

# FOUNDATION FOR INTELLIGENT PHYSICAL AGENTS

## FIPA Inform If Communicative Act Specification

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## **1 Scope**

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



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2 Inform If

Summary	A macro action for the agent of the action to inform the recipient whether or not a proposition is true.
Content	A proposition.
Description	<p>The <i>inform-if</i> macro act is an abbreviation for informing whether or not a given proposition is believed. The agent which enacts an <i>inform-if</i> macro-act will actually perform a standard <i>inform</i> act (see [FIPA00046]). The content of the inform act will depend on the informing agent's beliefs. To <i>inform-if</i> on some closed proposition <math>p</math> :</p> <p style="padding-left: 40px;">if the agent believes the proposition, it will inform the other agent that <math>p</math>, and,</p> <p style="padding-left: 40px;">if it believes the negation of the proposition, it informs that <math>p</math> is false (i.e. <math>\neg p</math>).</p> <p>Under other circumstances, it may not be possible for the agent to perform this plan. For example, if it has no knowledge of <math>p</math>, or will not permit the other party to know (that it believes) <math>p</math>, it will send a <i>refuse</i> message (see [FIPA00055]).</p>
Formal Model	<pre>&lt;i, inform-if(j, p)&gt;   &lt;i, inform(j, p)&gt; &lt;i, inform(j, ¬p)&gt;   FP: Bif<sub>i</sub> p B<sub>i</sub> (Bif<sub>j</sub> p Uif<sub>j</sub> ¬p)   RE: Bif<sub>j</sub> p</pre> <p><i>Inform-if</i> represents two possible courses of action: <math>i</math> informs <math>j</math> that <math>p</math>, or <math>i</math> informs <math>j</math> that not <math>p</math>.</p>
Example	<p>Agent <math>i</math> requests <math>j</math> to inform it whether Lannion is in Normandy.</p> <pre>(request   :sender i   :receiver j   :content     (inform-if       :sender j       :receiver i       :content         "in( lannion, normandy )" )     :language Prolog)   :language FIPA-SL)</pre> <p>Agent <math>j</math> replies that it is not:</p> <pre>(inform   :sender j   :receiver i   :content     "\+ in( lannion, normandy )" )   :language Prolog)</pre>

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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 [FIPA00055] FIPA Refuse Communicative Act Specification. Foundation for Intelligent Physical Agents, 2000.  
54 <http://www.fipa.org/specs/fipa00055/>