

FOUNDATION FOR INTELLIGENT PHYSICAL AGENTS

FIPA Reject Proposal Communicative Act Specification

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1 Scope

This document specifies the Reject Proposal communicative act which is compliant to [FIPA00037] requirements.

2 Reject Proposal

Summary	The action of rejecting a proposal to perform some action during a negotiation.
Content	A tuple consisting of an action description and a proposition which formed the original proposal being rejected, and a further proposition which denotes the reason for the rejection.
Description	<p><i>Reject-proposal</i> is a general-purpose rejection to a previously submitted proposal. The agent sending the rejection informs the receiver that it has no intention that the recipient performs the given action under the given preconditions.</p> <p>The additional proposition represents a reason that the proposal was rejected. Since it is in general hard to relate cause to effect, the formal model below only notes that the reason proposition was believed true by the sender at the time of the rejection. Syntactically the reason on the left-hand side should be treated as a causal explanation for the rejection, even though this is not established by the formal semantics.</p>
Formal Model	$\langle i, \text{reject-proposal}(j, \langle j, \text{act} \rangle, \phi, \psi) \rangle \equiv$ $\langle i, \text{inform}(j, \neg I_i \text{ Done}(\langle j, \text{act} \rangle, \phi) \wedge \psi) \rangle$ $\text{FP} : B_i \alpha \wedge \neg B_i (B_i f_j \alpha \vee U_i f_j \alpha)$ $\text{RE} : B_j \alpha$ <p>Where:</p> $\alpha = \neg I_i \text{ Done}(\langle j, \text{act} \rangle, \phi) \wedge \psi$ <p>Agent i informs j that, because of proposition ψ, i does not have the intention for j to perform action act with precondition ϕ.</p>
Example	<p>Agent i informs j that it rejects an offer from j to sell.</p> <pre>(reject-proposal :sender i :receiver j :content ((action j (sell plum 50)) (price-too-high 50)) :in-reply-to proposal13)</pre>

3 References

- [FIPA00037] FIPA Communicative Act Library Specification. Foundation for Intelligent Physical Agents, 2000.
<http://www.fipa.org/specs/fipa00037/>
- [FIPA00044] FIPA Disconfirm Communicative Act Specification. Foundation for Intelligent Physical Agents, 2000.
<http://www.fipa.org/specs/fipa00044/>