Notes from Session 4

General/Theory I

The plenary discussion on the first session of General/Theory had the following comments:

- OLIVE (online library of information visualization environments - University of Maryland) is a survey of visualization environments but it does not relate visualizations to tasks.
- Mr. Bouchard has presented a way for users to define their roles and tasks as a step towards choosing the right visualization.
- Dr. Hall – how do you assess whether a tool is not particularly useful vs. whether the operator is not aware of it?
  Mr. Bouchard – it is up to the user to make that assessment, not the researcher.
  Dr. Taylor – the introduction of a new tool implies to the operational users that for a time they will be worse off while they learn to use it and they need to decide if it will be worth it.
- Prof. Carley – many tools are data-greedy and the databases largely do not exist yet. Also, the average tool requires a network analysis expert to operate them. These are two reasons why tools are not as widely used. Network analysis is not part of training…but this is starting to change so 10 years from now we will have soldiers trained to do this type of analysis. Many applications are not organized by activity.
- Col. (Retd) Johansen – the visualization cannot be simple enough for the operator. Sometimes it is easier to take systems and modify them up to a 75% solution. Soldiers like to keep the familiar tools but make them better. Keep a short term development track such as this along with the longer term research programs.
- Prof. Carley – part of her cringes at the thought of working with fuzzy networks because of the unstructured network that would result. The resulting analysis may suffer. The underlying structure is important for analyzing networks. Perhaps treat emerging nodes as an alternate entity classes (e.g. buildings / groups of buildings) until they are large enough to treat as full nodes (e.g. cities).
- Dr. Taylor observed that fuzziness may not result in lack of structure…just a use of continuous values instead of discrete ones.
- Dr. Hall – we should not neglect the human end of this subject while we look at it from the data side…suggests looking to the video gaming world to see what they are doing right.
- Dr. Lem - There are times when you don't know what type of node it is – this is where fuzziness can come in. example of times when you need the interaction of two agents to bring about the proper effect. A role for the fuzzy node may be hypothesis generation – for testing what a connection might be between two other known nodes.
- Dr. Taylor noted that fuzziness and uncertainty are two different things.