Towards a Boundary Infrastructure for Knowledge Federation

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One of the primary aspects of collective intelligence is conversation. Conversation takes many forms, from interactive storytelling, to an emerging lingua franca of structured conversation, Issue-based information systems (IBIS) and related forms of contested discourse. Conversation federation facilitates improved collective intelligence for sensemaking and for decision making. This paper will sketch an architecture for federation of conversation. That architecture includes preliminary specifications of webservices protocols to support participation by many different platform participants in a federation.

The described platform serves as a boundary infrastructure on which varieties of contributed federation tools can be combined to facilitate a range of human participation, from tweets and blogging to structured discourse. The core architecture primarily serves federation of structured discourse, but is extensible to accept additional functions for other forms of sensemaking conversations and acts.

Federating conversations, as described, is performed through topic mapping processes where conversations are organized around the subjects they entail. While each conversation is, itself, a subject, each conversation is about one or more subjects. Structured conversations created in IBIS settings are typically rooted in a central topic or central question (issue). Where conversations are about the same topic or issue, they federate—that is, they are combined through a topic mapping merge process that maintains a well-organized map of the combined conversations.

The availability of federated conversations supports the needs of stakeholders other than the participants in those conversations. The arts, journalism, decision makers, and citizens who must select politicians to make decisions, benefit from the results of federation processes.

Conversation federation supports a variety of pedagogical practices, from learning conversations conducted in varieties of classrooms, to online portals that encourage global participation. The Dunbar number suggests that humans are capable of engaging up to 150 people; World Cafés suggest setting tables for four to five individuals in conversation at a time, and guilds in online role playing games such as Worlds of Warcraft engage a few dozen or less

participants in any quest. A useful expectation is that federation of conversations conducted by large numbers of small groups is a candidate business model for varieties of federation implementations.