

COOP
2012



10th International Conference on the Design of Cooperative Systems
“From research to practice: Results and open challenges”

Marseille (France)

Workshops on 29 May, 2012 Conference on 30 May - 1 June, 2012

Workshop

Do We Really Need to Share to Cooperate?

CALL FOR PAPERS

Workshop Organizers

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Theme of the workshop

It is often taken for granted that for cooperation to succeed, cooperating partners need to share, e.g., some common knowledge about the situation in which they are involved. As a result, cooperative systems are often claimed to support this sharing (cf. Boujut et al., 2010). However the “Sharing for cooperating” assumption is the subject of controversies: Various research communities disagree on what is necessary to share (e.g., symbolic and/or subsymbolic representations; simple reactive mechanisms of coordination; ...) and how much it is necessary to share (e.g., the maximum or minimum). This disagreement is illustrated for example in the controversy between the psycholinguists H.H. Clark and D.J. Barr (and their collaborators), a controversy summarized by Barr (2004) in a deliberately provocative manner: “Is common knowledge necessary?” Controversies of this kind also exist in the Cooperative Work / Cooperative Systems community (see,

e.g., Koschmann & LeBaron, 2003; Nova, Sangin & Dillenbourg, 2010). Because these controversies reflect diversity in approaches, models, methods, or work situations considered, it seems to us interesting and useful to clarify and to make explicit the approaches, models, and so on, underlying the positions about sharing.

In our opinion, there should be a tight articulation between theoretical statements and design stance. The appropriateness of models and methods is thus crucial for informing and determining the design properly. For example: an incorrect model of users' sharing practices can lead to design a system that will not support such practices; an inappropriate method for studying situations can lead to not identify practices that would need to be supported. Helping cooperative systems' analysts, designers and evaluators navigate in the variety of existing views (encompassing approaches, models, methods, and situations) could help them make appropriate design decisions.

Given these two reasons for undertaking the work of clarification and explicitation, the workshop thus addresses two levels of questions:

- *Level 1: Questions about the “Sharing for cooperating” issue (Do we really need to share to cooperate?), e.g.:*
 - Why sharing? What are the motivations for sharing (or not sharing): enabling a better orchestrated, less conversation heavy, smoother cooperation? avoiding or solving conflicts or ambiguities? aligning representations between actors involved in joint activities?...
 - What is to be shared: knowledge, practices, culture, emotions...?
 - What do we really share?
 - To what extent do we need to share? To what extent are we prepared to share? Is the amount of sharing directly related to cooperation effectiveness? How is offset the lack of sharing?
 - How can we share? By means of which actions? By means of which tools? By means of which practices?
 - With whom do we need to share? Or with whom can we share?
 - What are the situations/conditions which facilitate sharing?
 - Which sharing functionalities or sharing spaces can be implemented? Or which sharing functionalities or spaces have been demonstrated effective?
- *Level 2 (meta-level): Questions about the connections between the different views of “Sharing for cooperating”, e.g.:*
 - Which views do co-exist: Common Ground, Common Frame of Reference, Shared/Team awareness, Mutual Intelligibility, Mutual Understanding, Shared Context, Alignment, Joint Action, Shared Representations, Coordination Mechanisms...?

- How to navigate in the different views? How to map these views? How to select a view given the kind of work situation to be supported by the cooperative system?
- How to articulate and contrast the views: Where the differences are: in the problem setting, the naming of the shared entity (common ground, common frame of reference, shared context, shared awareness, etc.) and of the sharing process (grounding, aligning, harmonizing, coordinating, articulating, etc.), the models, the methods, the situations studied? How to explain these differences?
- Are the views reconcilable? If so, how? If not, why?

Workshop goals and activities

The workshop aims to contribute to the work of clarification and explicitation, in order to deepen our collective understanding of the “Sharing for cooperating” issue and to transfer this understanding to the design of cooperative systems. Two complementary contributions are expected from potential participants to the workshop:

1. *An individual contribution*: potential participants will be invited to submit a paper of 4 to 8 pages reporting a study related to the workshop questions. The nature of the contribution may be:
 - a. Theoretical and methodological studies.
 - b. Empirical field studies.
 - c. Cooperative system design.
2. *A collaborative contribution*: potential participants will be invited to participate to a collective activity on mapping existing work related to the “Sharing for cooperating” issue. To assist in this mapping work, potential participants will be asked to complete a common grid of analysis; the completed grids will be distributed among all the actual participants for feeding the discussion on the “Sharing for cooperating” issue.

Type of interaction planned for the workshop

Three types of interaction are planned:

1. *Pre-workshop Interactions*: To prepare the discussions during the workshop, these interactions will take place through an online shared space; participants will upload online version of their papers and grids, and begin the discussions about these contributions.
2. *Workshop Interactions*: (a) Participants will first present their individual contributions and their position on the “Sharing for cooperating” issue. Contributions and positions will be discussed. (b) Sec-

ondly, workshop organizers will provide a synthesis of the grids completed by the participants, and the synthesis will be discussed by the participants. This second step will be an opportunity to assess and improve the quality of the grid (formulation, relevance of items, etc.). (c) Thirdly, organizers and participants will discuss the follow-up on the initiative of cooperative work on the “Sharing for cooperating” issue.

3. *Post-Workshop Interactions*: Interactions will continue around the actions decided at the end of the workshop.

Maximum number of participants

The number of participants will be limited to 15 in order to facilitate discussions. We expect the participation of senior researchers as well as graduate students.

Related work

Recently, several special issues of scientific journals have been devoted to the “Sharing for cooperating” or “Sharing for acting jointly” topic, with contributions from various disciplines (such as social, cognitive and developmental psychology, cognitive neuroscience and philosophy, artificial intelligence, CSCW, HCI, etc.). Let us cite:

- “*Joint Action: What is Shared?*” – a special issue of the Review of Philosophy and Psychology (Stephen Butterfill & Natalie Sebanz, eds., 2011), where one of the main questions discussed was, “Is sharing constitutively necessary for joint action?”
- “*Joint Action: Current Perspectives*” – a special issue of Topics in Cognitive Science (Galantucci & Sebanz, eds., 2009), where one of the main questions discussed was, “Does effective communication require processing information related to the mental contents [or ‘common ground’] of the people engaged in the conversation?”
- “*Supporting Shared Representations in Collaborative Activities*” – a forthcoming special issue of the International Journal of Human Computer Studies (Boujut, Castellani, Roulland & Willamowski, eds.)¹, the focus of which is “on investigating the dimensions related to mediation that should be considered when designing new collaborative systems involving representations of shared objects”.

Our workshop initiative is part of this trend with the following difference: we want not only to gather different views on the “Sharing for cooperating” issue, but

¹ Note that this special issue is a follow-up to a workshop organized in conjunction with COOP 2010, namely “The mediation role of shared representations in cooperative activities: new challenges”.

also to bridge some gaps between these views. Hence our intention to provide workshop participants with a common grid of analysis to facilitate the bridging between views or at least mutual understanding between participants. Note that this grid was developed, tested and used by French-speaking researchers as part of the action research REFCOM (Common Frame of Reference) of GdR (Research Group) CNRS “Psycho Ergo”.

Moreover, in order to contribute to the COOP 2012 reflection on “what have been the successes and the failures, and what are the remaining challenges in our relevant domains”, we will look back at the work presented on the “Sharing of cooperating” topic in the past editions of COOP, i.e., papers presented at the conference itself or papers presented in associated workshops such as “The mediation role of shared representations in cooperative activities: new challenges” (COOP 2010) or “The use of Herbert H. Clark’s models of language use for the design of cooperative systems” (COOP 1998).

Duration

Full day.

Submissions

As previously said in Section “Workshop goals and activities”, potential participants to the workshop are expected to submit two complementary contributions: (1) an individual contribution in the form of a 4-to-8-page paper; (2) a collaborative contribution in the form of the common grid of analysis completed.

1. *Concerning the paper*: potential participants are invited to first submit an extended abstract of their intended paper; authors of accepted abstracts will be then invited to send the final version of their paper. The template to be used for the paper is the template available on the Website of the COOP 2012 conference: <http://coop-2012.grenoble-inp.fr/callforpaper.html>.
2. *Concerning the grid*: the common grid to be completed is available at this address: <http://coop-2012.grenoble-inp.fr/COOP2012-WS-Necessary-Sharing-GRID.doc>. Note that this grid is provisional. Consider it as “under collaborative construction”; in other words, you can adapt it according to your needs; you can also comment it.

Papers and completed grids must be sent in PDF format to: Alain Giboin (alain.giboin@inria.fr) and Pascal Salembier (pascal.salembier@utt.fr).

Reviewing process

Papers will be reviewed by a reviewing committee. Note that to be reviewed, papers must be sent with a completed grid. Papers with no completed grid will not be considered.

Important Dates

- *Papers and Grids*
 - Deadline for Extended abstract and Grid submission April 10, 2012 (Extension)
 - Decision : April 15, 2012
 - Final version of paper: May 10, 2012
- *Workshop*
 - May 29, 2012 (1st day of the COOP conference)

References

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