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Intelligent negotiation model for ubiquitous group decision scenarios

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Contact: João Carneiro

E-mail: jomrc@isep.ipp.pt

 ORCID: <http://orcid.org/0000-0003-1430-5465>

Motivation/Main ideas

➤ Motivation

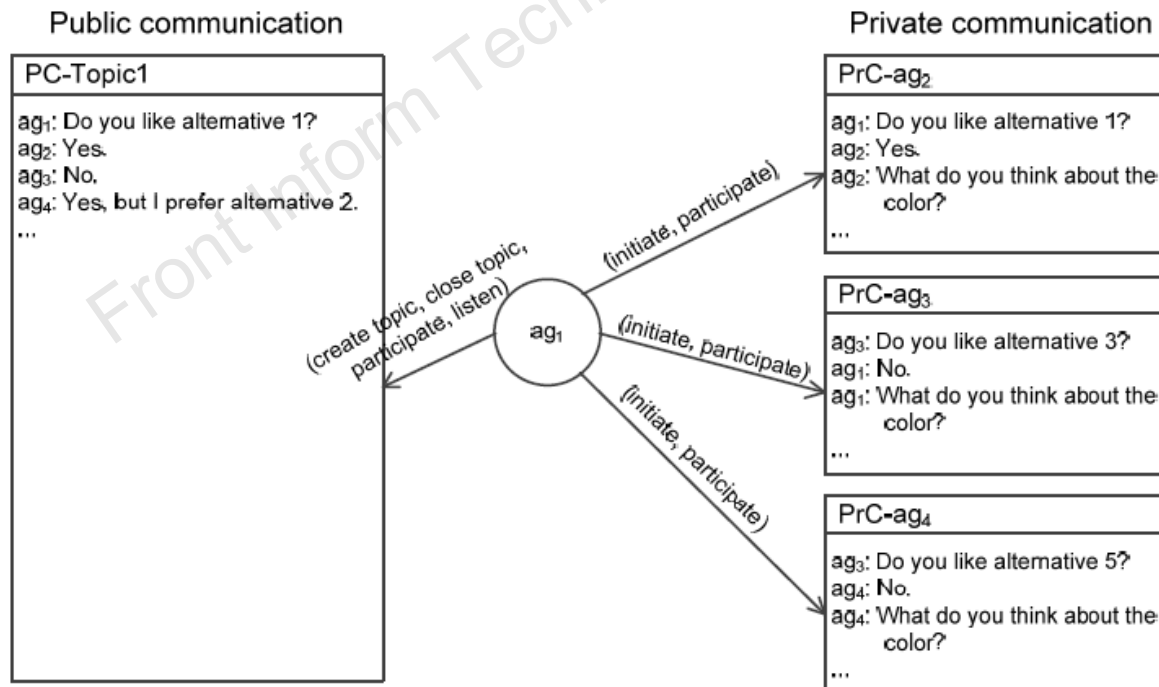
- The existing negotiation models are barely adaptable to the business world reality, have difficulty in reflecting the decision-making natural process, and create a certain discomfort in their use by decision-makers.
- The actual evaluation of the argumentation models is not the one an organization would want to use.
- The existing argumentation approaches are not oriented to problems that include multiple agents interacting simultaneously.

➤ Main Ideas

- Support the ubiquitous group decision-making process similarly to a real process, which simultaneously preserves the amount and quality of intelligence generated in face-to-face meetings and is adapted to be used in a ubiquitous context.
- Deal with intelligence because agents have the possibility to maintain a dialogue about the topic, expressing their opinions, and gather information of what they “heard”.

Proposed model

- Specifically designed to handle multi-criterion problems
- Main entities: Real Participant, Facilitator, Participating Agent
- Agents are both collaborative and competitive.
- Include two main types of communication inspired by the logic used in Social Networks:
 - Public Communication - PC.
 - Private Communication - PrC



Conclusions

- Existing group decision support systems are very limited especially in situations with time/space constraints.
- These systems have many validation/evaluation problems.
- Ubiquitous group decision support systems (UbiGDSS) provide answers to some of these issues.
- A negotiation model was proposed specifically planned for UbiGDSS that uses Social Network Logic and supports the decision-making process, in a similar way to a real process, while simultaneously preserving the quantity and quality of intelligence generated in face-to-face meetings