Description of workshop for NASTEC 2008, August 13-15, McGill University, Montreal
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Mining and Analyzing Web-based Social Networks using ORA

Organizer: Center for Computational Analysis of Social and Organizational Systems (CASOS)
Carnegie Mellon University (CMU)
Facilitator: Terrill L. Frantz
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Workshop duration: Full-day

Description: A lecture and hands-on workshop presented in two interconnected sections. The first section will be a lecture and discussion on the foundational concepts and techniques of Social Network Analysis (SNA) and the more advanced Dynamic Network Analysis (DNA); then in the second section, there will be a hands-on software workshop featuring powerful software to analyze these networks as they are obtained from the World Wide Web or email servers. Participants will be presented with a thorough demonstration of software features used to collect the web-based and email networks and analyze them using traditional and advanced DNA techniques. DNA recognizes that web-based social interactions involve multiple networks of human and non-human entities and involves representing and analyzing multi-mode networks, both point-in-time and over-time.

This workshop will be fast-paced and involves advanced material, however novices to network analysis should be able to follow along, as the material is presented in an affable, but comprehensive manner.

This full-day workshop introduces participants to the techniques and tools used by the researchers at the Center for Computational Analysis of Social and Organizational Systems (CASOS), at Carnegie Mellon University, to study both overt and covert human and web-based networks from a socio-technical system perspective. Participants will be introduced to a powerful network-based representation model and dynamic network analysis techniques. Basic social network and dynamic network representations, statistics, analysis and visualization techniques are covered, both in concept and practical operation.

Who Should Attend:
Those who are interested in analyzing Web social networks from a multi-network perspective and want to learn how to use powerful software tools and techniques to analyze them, should attend this full-day workshop. The material and its delivery is suitable for researchers and practitioners, alike. This is designed to be a non-technical workshop, however, by its very nature, the material will involve some mathematics, although this will be minimized as the delivery is driven towards forming an understanding of the concepts, not mastery of the details.

Topics Include:

- Social Network Analysis
- Dynamic Network Analysis
- DyNetML xml-based, data representation format
- ORA Network Analysis software
    - Web and email data mining & management
    - Visualization
    - Reporting

Computer Equipment:
The software presented in this tutorial is Windows operating system based. Participants should bring their own laptops to both sections of the workshop. Nevertheless, participants not able to bring a Windows-based laptop computer to the sessions are welcome to participate, and will still fully benefit from the workshop. The software will be screen-projected to the group as a live walk-through demonstration. Participants will be provided with a data CD containing the complete set of software and will be guided through its installation and subsequent hands-on usage.