



Diplomanden- und Doktorandenseminar
des Instituts für Informatik

Modelling Coalitions: ATL + Argumentation (joint work with C. Chesnevar and J. Dix)

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In the last few years, argumentation frameworks have been successfully applied to multi agent systems. Recently, argumentation has been used to provide a framework for reasoning about coalition formation.

At the same time alternating-time temporal logic has been used to reason about the behavior and abilities of coalitions of agents. However, ATL operators account only for the existence of successful strategies of coalitions. They do not consider whether coalitions can be actually formed.

In this talk it is proposed to combine both frameworks and to develop a logic through which it is possible to reason at the same time (1) about abilities of coalition of agents and (2) about the formation of coalitions. We provide a formal extension of ATL, Coalitional ATL, in which the actual computation of the coalition is modelled in terms of argumentation semantics. We show that Coalitional ATL's proof theory can be understood as a natural extension of the model checking procedure used in ATL.

Dienstag, den 06.05.2008
14:00 Uhr in Raum 106