concentration?
  - Mass ratios, mole ratios, volume ratios ....
- What sort of logic will be suitable to encode the UOM?

#### How to proceed?

- Goals?
- Who?
- Institutional framework:
  - For the ontology, for dissemination, web site?
  - Formal SDO? Informal SDO?
    - NIST, BIPM?
    - ISO?
    - W3C?
    - OASIS?
    - ....