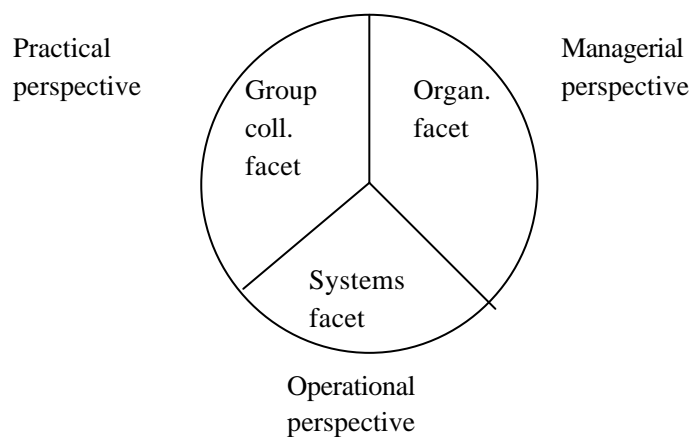


Intelligent Agents for Supporting Awareness

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The three Facets of Information Systems



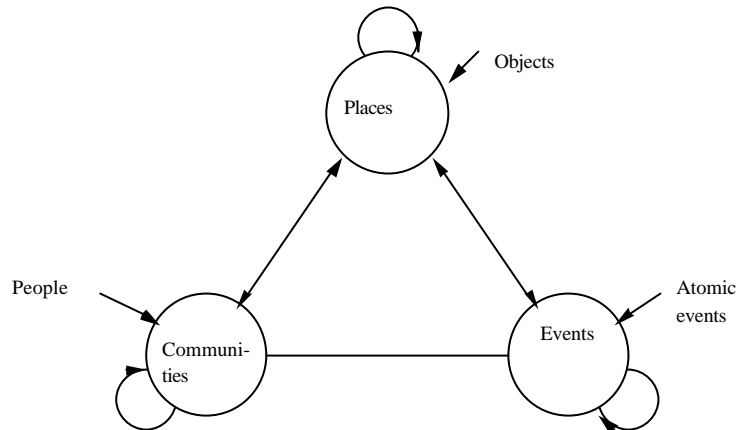
Practical Perspective

- Looking to situatedness of work activities
- Keeping users aware of it

Aware of what?

- Of space (where they are acting)
- Of time (what happened before, what will happen)
- Of social relations (with whom are they acting; within which community of practice)

A simple ontology of human activities



Three types of awareness

- Awareness of time - When acting
- Awareness of space - When browsing
- Awareness of social relations - When communicating

Managing representations

- Filtering representations: to reduce unnecessary complexity
- Recommending representations: to get value from complexity

The complexity of human practice

- Every fact is located:
 - In space (it has a *place*)
 - In social relations (it involves a *community*)
 - In time (is part of a *story*; is an *event*)

Representing human activities

- *Traces* of events
- *Maps* of places
- *Portraits* of communities and of their members

Three-dimensional representations

- Traces make reference to other traces and to maps and portraits
- Maps ...
- Portraits ...

How can awareness be supported?

- Making situation (space, time, social relations) *visible* and/or *transparent*
- Designing interaction spaces (knowledge spaces)
- Separating the *repository* of traces, maps and portraits from the *knowledge spaces*

Knowledge spaces

- A knowledge space is based on the distance between user focus and representations
- Distance value is the basis for filtering representations

A distributed interaction system

- Individual knowledge spaces
- Default common knowledge space
- Non divergent knowledge spaces

The role of agents

- *Updating* the repository of representations
- *Creating* new knowledge spaces; *updating* the existing ones
- *Switching* from one knowledge space to another one
- Proactively *recommending* representations

Open issues

- Dealing with external knowledge
- From Interaction Design to System Design:
 - Which are well-accepted interfaces?