Choosing Information Sharing Strategy on Collaboration Networks

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Motivation

- Conflicts are complex by nature and crisis management requires more cooperation, coordination and coherence on all levels of crisis management activities.
- When seeking cooperation with various actors there will be no overtaking authority to take a role over collaborative parties, because that would be inappropriate and counter productive.
- Comprehensive approach is a concept that invites various organizations and other actors and stakeholders to collect together to deal with a common challenge in commonly understandable and acceptable way.
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Aim of the Paper

- Comprehensive approach realization requires re-thinking of information exchange strategies between co-active parties.
- Cooperation in emergently evolving networked environment sets new kinds of challenges to both collecting required and necessary information and especially releasing right kind of information at right moments to relevant actors to enable efficient collaboration.
- This article presents practical findings based on solid collection of theories about the necessity to rethink information sharing strategy on present day and futures collaboration networks.
- The findings are interpreted as information sharing policy suggestion using the theory of complex adaptive systems (CAS) as reference.

Theoretical Basis

- Theory for deepen the understanding about complex information exchange situations originates to complex adaptive systems.
- Human information exchange framework is based on communication philosophy, sociology, cognition philosophy, organizational culture, knowledge management and decision support systems
- Empirical material is collected during national and international inter-organizational cooperation exercises between 2005 and 2008. Individual results of those studies have been published on academic conferences and research reports.

Complex Adaptive System

- The theory of complex adaptive systems (CAS) by (Holland 1995) aims at to explain the chaotic nature of multi-actor interactive system on the viewpoint of one actor.
- CAS theory divides these basic elements in four properties and three mechanisms:
  - Aggregation
  - Tagging
  - Nonlinearity
  - Flow
  - Diversity
  - Internal modeling
  - Building blocks

Hypotheses of Present Communication Activities

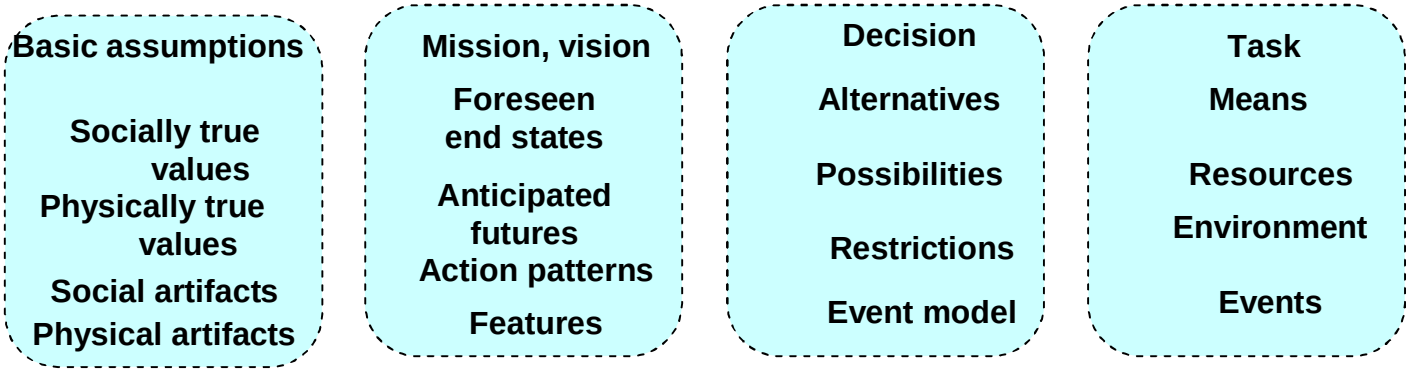
- Typically information is categorized (aggregated) by content and it is defined by subject of interest. Information exchange strategies are based on these content based aggregations.
- Social communication networks are defined by subject of interest that acts as tagging basis.
- The outcome of nonlinear interacting system is frequently attempted to tame with complicated information categorization models and precise procedures.
- Information flow between various interactive entities is controlled by content and amount.
- Typically diversity is seen case by case without taking account the comprehensive wholeness
- The evolution of internal models is relatively slow thus making novel communication situations with unseen parties somewhat challenging.
- The building blocks of creating common models for releasing and receiving relevant information will be different amongst different communicative actors.

Collaboration Relationships

- Collaboration relationships are building up in a complex way, where structuring principles depend on
  - the organizational structural level,
  - the mission of an organization,
  - the phase of the collaboration process, and
  - the role of the member in an organization.
- First two determining the relevant information content and latter two ones obey the framework of the relevant type of information.
- It is crucial to find out and understand also what type (not only the content) of information shall be put available for others in collaborative network.
- This typifying requires an internal model of entity's information exchange.

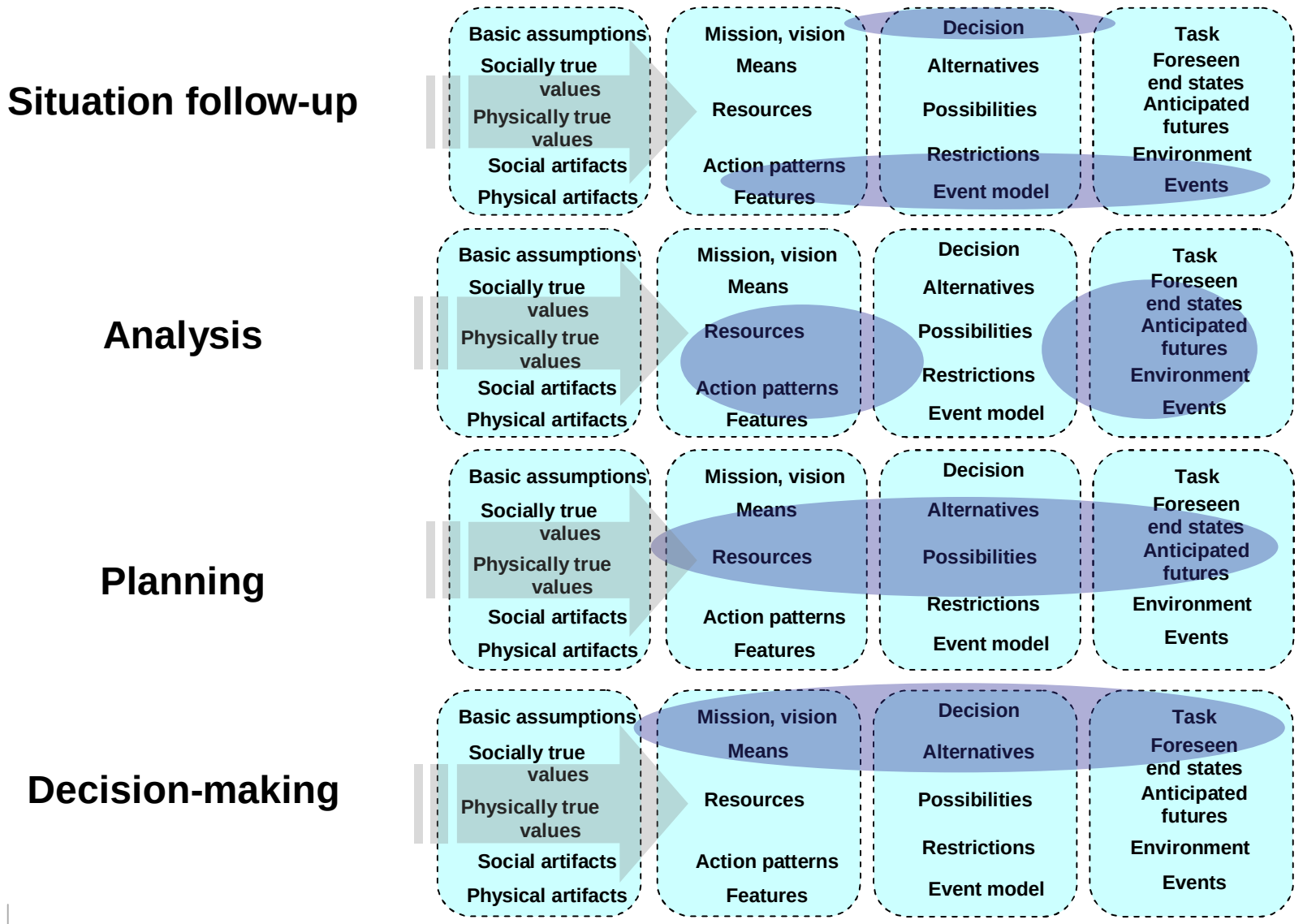
Empirical Testing

- Several Information exchange situations were studied during period of 2005 to 2008
- Results were categorized on the basis of information exchange meta-model



- *Differences between e.g. the roles of actors were discovered.*

Information Interests of Various Roles



Are Traditional Information exchange practices optimal?

- Research results concluded above give a steering hunch to ponder that novel idea shall be produced to rethink information exchange strategies in a new way.
- It is obvious that traditional ways to steer information exchange are not so optimal in emergent networked environment.

Information Sharing Strategies

- Different information sharing strategies may be chosen to create understanding, acceptance and cooperation. Following information releasing strategies can be expressed:
  1. I share everything.
  2. I share nothing.
  3. I share to suitable degree by rationing out with nominated (subjective) criteria.
  4. I share to suitable degree by releasing relevant type of information content related to criteria defined by working environment and situation.

Nature of Strategies 1, 2 and 3

- Strategies 1, 2 and 3 are more or less content based strategies that are based on fundamental assumption that right kind of content of shared information is main judgment criteria.
- Strategies 1 and 2 can be called simple ones and 3 complicated one.
- They reflect hypotheses about present day traditional communication ideas. Those hypotheses are revelation of traditional information sharing thinking that emphasizes subjective content of interest approach to information exchange.

Consequences of Strategies 1, 2 and 3

- 1, Information overflow –> static situation, irrelevant interpretations, wrong decisions
- 2, No information -> static situation, drifting out
- 3, Deterministic regulation, not covering all situations -> at best denial of info overflow, but slow process; at worst releasing completely irrelevant info at wrong moment -> possible obscure decisions at wrong moment

Strategy 4 – fundamental thought

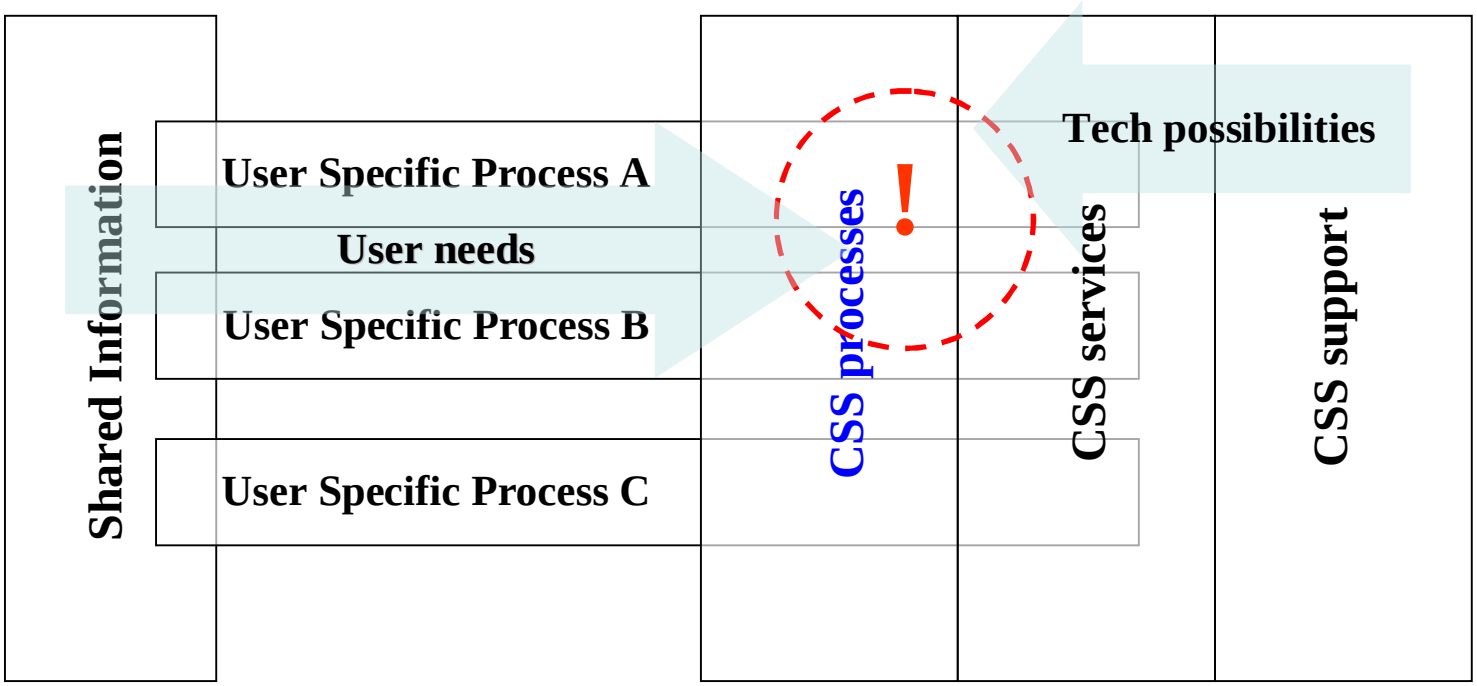
- “I cannot exactly know the specified content information needs of my partners, but I can know the overall features of the working environment and the situation, where my partners are. If I know this, and I know what types of information (what kind of information exchange profile) is required to handle this kind of situation I can guide (and maybe control) my information publishing towards to release situation bound relevant kind of information and avoid to release unnecessary information.”

- Strategy 3 obeys rules that categorize or classify the information content itself while strategy 4 relies on the understanding of the universal fundamentals of communicative situations.

Strategy 4

- Strategy 4 is framework based strategy that assumes that certain situations with certain kinds of actors form the framework that defines information exchange requirements.
- This strategy is network and inter-working oriented.
- It takes account both subjective information releasing criteria and objective collaborative parties viewpoints.
- It focuses to the communication situation instead of communicated content thus pursuing to create situation and context based communication forums to enhance the maturity of cooperative communication.

Where Strategies are Applied?



Conclusive Statements of CAS-based approach on Complex Information Sharing Strategy

- Aggregation shall be done on the basis of collaboration context and situation instead of communicated information content. Second order aggregation describes in that case the nature of cooperation instead of the meaning of each collaborative party.
- Tagging supports context and situation based aggregation.
- Nonlinearity is not tamed.
- Information flows are controlled by the demands of collaboration context and situation.
- Diversity is not controlled or forced.
- Individual tacit internal models are not tried to harmonize.
- Building blocks are situations instead of organizations or other actors.

Thank You

- Questions
- Comments