MetaManager: A communication network model

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MetaManager is a metacognitive map for modeling events, projects, organizational activities -- in fact any completing process whether in the social, biological, physical or intellectual realm.

Coupled with a powerful communication discipline derived from Speech Act Theory (The Conversation Model of Action), MetaManager^{tm} is being developed as a planning and decision support system for initiating and tracking projects and other ventures in the human social domain including business enterprises, corporate organizations, and research institutes.

The theoretical underpinnings derive from current notions in general systems theory put forth by Maturana, Varela, Jantsch, Prigogine and others. In particular, the concepts of autopoeisis, dissipative structures, and autonomous systems have led us to consider a long extant symbol or graph, termed the enneagram, as a means to represent the structure of an event or process both as it unfolds in time and as it "pre-exists" as a general pattern or archetype. There are many applications of this model possible.

We consider here the design of a communication network for optimal information flow and action sequencing in small groups (3 to 30 members) dedicated to a specific project or venture.

In our experience this metacognitive map is a powerful tool for perceiving and understanding whole systems. But more than that its form may be applied to the design of networks that model:

1. The flow of information required by project participants.
2. The anticipation and sequencing of specific actions to be carried out to complete the event or project.
3. The pattern of communications in which team members express their ongoing commitment to complete required tasks.

The successful completion of any process or event that is negentropic or transformative may be considered to be the result of taking into consideration three time-like perspectives or dimensions:

1. The sequential unfolding or succession of sub-events related to the whole (the temporal dimension).
2. The overall pattern or archetype of the event and its potentiality.
3. The hyparchic dimension or the notion of commitment of the action required to bring it about. More simply the idea of will.

Successful plannning and implementation of projects and ventures must take all three of these perspectives into consideration. MetaManager addresses these three dimensions in a manner more explicit than heretofore achieved by project planning systems or postulated by the general systems viewpoint.

In this paper, we describe the fundamentals of the underlying graphic representation mentioned above and point out its general features. Several examples are modeled on the graph to illustrate its wide utility. Then we describe the features of a communication network model based on this graph integrated with the conversation action model and show how this can be applied to monitoring the process of technological innovation as it might be carried out by a project group in a government laboratory, university or a R&D based firm.

We chose this application because technological innovation is acknowledged to be the cutting edge and primary motive force driving modern industrial economies yet its process is very little understood. Breakthroughs here could have significant impact on productivity and innovation in all sectors of the economy.