Map-mediated Online Deliberation

Facilitating Participatory Risk Assessment in Communities

When threats are imposed on a community, the appropriate actions to be taken depend on the nature and severity of the risks as perceived by the community. Unfortunately, risk understanding by individuals can be fragmented, biased and incomplete, and they need to be communicated, related and reconciled in order to build adequate risk understanding aligned with the community value. GIS technologies, combined with web services, have the potential to assist the communities at all levels of participation. However, the existing approaches have made limited impact on increasing the risk communication capacity of local communities. In this project, we developed methods in using map-based online discussion to facilitate participatory spatial decision-making processes in local communities, which support three important dimensions in a shared discussion space: (1) the information space, (2) the argumentation space, and (3) analysis space. The three dimensions aim to support deliberative community networks.

To explore the potential of using geospatial annotation technology to facilitate map-based online discussion among various stakeholders in local communities, we developed a prototype system, GeoDeliberator. The features of this system are based on the conceptual understanding of map-based discussion space. GeoDeliberator explicitly links participants’ discussion contributions with their geographic references on the map. It provides an effective communication and analysis platform to enrich the dialogues among various stakeholders in spatial decision-making processes. For example, participants can circle an area directly on the map to which they want to draw attention and obviate the need for specialized language in order to orientate the other participants to an object under discussion. Such visual discussion support tools can encourage the public to actively participate in community discussion.

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GeoDeliberator's User Interface: (1) Group Panel, (2) Annotation Panel, (3) Map Panel, (4) Annotation creation

Benefit: GeoDeliberator supports better risk communication and situation understanding through map-mediated online discussion. It allows individual perceptions and knowledge to be externalized and meaningfully visualized and associated by time, issues, and arguments, and space. Visual analytic techniques are applied to annotations for building coherence and shared values.