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A Knowledge Capture Approach For Directly Acquiring Team Mental Models

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Abstract.

In order to better study team behavior and performance, much attention has focused on obtaining team members' mental models for the purposes of analysis and prediction. This paper describes a knowledge capture approach and a supporting graphical tool that together allow for direct acquisition of team mental models in the form of conceptual graphs. We performed acquisition experiments on over one hundred teams where team members used the tool to specify their team process. In addition to acquiring team members' models, non-team observers created "expert" models of the team process for comparison. We obtained good results on accepted measures of recall and precision compared to the "expert" models.

Keywords: Knowledge acquisition; knowledge capture; team mental model; conceptual graph; recall; precision

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