FOUNDATION FOR INTELLIGENT PHYSICAL AGENTS

FIPA Accept Proposal Communicative Act Specification

Document title	FIPA Accept Proposal Communicative Act Specification		
Document number	DC00039B	Document source	FIPA TC C
Document status	Deprecated	Date of this status	2001/08/10
Supersedes	None		
Contact	fab@fipa.org		
Change history			
2000/10/16	Deprecated by FIPA00037		
2001/08/10	Line numbering added		

Foreword

The Foundation for Intelligent Physical Agents (FIPA) is an international organization that is dedicated to promoting the industry of intelligent agents by openly developing specifications supporting interoperability among agents and agent-based applications. This occurs through open collaboration among its member organizations, which are companies and universities that are active in the field of agents. FIPA makes the results of its activities available to all interested parties and intends to contribute its results to the appropriate formal standards bodies.

The members of FIPA are individually and collectively committed to open competition in the development of agent-based applications, services and equipment. Membership in FIPA is open to any corporation and individual firm, partnership, governmental body or international organization without restriction. In particular, members are not bound to implement or use specific agent-based standards, recommendations and FIPA specifications by virtue of their participation in FIPA.

The FIPA specifications are developed through direct involvement of the FIPA membership. The status of a specification can be either Preliminary, Experimental, Standard, Deprecated or Obsolete. More detail about the process of specification may be found in the FIPA Procedures for Technical Work. A complete overview of the FIPA specifications and their current status may be found in the FIPA List of Specifications. A list of terms and abbreviations used in the FIPA specifications may be found in the FIPA Glossary.

FIPA is a non-profit association registered in Geneva, Switzerland. As of January 2000, the 56 members of FIPA represented 17 countries worldwide. Further information about FIPA as an organization, membership information, FIPA specifications and upcoming meetings may be found at http://www.fipa.org/.

Contents

1   Scope

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

46 **2   Accept Proposal**

Summary	The action of accepting a previously submitted proposal to perform an action.
Content	A tuple, consisting of an action expression denoting the action to be done, and a proposition giving the conditions of the agreement.
Description	*Accept-proposal* is a general-purpose acceptance of a proposal that was previously submitted typically through a *propose* act (see [FIPA00051]). The agent sending the acceptance informs the receiver that it intends that (at some point in the future) the receiving agent will perform the action, once the given precondition is, or becomes, true. The proposition given as part of the acceptance indicates the preconditions that the agent is attaching to the acceptance. A typical use of this is to finalise the details of a deal in some protocol. For example, a previous offer to "hold a meeting anytime on Tuesday" might be accepted with an additional condition that the time of the meeting is 11.00. Note for future extension: an agent may intend that an action becomes done without necessarily intending the precondition. For example, during negotiation about a given task, the negotiating parties may not unequivocally intend their opening bids: agent a may bid a price p as a precondition, but be prepared to accept price p'.

Formal Model	```
	<i, accept-proposal(j, <j, act>,))>
	  <i, inform(j, Ii Done(<j, act>,))>
	    FP: Bi Bi (Bifj Uifj)
	    RE: Bj
	
	Where:
	
	     = Ii Done(<j, act>,)
	``

Example	Agent i informs j that it accepts an offer from j to stream a given multimedia title to channel 19 when the customer is ready. Agent i will *inform* (see [FIPA00046]) j of this fact when appropriate:
	
	``
	(accept-proposal
	  :sender i
	  :receiver j
	  :in-reply-to bid089
	  :content
	    ((action j (stream-content movie1234 19))
	      (B j (ready customer78)))
	  :language FIPA-SL)
	``

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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   [FIPA00046]   FIPA Inform Communicative Act Specification. Foundation for Intelligent Physical Agents, 2000.
52   `http://www.fipa.org/specs/fipa00046/`
53   [FIPA00051]   FIPA Propose Communicative Act Specification. Foundation for Intelligent Physical Agents, 2000.
54   `http://www.fipa.org/specs/fipa00051/`