

FOUNDATION FOR INTELLIGENT PHYSICAL AGENTS

FIPA Request Whenever Communicative Act Specification

Document title	FIPA Request Whenever Communicative Act Specification		
Document number	DC00059A	Document source	FIPA TC C
Document status	Deprecated	Date of this status	2000/10/16
Supersedes	None		
Contact	fab@fipa.org		
Change history			
2000/10/16	Deprecated by FIPA00037		

© 2000 Foundation for Intelligent Physical Agents - <http://www.fipa.org/>

Geneva, Switzerland

Notice

Use of the technologies described in this specification may infringe patents, copyrights or other intellectual property rights of FIPA Members and non-members. Nothing in this specification should be construed as granting permission to use any of the technologies described. Anyone planning to make use of technology covered by the intellectual property rights of others should first obtain permission from the holder(s) of the rights. FIPA strongly encourages anyone implementing any part of this specification to determine first whether part(s) sought to be implemented are covered by the intellectual property of others, and, if so, to obtain appropriate licenses or other permission from the holder(s) of such intellectual property prior to implementation. This specification is subject to change without notice. Neither FIPA nor any of its Members accept any responsibility whatsoever for damages or liability, direct or consequential, which may result from the use of this specification.

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..... 1

2 Request Whenever..... 2

3 References..... 3

1 Scope

This document specifies the Request Whenever communicative act which is compliant to [FIPA00037] requirements.

2 Request Whenever

Summary	The sender wants the receiver to perform some action as soon as some proposition becomes true and thereafter each time the proposition becomes true again.
Content	A tuple of an action description and a proposition.
Description	<p><i>Request-whenver</i> allows an agent to inform another agent that a certain action should be performed as soon as a given precondition, expressed as a proposition, becomes true, and that, furthermore, if the proposition should subsequently become false, the action will be repeated as soon as it once more becomes true.</p> <p><i>Request-whenver</i> represents a persistent commitment to re-evaluate the given proposition and take action when its value changes. The originating agent may subsequently remove this commitment by performing the <i>cancel</i> action (see [FIPA00041]).</p> <p>No specific commitment is implied by the specification as to how frequently the proposition is re-evaluated, nor what the lag will be between the proposition becoming true and the action being enacted. Agents who require such specific commitments should negotiate their own agreements prior to submitting the <i>request-when</i> act (see [FIPA00058]).</p>
Formal Model	$\langle i, \text{request-whenver}(j, \langle j, \text{act} \rangle, \phi) \rangle \equiv$ $\langle i, \text{inform}(j, I_i \text{ Done}(\langle j, \text{act} \rangle, (\exists e) \text{ Enables}(e, B_j \phi))) \rangle$ $\text{FP: } B_i \alpha \wedge \neg B_i (B_i f_j \alpha \vee U_i f_j \alpha)$ $\text{RE: } B_j \alpha$ <p>Where:</p> $\alpha = I_i \text{ Done}(\langle j, \text{act} \rangle, (\exists e) \text{ Enables}(e, B_j \phi))$ <p>Agent <i>i</i> informs <i>j</i> that <i>i</i> intends that <i>j</i> will perform some <i>act</i> whenever some event causes <i>j</i> to believe ϕ.</p>
Example	<p>Agent <i>i</i> tells agent <i>j</i> to notify it whenever the price of widgets rises from less than 50 to more than 50.</p> <pre> (request-whenver :sender i :receiver j :content ((inform :sender j :receiver i :content (price widget)) (> (price widget) 50)) ...)</pre>

3 References

- [FIPA00037] FIPA Communicative Act Library Specification. Foundation for Intelligent Physical Agents, 2000.
<http://www.fipa.org/specs/fipa00037/>
- [FIPA00041] FIPA Cancel Communicative Act Specification. Foundation for Intelligent Physical Agents, 2000.
<http://www.fipa.org/specs/fipa00041/>
- [FIPA00058] FIPA Request When Communicative Act Specification. Foundation for Intelligent Physical Agents, 2000.
<http://www.fipa.org/specs/fipa00058/>