FOUNDATION FOR INTELLIGENT PHYSICAL AGENTS

FIPA Subscribe Communicative Act Specification

Document title	FIPA Subscribe Communicative Act Specification		
Document number	DC00060B	**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		

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Geneva, Switzerland

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Contents

1 Scope

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

2 Subscribe

Summary	The act of requesting a persistent intention to notify the sender of the value of a reference, and to notify again whenever the object identified by the reference changes.
Content	A descriptor (a referential expression).
Description	The *subscribe* act is a persistent version of the *query-ref* act (see [FIPA00054]), such that the agent receiving the *subscribe* will *inform* (see [FIPA00046]) the sender of the value of the reference, and will continue to send further *inform*s if the object denoted by the description changes.

Formal Model	<i, subscribe(j, Ref x (x))>
	  <i, request-whenever(j, <j, inform-ref(i, Ref x (x))>,
	  (y) B_j ((Ref x (x) = y))>
	  FP: B_i B_i (Bif$_j$ Uif$_j$)
	  RE: B_j
	
	Where:
	
	  = I_i Done(<j, inform-ref(i, Ref x (x))>,
	  (e) Enables(e, (y) B_j ((Ref x (x) = y)))
	
	Note: Ref x (x) is one of the referential expressions: x (x), any x (x) or all x (x).

Example	Agent i wishes to be updated on the exchange rate of Francs to Dollars, and makes a subscription agreement with j (an exchange rate server).
	
	(subscribe
	  :sender i
	  :receiver j
	  :content
	  (iota ?x
	  (= ?x (xch-rate FFr USD))))

3 References

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

[FIPA00046] FIPA Inform Communicative Act Specification. Foundation for Intelligent Physical Agents, 2000. http://www.fipa.org/specs/fipa00046/

[FIPA00054] FIPA Query Ref Communicative Act Specification. Foundation for Intelligent Physical Agents, 2000. http://www.fipa.org/specs/fipa00054/