FOUNDATION FOR INTELLIGENT PHYSICAL AGENTS

FIPA Request When Interaction Protocol Specification

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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/.

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1   FIPA Request When Interaction Protocol

The FIPA Request When Interaction Protocol (IP) provides a framework for the *request-when* communicative act (see [FIPA00058]). The initiator uses the *request-when* action to request that the participant do some action once a given precondition becomes true. If the requested agent understands the request and does not initially refuse, it will *agree* (see [FIPA00040]) and wait until the precondition occurs. Then, it will attempt to perform the action and notify the requester accordingly. If after the initial agreement the participant is no longer able to perform the action, it will send a *refuse* action (see [FIPA00055]) to the initiator.

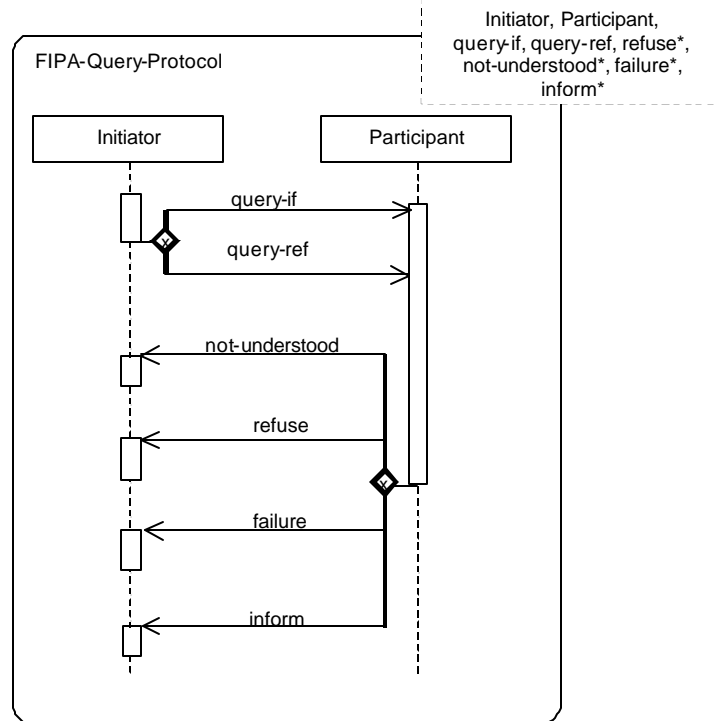The representation of this IP is given in *Figure 1*.

Figure 1: FIPA Query Interaction Protocol

1.1   Exceptions to Interaction Protocol Flow

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

2   References

[FIPA00040]   FIPA Agree Communicative Act Specification. Foundation for Intelligent Physical Agents, 2000.
               `http://www.fipa.org/specs/fipa00040/`
[FIPA00055]   FIPA Refuse Communicative Act Specification. Foundation for Intelligent Physical Agents, 2000.
               `http://www.fipa.org/specs/fipa00055/`
[FIPA00058]   FIPA Request When Communicative Act Specification. Foundation for Intelligent Physical Agents, 2000.
               `http://www.fipa.org/specs/fipa00058/`