

# FOUNDATION FOR INTELLIGENT PHYSICAL AGENTS

## FIPA Iterated Contract Net Interaction Protocol Specification

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|------------------------|---|----------------------------|------------|
| <b>Document title</b>  | FIPA Iterated Contract Net Interaction Protocol Specification |                            |            |
| <b>Document number</b> | XC00030F  | <b>Document source</b>     | FIPA TC C  |
| <b>Document status</b> | Experimental  | <b>Date of this status</b> | 2001/08/10 |
| <b>Supersedes</b>      | None  |                            |            |
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| <b>Change history</b>  |   |                            |            |
| 2001/01/29             | Approved for Experimental                                     |                            |            |
| 2001/08/10             | Line numbering added  |                            |            |

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*Geneva, Switzerland*

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33 specifications and their current status may be found in the FIPA List of Specifications. A list of terms and abbreviations  
34 used in the FIPA specifications may be found in the FIPA Glossary.

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37 specifications and upcoming meetings may be found at <http://www.fipa.org/>.

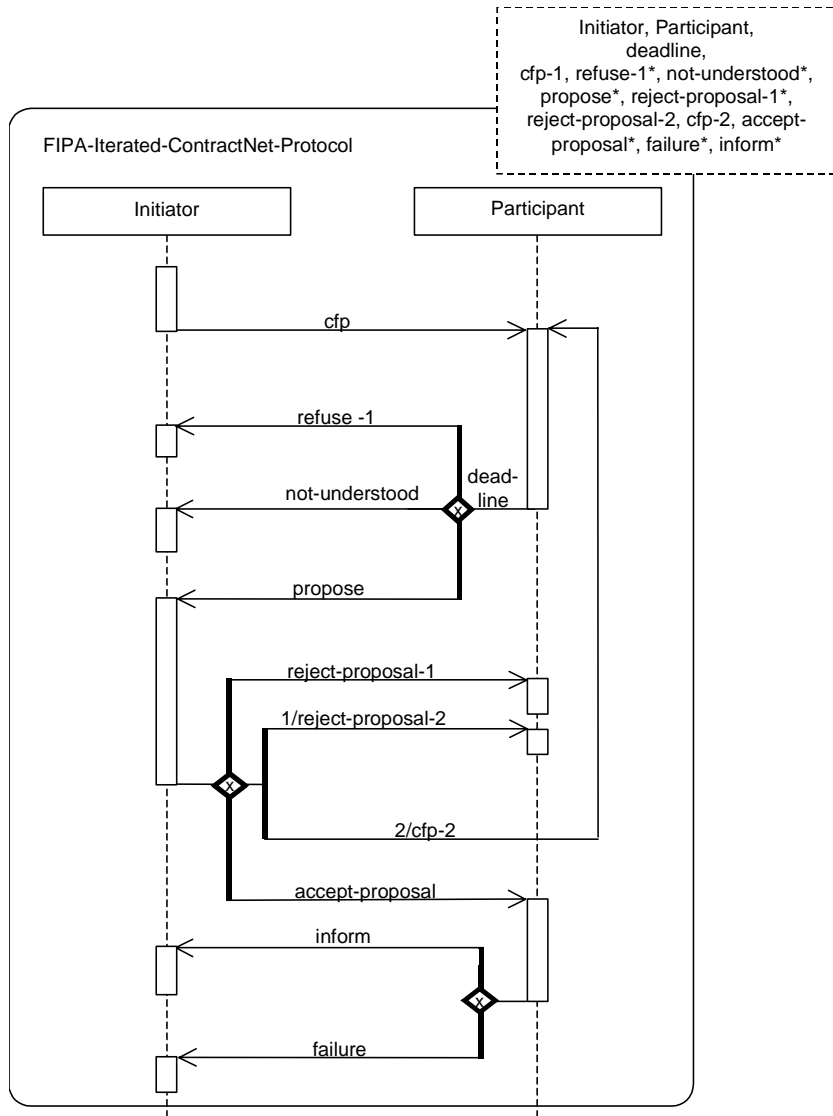
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42 **1 FIPA Iterated Contract Net Interaction Protocol**

43 The FIPA Iterated Contract Net Interaction Protocol (IP) is an extension of the basic FIPA Contract Net IP (see  
 44 [FIPA00029]), but it differs by allowing multi-round iterative bidding. As with the FIPA Contract Net IP, the manager  
 45 issues the initial call for proposals with the *cfp* act (see [FIPA00037]). The contractors then answer with their bids as  
 46 *propose* acts (see [FIPA00037]) and the manager may then accept one or more of the bids, rejecting the others, or may  
 47 iterate the process by issuing a revised *cfp*. The intent is that the manager seeks to get better bids from the contractors  
 48 by modifying the call and requesting new (equivalently, revised) bids. The process terminates when the manager  
 49 refuses all proposals and does not issue a new *cfp*, accepts one or more of the bids or the contractors all refuse to bid.

50  
 51 The representation of this IP is given in *Figure 1*.  
 52



53  
 54  
 55 **Figure 1: FIPA Iterated Contract Net Interaction Protocol**  
 56

57 **1.1 Exceptions to Interaction Protocol Flow**

58 This IP is a pattern for a simple interaction type. Elaboration on this pattern will almost certainly be necessary in order to  
 59 specify all cases that might occur in an actual agent interaction. Real world issues of cancelling actions, asynchrony,  
 60 abnormal or unexpected IP termination, nested IPs, and the like, are explicitly not addressed here.  
 61  
 62

62 **2 References**

- 63 [FIPA00029] FIPA Contract Net Interaction Protocol Specification. Foundation for Intelligent Physical Agents, 2000.  
64 <http://www.fipa.org/specs/fipa00029/>
- 65 [FIPA00037] FIPA Communicative Act Library Specification. Foundation for Intelligent Physical Agents, 2000.  
66 <http://www.fipa.org/specs/fipa00037/>