FIPA Query If Communicative Act Specification

<table>
<thead>
<tr>
<th>Document title</th>
<th>FIPA Query If Communicative Act Specification</th>
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Geneva, Switzerland

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1 Scope
This document specifies the Query If communicative act which is compliant to [FIPA00037] requirements.
2 Query If

<table>
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<th>Summary</th>
<th>The action of asking another agent whether or not a given proposition is true.</th>
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<td>Content</td>
<td>A proposition.</td>
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<tr>
<td>Description</td>
<td>Query-if is the act of asking another agent whether (it believes that) a given proposition is true. The sending agent is requesting the receiver to inform (see [FIPA00046]) it of the truth of the proposition.</td>
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The agent performing the query-if act:

- has no knowledge of the truth value of the proposition, and,
- believes that the other agent does know the truth of the proposition.

| Formal Model | $<i, \text{query-if}(j, \phi) \equiv \langle i, \text{request}(j, \langle j, \text{inform-if}(i, \phi) \rangle) \rangle$
|--------------|----------------------------------------------------------------------------------|
|              | FP: $\neg B_{if} i \phi \land \neg U_{if} i \phi \land \neg B_i I_j \text{Done}(<j, \text{inform-if}(i, \phi)>)$
|              | RE: $\text{Done}(<j, \text{inform}(i, \phi)>) \mid <j, \text{inform}(i, \neg \phi)>)$

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<tr>
<th>Example</th>
<th>Agent $i$ asks agent $j$ if $j$ is registered with domain server $d1$:</th>
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|         | (query-if
|         | :sender $i$
|         | :receiver $j$
|         | :content
|         |   (registered
|         |     (server $d1$
|         |     (agent $j$))
|         | :reply-with r09
|         | ...)

Agent $j$ replies that it is not:

|         | (inform
|         | :sender $j$
|         | :receiver $i$
|         | :content
|         |   (not
|         |     (registered
|         |       (server $d1$
|         |       (agent $j$))
|         | :in-reply-to r09)
3 References

http://www.fipa.org/specs/fipa00037/

http://www.fipa.org/specs/fipa00046/