Information Interpretation and Integration Conference

I^{3}CON

LOCKHEED MARTIN

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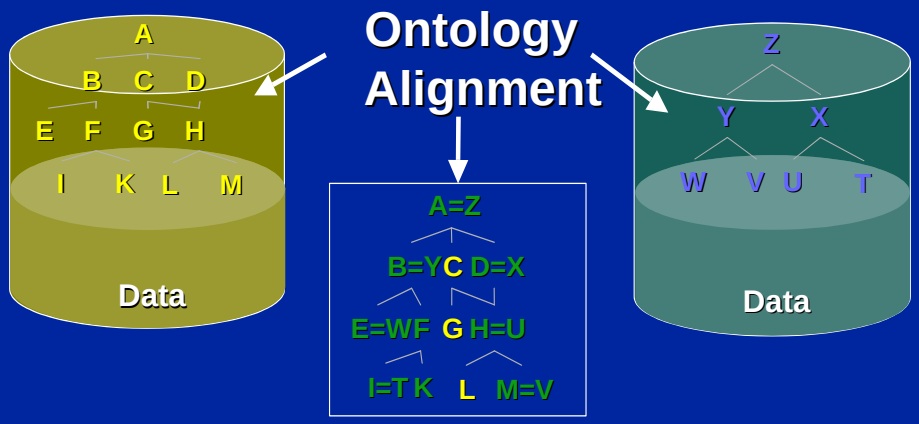
Semantic Integration

- **Semantic integration will be one of the first major accomplishments for ontology-based applications**
  - Semantic Web (supported by DARPA) moving this forward
  - New developments in automated ontology/schema alignment, merging, learning



I³CON is organized on the model of the Text Retrieval Conference (TREC).

- **Still, there are no well-defined concepts for measuring success for semantic integration**
  - We need clear metrics and benchmarks for evaluating technology that enable semantic integration of heterogeneous systems

I³CON

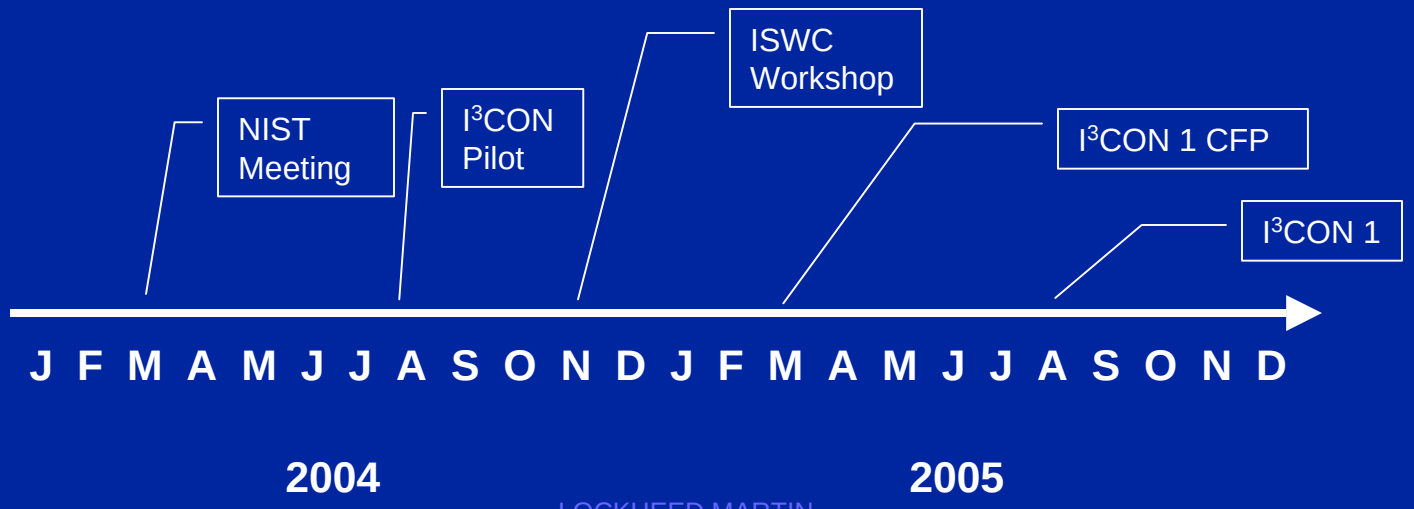
- **Information Interpretation and Integration Conference will:**
  - Define metrics, challenge problems, research objectives for ontology alignment, merging, learning
  - Lay the groundwork for major advancements
  - Facilitate the formation of new funded research programs
    - C2 workflow composition
    - Semantic integration
    - Knowledge-based systems
    - Autonomous systems
    - Cognitive learning agents

I3CON

- I3CON is an industry-academic-government collaboration
- Organizational Committee includes individuals from
  - Lockheed Martin
  - NIST
  - NRL
  - Microsoft
  - Realtime Communications
  - University of Illinois
  - INRIA
  - Stanford University
  - University of Trento
  - Sam Houston State University
  - University of Manchester
  - Yale
  - Teknowledge
  - ISX
  - University of Amsterdam
  - Ontology Portal

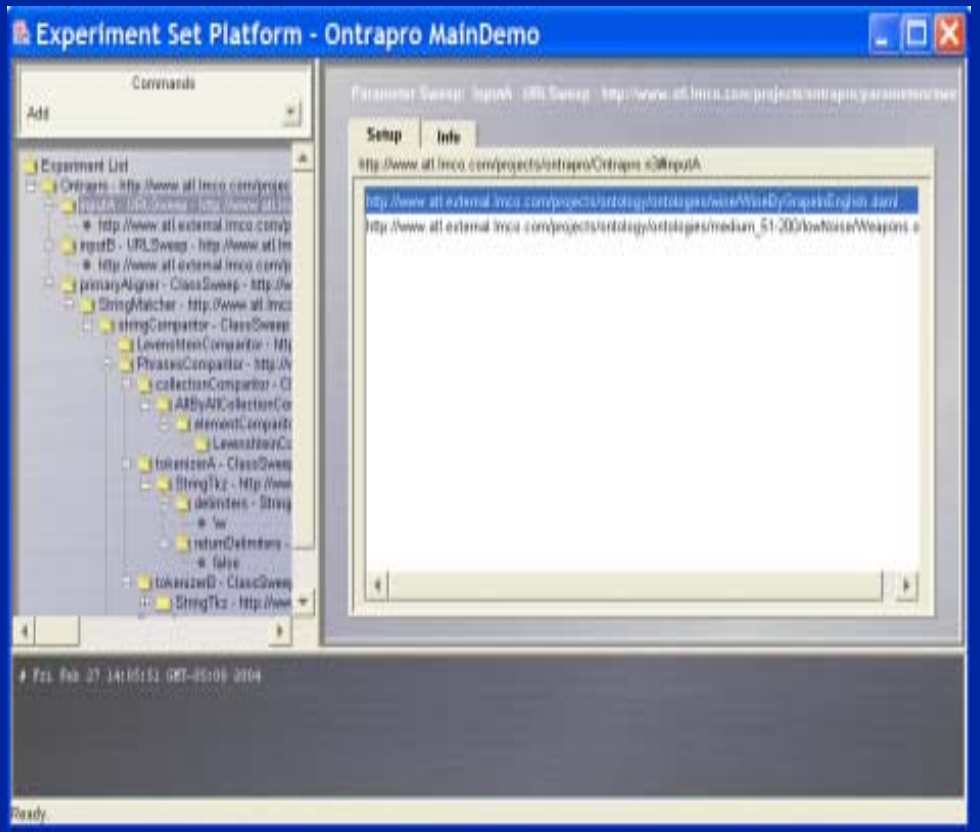
I³CON Timeline

- **March 9, 2004:** I³CON brainstorming at NIST
- **June 14, 2004:** Ontology pairs released to participants
- **July 16, 2004:** Participants submit alignments
- **August 24-26, 2004:** I³CON pilot at PerMIS 04
- **November 8, 2004:** EON Ontology Alignment Tools Evaluation Workshop at ISWC04
- **March 2005:** Call for Participation for I³CON
- **August 2005:** I³CON 1

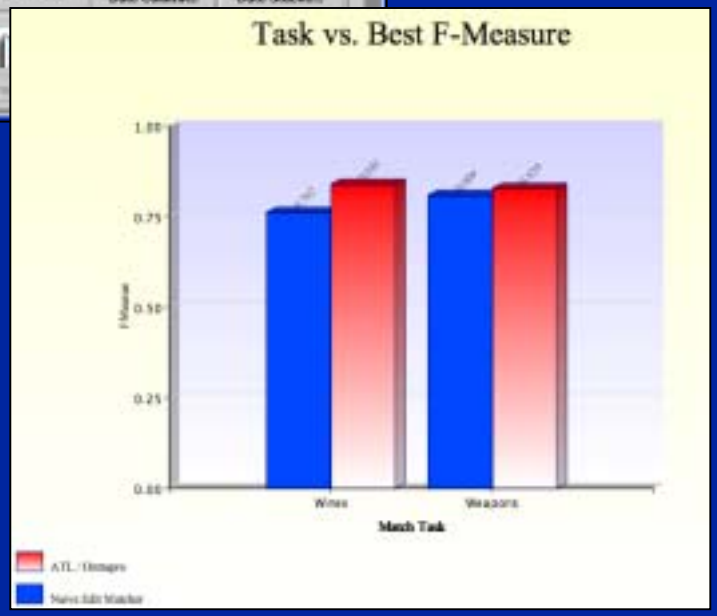


Experiment Set Platform

- **ATL developed a platform for**
  - Semi-automating experiment setup
  - Automating experiment execution
  - Automating data collection
- **Employs a core set of ontologies**
  - Ontology Alignment
  - Alignment Evaluation
  - Ontology Operation
  - Operation Evaluation



Evaluation Tools



- ATL is also developing a platform for evaluation of ontology alignment algorithms
- Employs the same set of core ontologies that provide a structured reporting metrics
  - Precision, Recall, fMeasure, Alignment Challenge, etc.
- Interfaces with KavaChart tool for data visualization

I³CON Needs You

- For I3CON to be a success, we need a number of researchers to participate
- All participation requires is the following:
  - Running your alignment tool(s) on ontology pairs we provide
  - Reporting your alignment results in the format described in http://www.atl.external.lmco.com/projects/ontology/
  - Submitting a short position or technical paper and presenting it at PerMIS
- As benefits, you will get:
  - A publication
  - Real performance data that can be used to evaluate your approach and compare it to others
  - An opportunity to have technical discussions with other alignment researchers
  - Influence on the direction and scope of I³CON
  - An excuse to take a trip to beautiful Gaithersburg, MD

I³CON

http://www.atl.lmco.com/projects/ontology/I3CON