FOUNDATION FOR INTELLIGENT PHYSICAL AGENTS

FIPA Disconfirm Communicative Act Specification

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Foreword

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1 Scope

This document specifies the Disconfirm communicative act that is compliant to [FIPA00037] requirements.

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Summary	The sender informs the receiver that a given proposition is false, where the receiver is known to believe, or believe it likely that, the proposition is true.
Content	A proposition.
Description	The disconfirm act is used when the agent wishes to alter the known mental attitude of another agent.
	The sending agent:
	believes that some proposition is false,
	intends that the receiving agent also comes to believe that the proposition is false, and,
	believes that the receiver either believes the proposition, or is *uncertain* of the proposition.
	The first two properties defined above are straightforward: the sending agent is sincere, and has (somehow) generated the intention that the receiver should know the proposition (perhaps it has been asked). The last pre-condition determines when the agent should use *confirm* (see [FIPA00043]), *inform* (see [FIPA00046]) or *disconfirm*: *disconfirm* is used precisely when the other agent is already known to believe the proposition or to be uncertain about it.
	From the receiver's viewpoint, receiving a *disconfirm* message entitles it to believe that:
	the sender believes that the proposition that is the content of the message is false, and,
	the sender wishes the receiver to believe the negated proposition also.
	Whether or not the receiver does, indeed, change its mental attitude to one of disbelief in the proposition will be a function of the receiver's trust in the sincerity and reliability of the sender.
Formal Model	$<i,\ \text{disconfirm}(\ j,\ \phi\ )>$ $\text{FP: } B_i \neg\phi \wedge B_i(U_j\phi \vee B_j\phi)$ $\text{RE: } B_j \neg\phi$

Example	Agent i, believing that agent j thinks that a shark is a mammal, attempts to change j's belief.
	
	 `(disconfirm`
	`  :sender i`
	`  :receiver j`
	`  :content`
	`    (mammal shark))`

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48 3 References

49 [FIPA00037] FIPA Communicative Act Library Specification. Foundation for Intelligent Physical Agents, 2000.
50   `http://www.fipa.org/specs/fipa00037/`
51 [FIPA00043] FIPA Confirm Communicative Act Specification. Foundation for Intelligent Physical Agents, 2000.
52   `http://www.fipa.org/specs/fipa00043/`
53 [FIPA00046] FIPA Inform Communicative Act Specification. Foundation for Intelligent Physical Agents, 2000.
54   `http://www.fipa.org/specs/fipa00046/`