



# Ethnomethodology for Complex Technical Negotiations

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# Problem



- **Motivating work area**
  - **MITRE runs or participates in data standards and information sharing efforts**
- **Primary challenge**
  - **How to develop shared vocabularies and common processes, while accommodating multiple—and often divergent— stakeholder viewpoints and interests**
- **Core problem**
  - **Inattention to the social dynamics of how groups form and create shared meaning can lead to unnecessary conflicts and confusion**

# Background

- **MITRE collaborates with industry and government**
  - Many complex technical negotiations
  - Must create shared meaning
- **Social and behavioral sciences**
  - Ethnomethodology: the study of human practice
  - Conversation Analysis: the study of conversational practices
  - Together: basis for understanding how people make meaning together



# Objectives

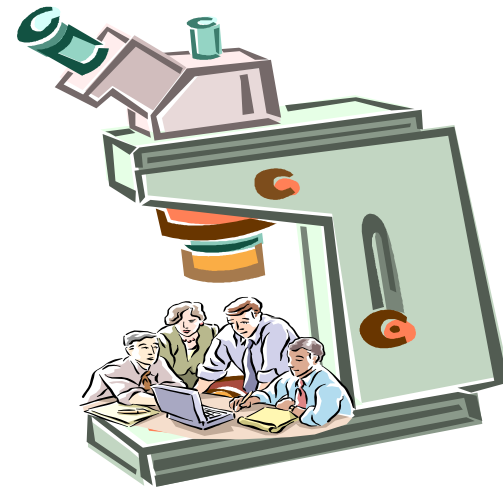
- **Primary objective: Investigate the utility of Ethnomethodology and Conversation Analysis for facilitating complex technical negotiations**
  - Use MITRE's information assurance standards efforts as test bed
- **Secondary objective: Explore how Ethnomethodology and Conversation Analysis can be used to understand and address the challenges of information sharing**
  - In general
  - For Common Vulnerability and Exposure list and related efforts specifically

# Activities

- **Engaged with sociologists from Bentley College and received training in Ethnomethodology and Conversation Analysis (EM/CA)**
  - Focus on the application of EM/CA to technical environments
- **Collaborated with Bentley College sociologists to conduct EM/CA-based case studies of CVE and related programs**
  - Analysis of e-mail archives
  - Analysis of negotiations in live meetings
- **Research on how Ethnomethodology can provide useful implications for MITRE's work in information sharing**

# Highlight

- **CA applied to e-mail and live negotiations**
  - Demonstrates the approach is feasible and illuminating
  - Insights into how sustained disagreements arise
- **EM/CA analysis of CVE's role as a "boundary object"**
  - Supports durable cooperation among communities
  - Examples: ISBNs, VINs, SSNs, and CVE IDs



# Highlight

- **Ethnomethodology supports common observations about the problems of information sharing**
  - **We need to talk: Some degree of interaction is crucial for effective information sharing**
  - **People (not repositories) share information**
  - **Boundary objects that require interaction reduce misunderstandings**
  - **Don't expect good records: The more broadly a record is shared, the less likely it is to be meaningful and useful**
  - **Document sharing  $\neq$  information sharing: Making information discoverable does not make sharing complete**



# Impacts

- **Increased effectiveness in MITRE's role as an honest broker in complex technical negotiations**
- **More useful standards that influence customers and vendor communities**
  - **Increased understanding across communities of practice**
  - **Avoidance of unnecessary "terminology wars"**
- **Improved MITRE efforts in system design and information sharing**

# Future Plans

- **Apply Conversation Analysis to other domains, such as Intelligence Analysis**



- **Investigate and apply EM/CA concepts to information system design, particularly**
  - Loosely structured (semantically lean) boundary objects
  - Identifier schemes versus structured naming schemes
- **Apply EM/CA to systems engineering for information sharing**