

# **Participation in Building Understanding and Making Decisions**

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# Knowledge

- Knowledge is part of the hierarchy made up of data, information and knowledge.
  - Data are raw facts
  - Information is data with context and perspective
  - Knowledge is information with guidance for action based upon insight and experience
- Theory and information may be formal, factual, descriptive or empirical
- Theoretical and/or practical understanding of matters **worth knowing**



## Knowledge use

- Understanding and learning
- Analyzing and interpreting
- Explaining oneself and influencing others
- Making informed decisions
  
- *How to distinguish knowledge from noise and other matters?*
  - In general: very difficult
  - Often assumed being outside of the task at hand
  
  - Key in situations when knowledge is processed with technology

# Knowledge types

- Personal knowledge  
knowledge by acquaintance (I like everything in Bari except driving)
- Procedural knowledge  
knowledge how to do something but not the theory underlying this knowledge (Little John knows how to make fire but nothing about the physics behind.)
- Propositional knowledge  
knowledge of facts, knowledge that such and such is the case (I know that Grazia and Anna organized this seminar)



## Knowledge types

- The three types of knowledge do not comprise exclusive classes but they are useful to think about learning, organizing and participating
- It is important to note that
  - Propositional knowledge is not a sufficient source of personal knowledge or procedural knowledge
  - Personal knowledge involves acquiring propositional knowledge in a certain way
  - Procedural knowledge may entail propositional knowledge, but
  - The same propositional knowledge certainly does not entail procedural knowledge



# Participation

- Is the act of sharing in the activities of a group
- It is sharing personal and propositional knowledge while using a procedural knowledge
  - Personal knowledge is local: objectives, preferences, needs, ...
  - Procedural knowledge has to be shared; it is communal
  - Propositional knowledge is recognized (universal?)
- Participation:

The use of the procedural knowledge in order to construct accepted propositional knowledge through the integration of every participants' personal knowledge



# Procedural knowledge

- Is culture-dependent!
- Time-orientation
  - Linear vs. spiral
  - “Time is money” vs. “Time is free”
- Context (Hall, 1976)
  - High context emphasizes indirect communications, meaning is implicit, and logic and argument appeal to emotion and ideology
  - Low context, emphasizing direct communication, meaning is explicit, and logic and argument are rational and factual



## Culture and technology

- Technology is not culture-neutral
  - It imbeds cultural norms and values
  - Its adoption affects culture
- ICT mostly comes from the individualistic and low context cultures and thus it changes how the collectivists and high context cultures work and live
  - (mobile phone seems an exception)
- What technology bundle is in **e** of the e-participation?
- Does procedural knowledge have to be modified when moving to e-participation? How?

# Participation instruments

- Participatory democracy proposes
  - *Citizen juries* – members are randomly selected
  - *Stakeholder workshops* – members represented stakeholders
  - *Deliberative opinion polls* – citizens' discussions followed by random sampling of public opinions
  - *Town meetings* – open discussion and questioning of authorities
  - *Referenda* – selection from the available options through voting
- ICT use
  - Discussion forums or other online discussion tools
  - Online pooling and voting tools



# Support for participatory instruments

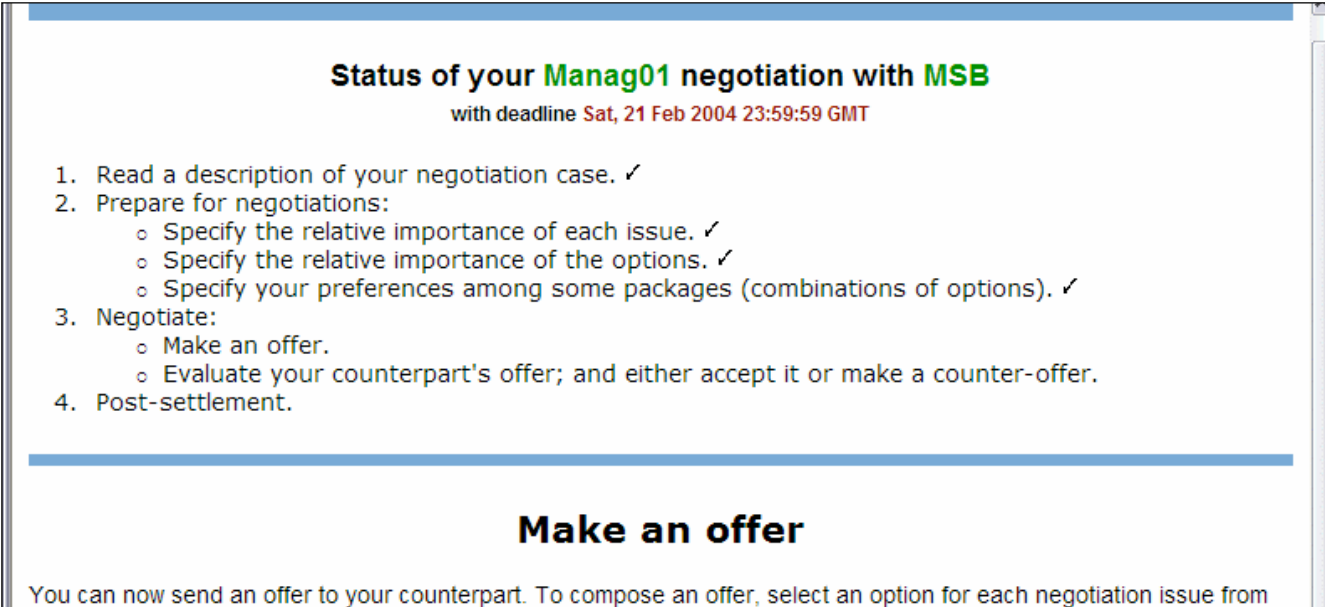
- Democratic discourse support:
  - Connecting large numbers of people and helping them communicate (Grass: de Moor and Aakhus, 2006 )
- Argumentation support
  - Helping people to argue in a dialectical manner (GeoMed: Karacapilidis and Pappis, 1997)
- Electronic petition systems
  - Creating, viewing and signing petitions and associated fora (Macintosh et al., 2002)
- Electronic voting systems

# Support for participatory instruments

- GIS and participatory spatial decisions
  - Collecting and sharing spatial knowledge and preferences
- Decision analytic support
  - Aiding groups in undertaking joint decisions (Decisionarium, Hämäläinen et al, 2001)
- Semantic web agents
  - Helping people who have no time, skills and will to partake in the processes

# Participation procedures

- Technology imposes a procedure
  - Conforming or contradicting the community ways of doing things
  - Searching for least disruptive technologies



**Status of your Manag01 negotiation with MSB**  
with deadline Sat, 21 Feb 2004 23:59:59 GMT

1. Read a description of your negotiation case. ✓
2. Prepare for negotiations:
  - Specify the relative importance of each issue. ✓
  - Specify the relative importance of the options. ✓
  - Specify your preferences among some packages (combinations of options). ✓
3. Negotiate:
  - Make an offer.
  - Evaluate your counterpart's offer; and either accept it or make a counter-offer.
4. Post-settlement.

**Make an offer**

You can now send an offer to your counterpart. To compose an offer, select an option for each negotiation issue from



# Knowledge management systems

- Two levels
  - Community: propositional and procedural knowledge
  - Individual: propositional, personal and procedural
- Ontology-based
- Capable of interacting with maps and VR systems



*Thank you*