Jeff Conklin: Dialogue Mapping
Building Shared Understanding of Wicked Problems

By Dino Karabeg
Some problems are so complex that you have to be highly intelligent and well informed just to be undecided about them.

(Laurence J. Peter)
1. There is no definitive formulation of a wicked problem.
2. Wicked problems have no stopping rule.
3. Solutions to wicked problems are not true-or-false, but good-or-bad.
4. There is no immediate and no ultimate test of a solution to a wicked problem.
5. Every solution to a wicked problem is a "one-shot operation"; because there is no opportunity to
   learn by trial-and-error, every attempt counts significantly.
6. Wicked problems do not have an enumerable (or an exhaustively describable) set of potential
   solutions, nor is there a well-described set of permissible operations that may be incorporated into
   the plan.
7. Every wicked problem is essentially unique.
8. Every wicked problem can be considered to be a symptom of another problem.
9. The existence of a discrepancy in representing a wicked problem can be explained in numerous
   ways. The choice of explanation determines the nature of the problem's resolution.
10. The planner (designer) has no right to be wrong. “As We May Think”, In July 1945 formulated a vision
    that inspired J.C.R. Licklider, Doug Engelbart and Ted Nelson

    (Werner Kuntz and Horst Rittel, the designers of IBIS)
Example: Car Design
Further Examples of Wicked Problems

• Routhe the highway through our city or around it?
• How to deal with crime and violence in our school?
• What to do when oil reserves run out?
• What should our mission statement be?
• What features should be in our new product?
Conventional Design Process...

Figure 1: Traditional wisdom for solving complex problems: the “waterfall”
...fails

drove the rest of the design process.

Figure 2: Pattern of cognitive activity of one designer -- the “jagged” line
...fails

drove the rest of the design process.

*Figure 2: Pattern of cognitive activity of one designer -- the “jagged” line*
Figure 3: A wicked project with a second designer working on the problem.
Figure 6: The "centrifugal" fragmenting forces pulling a project apart
Because of social complexity, solving a wicked problem is fundamentally a social process. Having a few brilliant people or the latest project management technology is no longer sufficient.
Mapping a dialog
Features of a Collaborative Display

• Augments the group’s short-term memory
• Long-term memory
• Communication becomes production
• Focuses the dialog on the issues - from winning an argument to making strongest possible logical case for a proposal
• Powerful listening tool
• Mirror for the group and its behavior; disruptive behavior shows up
Turning linear discourse into a map

Limits of Conversational Structure

Conversational structure versus Issue structure

The basic unit of conversation is a ‘comment’

The structure of conversation is ‘turn taking’ – each person’s comment follows the one before

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IBIS - Issue Based Information System

[Diagram showing a decision-making process with various options and questions such as Proposed Budget (June 10 version), Cut costs, Increase revenue, Accept the deficit, etc.]
Compendium Elements - Question
Compendium Elements - Idea
An idea responds to a question
Compendium Elements - A Con
Compendium Elements - Conclusion
A Compendium Map

- Proposed Budget (June 10 version)
- Just went through cost cutting last year
- Eliminate special programs
- Which ones?
- Cut costs
- How to?
- Cut staff
- Takes too long
- Renegotiate salaries
- Unlikely to work
- Increase revenue
- How to?
- Petition county for tax increase
- Charge fees for special programs
- Accept the deficit
- Strong economic forecast for next year
- Wall Street Journal article
- "John: Research economic forecast for next year"
Compendium Maps from a Strategic Planning Session

Map node … opens to show …

Sub-maps
Analogy with programming language design
What is the IBIS equivalent for knowledge federation?
Thanks!