- Columbia University (Comp Sci  Dept)
- PI: John R. Kender
- Team: Graduate students; have previously teamed with IBM on VACE

- Video semantics
  - Measures of tag quality, efficiency, correlation
  - Automatic derivation of "missing" tags
  - Application of OntoClean to video ontologies
- Feature selection for video machine learning
  - Rapid method ("Sort-Merge") prior to SVMs
  - Multidimensional: same accuracy but 100x fewer
- Browsers for unstructured video (lectures)
  - Emphasized content in enhanced context
  - Multimodal: text, gesture, ASR, face, diagram

- Application domain
  - Unstructured low-quality video presentations
  - Management, refinement of multiple cues, tags
- Ontology focus
  - Efficient selection of signal basis and location
  - Effectiveness measure, improvement of taxonomy
- Validation through user studies
  - Browser use increased student exam performance
  - Null video window increases search performance

- This work is complementary to:
  - Low-level infrastructure and/or high data capability needing high-level tag management
  - Feature bases derived intuitively needing refinement for accuracy and speed
  - Browsers based on edited input needing relaxation of "cut", "scene" definition

- John R. Kender

- Professor of Computer Science

- Columbia University

- jrk@cs.columbia.edu

- 212-939-7115

- www.cs.columbia.edu/~jrk