

# Grand Challenges Track

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Ram Sriram / 31-Mar-2011

# Goals For Grand Challenges Track

- For a domain
  - Summarize current state of the art on ontology use: academic and industry
  - Determine gaps that hinder real-world ontology applications
  - Enumerate the actions that need to be taken to overcome these gaps
- Brainstorm ideas for a grand challenge problem

# Speakers

- Christopher Welty (IBM)
  - Grand challenge for Watson-like Systems
- Ramesh Jain (UC – Irvine)
  - Social Life Networks – Ontology-based Recognition
- Eliot Siegel (UMD, School of Medicine)
  - The Dr. Watson Project: Clinical Perspective
- Christopher Chute (Mayo Clinic)
  - Relationships among Biomedical Ontologies and Classifications
- Nabil Adam (Department Homeland Security)
  - Ontology Applications in Homeland Security
- Christopher Frangione (X Prize)
  - Revolution through Competition: Designing Effective Incentive Prizes

# Domains Identified

- Health Care
- Social networks
- Homeland security

# Health Care

- Watson-like system for medical education (Siegel, Welty)
  - Text retrieval (Harrison, Merck, etc..)
- Automated chart reviews (Siegel)
  - Learning
- Diagnosis and Treatment (Siegel)
  - Expert Systems
- Challenge: Vocabularies and Terminologies (see slide 2, Chute)
  - ICD 11 and beyond – creation, validation, and verification of ontologies

# Social Networking

- Internet of things emerging
- Situational Analysis and Recommendation (slide 8, Jain)
- Interpreting images and text (context-based, slide 9, Jain)
- Challenge: Creating and testing R-ontologies (Recognition Ontologies)

# Homeland Security (Adams)

- DHS Infrastructure
- Modeling, Simulation, and Analysis
- Challenge: Development, validation, acceptance, update, and integration of ontologies

# Finally: The X Prize (Frangione)

- Attributes of X Prize (slide 13)
- How do prizes deliver change (slide 14)
- Developing a prize (slide 17)
  - Goal setting, Prize strategy, Design, Execute, Life Cycle
- Various models of prize (slide 18)
  - X prize is incentive model
- Designing a prize (slides 20-23)
- The Ansari (X) Prize (slide 24)
  - Human space flight – A reality for all
- Thoughts about X Prize
  - Domain, funding, management, etc..