

Title	Minutes of the X2S TC meetings in Helsinki
Date	22-26 July 2002
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## 1 Brief introduction

- Goal for this meeting: finalize all feedback and fix all identified specs
- Goal for next meeting: put all documents into their final form and organize the vote, including getting all the necessary information (e.g. existing implementations of the specs)

## 2 Specific input received for/during this meeting

id	Spec name	Spec no.	Contact Point	Date	Note (see also minutes of the discussions)
34	Agent Management	23	Ravi Prakash	14/5/2002	example
35.1	Message Transport Agent Management Envelope in bit-efficient	67D 67D 67D 67D 23H 67D, 23H 88B	Nicolas Lhuillier	16/5/2002	typo
35.2					typo
35.3					error message
35.4					prevent bouncing
35.5					examples
35.6					merge fipa-agent- management ontology
35.7					into a single document remove the spec
36	Interaction Protocols	25-36	Marian Nodine	16/5/2002	canceling a protocol scope of conv-id
37	ACL	37	Luis Botelho	17/5/2002	content of cfp
38	SL	8	David Bonnefoy, Fabio Bellifemine	23/5/2002	ambiguity in SL encoder
39	ACL bit-efficient Envelope bit-efficient Device Ontology	69, 88, 91	Heikki Helin	29/5/2002	revised documents
40	fipa-subscribe		Marian Nodine Fabio Bellifemine Giovanni Rimassa	3/6/2002	
41	fipa-auction IPs	31,32	James Odell	7/6/2002	
42	ACL	37	Marian Nodine	7/6/2002	semantics of cancel
43	fipa-auction IPs	31,32	Claudio Bartolini	7/6/2002	approach to auctions
44	fipa-agent-management	23	Jamie Lawrence	10/6/2002	slot names
45	contract-net	29F	Karl-Heinz Krepfels	12/6/2002	
46	CCL content language	9B	Karl-Heinz Krepfels	12/6/2002	
47	nomadic application	14	Heikki Helin	14/6/2002	informative documents
48	all IPs	25-36	Misty Nodine	27/6/2002	cancel meta-policy
49	ACL message structure		Steven Willmott	7/7/2002	multiple ontologies (see also reply of Suguri)
50	HTTP MTP	84	Heikki Helin	11/7/2002	
51	bit-efficient ACL	69	Heikki Helin	11/7/2002	
52	ontology param	61	Luis Botelho	11/7/2002	
53.1	ALL	ALL	Steven Willmott	18/7/2002	naming space;
53.2				21/7/2002	naming fipa specs components

54	ACL message structure	61	Jonathan Dale	18/7/2002	ontology, language, protocol params
pending from Vancouver					
10.4	HTTP MTP & XML Envelope	54	Ion Constantinescu	21/1/2002	need more discussion / clarifications from Ion (see also Ion's 10 <sup>th</sup> Jul)
13	Agent Management. DF lease-time	23	Jonathan Dale	6/5/2002	To be further discussed in Helsinki. (see new input on the reflector)
14	Agent Management (DFederation)	23	Jonathan Dale	7/5/2002	To be further discussed in Helsinki
16	Agent Management (DFederation)	23	Misty Nodine	7/5/2002	To be further discussed in Helsinki
17	Fipa-subscribe		Misty Nodine	7/5/2002	New spec.
11.3	ACL Message structure		Fabio Bellifemine Misty Nodine	5/4/2001	ACLMessage parameters: - new ACLMessage parameter to express the order of the messages sent within the scope of a conversation (e.g. conversation-msg-no 1) - add new parameter to the ACLMessage structure to specify a deadline for a conversation. (e.g. conversation-expiration-time endOfMay)
11.1	IIOp MTP		Fabio Bellifemine	5/4/2001	Should IIOp MTP specs include definition of URI or pointer to where it is defined?
other input welcome during this meeting					
55	MTS		Stefan Poslad	23/7/2002	encrypted field
56	AMS lease-time (see 13)	23	Fabio	24/7/2002	kept pending until next meeting
57	AMS federation (see 14)	23	Fabio	24/7/2002	kept pending until next meeting

### 3 Pending Issues from Vancouver's resolutions

- recommend FAB to produce a guideline document for maintenance of the specifications and publish it on the public area of the Web site (see for instance the doc. no. 61 and doc. no. 37). FAB reply: PENDING
- recommend FIPA to publish all the application-related specifications as informative documents, in particular the following documents: Personal Assistant (83), Network Management and Provisioning (82), Audio-visual Entertainment and Broadcasting (81), Personal Travel Assistance (80), part of Nomadic Application Support (14). FAB reply: DONE
- recommend FIPA to produce and approve a document with the list of all the symbols defined by FIPA and a pointer to the specification number where they have been defined and where they have been used. If FIPA approves that, than X2S will consider to produce it in Helsinki (if there will be enough volunteers to do that!). FAB reply: PENDING because of namespace proposal.

### 4 X2S Agenda for this week

- Monday 14:00 – 17:00
  - o ACL & ACL Message Structure (42, 37, 49, 52, 54, 11.3)
- Monday 17:00 – 18:00
  - o content languages CCL & SL (38, 46)
- Tuesday 9:00 – 12:30
  - o Interaction Protocols (36, 40, 41, 43, 45, 48)
- Tuesday 14:00 – 17:00
  - o Interaction Protocols (cont.)
- Wednesday 9:00 – 12:30
  - o DF lease time, DF federation (13,14,16)
- Thursday 10:30 – 12:30
  - o MTS, Agent Management, MTPs (34, 35, 44, 10.4, 11.1, 50, 53, 55)
- Friday 9:00 – 12:30
  - o continue Thursday issues
  - o Wireless TC: Nomadic, Message Buffering, bit-efficient (39, 47, 51)

### 5 List of participants

Name	Company	Ma	Tm	Ta	Wm	Thm	Fm
Bernard Burg	HP	X	X				X
David Levine	IBM	X					
Fabio Bellifemine	TILAB	Xx	X		X	X	X
Frank Mc Cabe	Fujitsu	X					
Farooq Ahmad	Comtec	Xx	X		X	X	X
Heikki Helin	Sonera		X		X	X	X
Heimo Laamanen	Sonera		X				X
Hiroki Suguri	Comtec	Xx	X		X		X
Jeremy Pitt	Imperial College of London	X					
Jim Odell	James Odell Associates	X	X				
Jonathan Dale	Fujitsu	Xx			X		X

Makoto Okada	Fujitsu	X	X				
Michael Berger	Siemens				X		X
Mike Kerstetter	Boeing	X	X			X	
Misty Nodine	Telcordia	X	X				
Monique Calisti	Whitestein	Xx			X		
Patricia Charlton	Motorola						X
Shaw Feng		x	X				X
Tadashi Aragi		X					
Steven Willmott	EPFL				X	X	X
Mikko Laukkanen	Sonera	Xx	X		X		X
Santtu Toivonen	VTT	Xx	X		X		

### LEGEND:

- Ma-X is the first part of the Monday afternoon session
- Ma-x is the second part of the Monday afternoon session
- Tm is Tuesday morning session
- Ta is Tuesday afternoon session
- Wm is the Wednesday morning session
- Thm is the Thursday afternoon session
- Fm is the Friday morning session

## 6 Discussion

### *Monday afternoon – first part*

#### **no. 42, semantics of cancel**

proposal of Misty: remove totally the FP, modify the RE, modify CANCEL such that it is no more defined in terms of disconfirm

semantics of done: is the RE of a subscribe done() after the communication or only after the cancel?

proposal of Frank: have a new comm. act to TERMINATE a request-whenever/request-when/subscribe

semantics of cancel should be more flexible such that it fits with the requirements of request-whenever

Keep existing CANCEL semantics. Modify semantics of request-whenever, ... such that it is never done

*Conclusion: Modify the semantics of request-whenever, subscribe, request-when by using forall quantifier instead of exist quantifier. Modify FP of CANCEL and add a footnote to highlight that the semantics might not work for terminating a request-whenever.*

$\langle i, \text{cancel}(j, a) \rangle \equiv$

(cancel becomes a new primitive ca). Add a footnote that this is not capturing the real semantics in case of canceling a subscribe or a request-whenever. PATCH: We know that there is this problem but we need to cancel a subscribe/request-whenever.

FP:  $B_j I_i \text{ Done } (a)$   
RE:  $B_j \neg I_i \text{ Done } (a)$

$\langle i, \text{request-whenever } (j, \langle j, \text{act} \rangle, \phi) \rangle \equiv$   
 $\langle i, \text{inform } (j, (\text{AND forall } e \text{ Enables } (e, B_j \phi) I_i \text{ Done } (\langle j, \text{act} \rangle, )) \rangle)$   
FP:  $B_i \alpha \wedge \neg B_i (B_i f_j \alpha \vee U_i f_j \alpha)$   
RE:  $B_j \alpha$

Where:

$\alpha = \text{TO CHANGE } I_i \text{ Done } (\langle j, \text{act} \rangle, (\exists e) \text{ Enables } (e, B_j \phi))$

*Agent i informs j that i intends that j will perform some act whenever some event causes j to believe  $\phi$ .*

### **no. 37, content of cfp**

the current specs are correct. See also the formal model that uses a referential expression.

### ***Monday afternoon – second part***

#### **no. 49, 52, 54 ontology slot of ACLMessage**

```
:content ( ontology1#symbol1 ontology2#symbol2)
:content (AgentCities.Onto1#restaurant Agentcities.Onto2#food)
:ontology (symbol1:ontology1#symbolX)
:content (symbolX
```

ALTERNATIVES:

```
:ontology O1 ==> all symbols in the content belong to O1
:ontology (sequence O1 O2) ==> all symbols in the content belong to O1, if a symbol is
not found in O1 then it belongs to O2
:ontology (sequence O1 symbol1:O2 O3) ==> all symbols in the content belong to O1,
symbol1 belongs to O2, if a symbol is not found then it belongs to O3
:ontology (sequence namespace1:ontology1 namespace2:ontology2) ==> all symbols
in the content prefixed by namespace1 belong to ontology1, ...
:ontology (sequence URI1 URI2 URI3 ...)
:ontology value is an ordered sequence of symbols. Each symbol identifies an ontology.
The symbols used in the content must belong to ... in sequence.
```

(INFORM

```
:ontology (sequence fipa-agent-management jade-agent-management)
:content ( (action DF (register (DFAGentManagement :service (JADEService :name
JADE.register ...)))
:language fipa-sl
)
```

(INFORM

:ontology (sequence englishAddress italianAddress)

AVAILABLE ALTERNATIVES:

1. leave ontology slot as it is today: all symbols of the content belong to one (and only one) ontology and the ontology slot has String value; or it is implementation-dependent.
2. specify the ontology slot to have values as a SET (i.e. the mapping between symbols in the content and ontologies is implementation-dependent)
3. specify the ontology slot to have values as a SEQUENCE (i.e. the mapping between symbols in the content and ontologies is specified according to the order in the sequence. Each symbol in the content must be searched in the first ontology, if it is not found into that ontology, then it must be searched in the second ontology, and so on...)
4. specify a solution for defining name spaces within the ontology slot

CONCLUSION: SOLUTON 2 modified with a backward-compatible modification. Value of :ontology can be a SET of symbols or a single Symbol. (check to be done in all the ACL Codecs)

### **no. 11.3, new ACLMessage parameters**

- conversation expiration time. Not accepted because it is good to have but so far not particularly needed by anyone.
- :conversation-sequence number. No proposed solution solves completely the problem of recreating the order of the received messages; in particular when there is a proxy agent between the sender and the receiver or in the case of interaction protocols with multiple receivers. CONCLUSION: Not accepted and REQUEST input to [chat@fipa.org](mailto:chat@fipa.org) and [x2s@fipa.org](mailto:x2s@fipa.org). The best proposal so far is to have 1 counter for each conversation-id for each agent, but it does not work when there is a proxy.

### **no. 46, CCL content language**

ACCEPTED. Action: FB asks the submitter of this comment to edit himself the document and submit the new document (with track change on) to X2S.

On Thursday the document, modified by the submitter, has been received and reviewed. The only modification he did is replacing 'intensional' with 'intentional'.

REJECTED. The right word is 'intensional' as opposed to 'extensional'.

### **no. 38, ambiguity in SLEncoder**

Action: add a footnote in SL specs to specify that FunctionalTerms within Actions must be encoded without slotNames, while in all the other cases they must be encoded with SlotNames.

PENDING UNTIL NEXT MEETING

## ***Tuesday morning***

### **no. 36, 48 canceling a protocol, scope of conv-id**

#### scope of conversation-id

- add a comment in the meta-policy of the IPs and summarize what is written in the ACL parameter specs:

**Notes:** Any ACL message that contains a non-null value for this protocol message element is considered to belong to a conversation and it is required to respect the following rules:

- the initiator of the protocol must assign a non-null value to the conversation-id element
- all responses to the message, within the scope of the same interaction protocol, should contain the same value for the conversation-id element
- the timeout value in the reply-by slot must denote the latest time by which the sending agent would like to have received the next message in the protocol flow (not be confused with the latest time by which the interaction protocol should terminate).

**Notes:** An agent must tag ACL messages with a conversation identifier to manage its communication strategies and activities. Typically this will allow an agent to identify individual conversations with multiple agents. It will also allow agents to reason across historical records of conversations.

**Notes:** It is required the usage of globally unique values for the conversation-id element in order to allow the participants to distinguish between several concurrent conversations. A simple mechanism to ensure uniqueness is the concatenation of the globally unique identifier of the sender agent to an identifier (e.g. a progressive number) that is unique within the scope of the sender agent itself

in case of 1:N interaction protocols or sub-protocols it is free to the initiator to decide if the same conv-id should be used or a new one should be issued.

#### canceling/terminating a protocol:

decision: add in the meta-policy a standard and uniform way that allows the initiator to cancel/terminate an ongoing protocol (e.g. if an action is taking too long). The conv-id of the CANCEL protocol must have the same value of the cancelled comm. act.

### **no. 40, 17 fipa-subscribe**

APPROVED and Jim and Misty nominated as editors.

### **no. 45, fipa contract-net**

It was fixed already in Vancouver and the new document reflects already this comment.

### **no. 41, 43 fipa-auction IPs**

alternatives available for the 2 auctions documents:

- not to propose to Standard the 2 auctions documents because the AUML notation does not capture all the semantics and variants of the protocols (e.g. the first bid that arrived, each bid must increase the price, ...), and wait until AUML or an alternative



notation is available. Furthermore, the FIPA documents do not well represent the state-of-the-art.

- select one or two variants and submit those variants to go to standard

DECISION: X2S does not propose those 2 documents (31, 32) to go to standard. X2S invites FIPA membership to submit a workplan and revise the documents based on the state-of-the art of the auction theory. X2S proposes documents 25-36 (but not 31,32) to go to standard. We change 25 to an informative document with an overview of the AUML notation used in the IPs document.

Remove the boxes on the upper-right corner, but keep the mapping label-comm.act in the figure (e.g. failure-no-match:failure). Also translate the asterisks in the box into appropriate labels in the figure.

## ***Wednesday morning***

### **no. 13, DF lease-time**

APPROVED FOR THE DF:

- add a new attribute to DFAgentDescription: lease-time. The value of lease-time is a Time (e.g. DateTime in SL) that represents the duration of the lease. It is recommended (but not required) to use relative time. (add a footnote unless the clocks are synchronized)
  - o (DFAgentDescription :lease-time +00000000T600000000T)
- in order to renew a lease-time we use modify action
- the inform-done will include the actual lease-time assigned by the DF
  - o (REQUEST  
:content “(( action (agent-identifier :name DF)  
 (register (DFAgentDescription :lease-time 1 hour))))”
  - o (INFORM  
:content “(( done (action (agent-identifier :name DF)  
 (register (DFAgentDescription :lease-time 1 minute))))”
- it is the DF that decides how long the lease-time should be, even there is no lease-time specified in the request of registration.
- lease-time is an optional field. The default value is an infinite lease-time.

### **no. 14,16 DF Federation**

Problem: avoid loops and limit propagation in the graph of federated DFs

Decision:

- replace df-search-results with max-results (typos at page 6, line 260)
- require that each DF that propagates a search action decrease by 1 the value of max-depth
- specify default values for max-depth (0), max-results (1), when not specified.
- a negative value for max-results and max-depth means ALL
- add a search-id slot in the SearchConstraints Frame and requires that each DF that propagates a search action does propagate the search-id and does not change the value of search-id
- search-id must be globally unique

- a DF that receives a search with a search-id that he had received already is free to discard and ignore completely the request

## ***Thursday morning***

### **no. 34, example in Agent Management**

accepted. The example in FIPA000023 is wrong and has been fixed.

### **no. 35, typos, examples, error messages, ... in Agent Management**

- 35.1. Approved. Removed a sentence in FIPA000067
- 35.2. Approved. Remove all references to WAP in FIPA000067
- 35.3. Approved. Added clarification in FIPA000067 and required to include in the generated failure message also the ACLmessage that was not delivered. Added policy about conv-id and reply-with.
- 35.4. Approved. Add a policy such that *If the ACC receives a message it has already stamped, it could just discard the message*
- 35.5. Approved. To correct examples in FIPA000023
- 35.6. Approved. Add a note in FIPA23 and in FIPA67 that informs the reader that some symbols of the FIPA-Agent-Management ontology have been defined into the other document
- 35.7 . Rejected. HTTP-MTP can use several types of envelopes, including bit-efficient envelope.

### **no. 44, slot names in FipaAgentManagement**

Accepted. all slot names should be singular except when they are used for sets/sequences etc when they MUST be plural

**Need to change 23, all the examples, and check all the FIPA specs.**

### **no. 55, encrypted field**

Security WG proposes to remove the encrypted field from the Envelope.

Accepted. Remove the field + add a note that recommends usage of X-<something> for proprietary types of encryptions.

### **no. 50, HTTP MTP**

Accepted. Heikki Helin appointed as an editor of this specs for the following modifications:

- content-type of the HTTP header must be multipart
- content-type of the Envelope part must be application/<name of the envelope>
- line 177 must be removed

### **no. 10.4 HTTP MTP & XML Envelope**

- correct the example by adding quotes in the content of the ACLMessage
- correct the example with a newline between lines 288 and 289
- add text to indicate that the newline is part of the MIME boundary and must be present

- add a note in Section 2.4 that reminds that “HTTP message headers should always immediately follow after the request/response line and reminds the reader about the following excerpt from RFC2616

-- excerpt from rfc2616 --

In the interest of robustness, servers SHOULD ignore any empty line(s) received where a Request-Line is expected. In other words, if the server is reading the protocol stream at the beginning of a message and receives a CRLF first, it should ignore the CRLF.

Certain buggy HTTP/1.0 client implementations generate extra CRLF's after a POST request. To restate what is explicitly forbidden by the BNF, an HTTP/1.1 client MUST NOT preface or follow a request with an extra CRLF.

--

- > o To start an initiative for support of unidirectional HTTP MTP
- > protocol. Currently a platform supporting the HTTP MTP requires both
- > outgoing and incoming TCP connections. The later is often blocked by
- > firewall settings. A communication mechanism based only on outgoing
- > connections may provide a solution to this problem.
- > CORRECT BUT DOES IT HAVE AN IMPLICATION ON THE SPECIFICATION OR IT IS JUST AN IMPLEMENTATION ISSUE?

In my view it's not an implementation issue because the kind of behaviour expressed above cannot be achieved using the current specification (there is no specification for interpreting the HTTP response). I believe that currently there are two options:

- modify (extend, make provisions) to the current specification to allow for such kind of behaviour

- start the process of developing a new specification aimed to resolve exactly this problem

DECISION: X2S recommends Ion and FIPA members to submit a workplan and a concrete solution to this problem. It is not in the mandate of X2S to define new technical solutions.

- Replace reference RFC822 with RFC2822. Approved
- Remove description of how the MIME boundary is expressed and just refer to the proper MIME or HTTP specifications. Approved.
- Move section 2.4 and all notes for developers into an Annex – Notes for Developers. Approved.

### **10.4.1 Defining a well-known port number for HTTP-MTP**

KEPT OPEN UNTIL NEXT MEETING

Ion proposes to recommend a well-known port for FIPA HTTP MTP, e.g. 7778, and register this port with IANA

### **no. 11.1 IIOP MTP**

Add a reference to the specifications where the URL of an IIOP address (i.e. IOR, corbaloc, corbaname) is specified. Approved

### ***Friday morning***

### **no. 53, naming space for fipa components**

can we register now with IETF/IANA the name space urn:fipa ?

can we write in the documents that there is a default naming space for each component of the Envelope/ACL (e.g. ...)

where we define the name spaces? in a new document?

why colon and not dot?

how complex is assigning a resolver now?  
this proposal is not complete and needs work, editor?

Decisions:

- Having name space is a good idea and should be accepted by FIPA
- Action Point (Steve Willmott): prepare documentation for registering fipa name space with IETF/IANA
- A URN is resolved into a number of URLs, at least one of these URLs is a human-readable specification of the component; the content of the other URLs is undefined and depends on the file type (.doc, .pdf, .daml, .rdfs, ...)
- The value of each parameter in the specifications will have a default name space (e.g. the parameter language of the ACLspecs has a default name space urn:fipa:language)
  - o (request :language sl0) is equivalent to (request :language urn:fipa:language:sl0)
- The symbols in the content parameter of the ACLMessage by default belong to the combination of the name spaces defined in the language and in the ontology parameter of the ACLmessage.
  - o (request :language sl0 :ontology agent-management :content “((action (register ...)))”)
- Action Point (Steve Willmott): prepare a list of all the symbols defined in the FIPA specs (Jonathan will help, Fabio is responsible for SL symbols):
  - o urn:fipa:acl:performative:request, ...
  - o urn:fipa:content:language:sl:action , urn:fipa:content:language:sl:and , ...
  - o urn:fipa:iprotocol:contract-net , ...
  - o urn:fipa:ontology:agent-management:DFDescription:Service
  - o urn:fipa:mts:mtp:...
  - o NOTE: all symbols in lower case
  - o Steve sends on Monday to X2S mailing list the top-level name spaces

### **no. 39, bit-efficient + device ontology (revised documents)**

88B to change in order to remove encrypted field (Heikki)

### **no. 47, nomadic application document**

Heikki proposes to split the document no. 14 into 2 documents:

- an informative document with all the examples, ...
- a normative document with the ontology of the QoS

APPROVED already in Vancouver.

In September Heikki will submit the 2 documents to X2S mailing list.

### **no. 51, bit-efficient ACL**

Approved.

## **7 SUMMARY OF CHANGES IN THE SPECS**

Notes: all modifications in bold might cause backward-incompatibility.

no. version	spec – editor	approved changes
23I	Agent Management – Fabio Bellifemine, Jonathan Dale	<ul style="list-style-type: none"> <li>- Entire specification: Fixed syntax of the examples by adding extra parenthesis in the content</li> <li>- Page 13, line 556-558 Added a note that references [FIPA00067] for the closure of fipa-agent-management ontology</li> <li>- <b>Page 14, line 585,587: Modified the names of the following parameters: protocols, ontologies, languages</b></li> <li>- Page 21, line 1172: Removed wrong parenthesis in the example</li> <li>- <b>Page 6, line 261: Added text on limiting the propagation of federated searches</b></li> <li>- <b>Page 11, line 469: Added a section explaining registration lease times</b></li> <li>- <b>Page 13, line 498: Added a new parameter, lease-time, to the df-agent-description.</b></li> <li>- <b>Page 13, line 498: Added a footnote explaining the suggested value of lease-time as a time duration.</b></li> <li>- <b>Page 13, line 498: Added a footnote explaining the default lease time value.</b></li> <li>- <b>Page 14, line 506: Added a note on negative values for max-depth and max-results.</b></li> <li>- <b>Page 14, line 506: Added a search-id parameter to search-constraints.</b></li> </ul>
26, 27, 28, 29, 33, 34, 36 G	all IPs - Misty Nodine, Jim Odell	<ul style="list-style-type: none"> <li>- Figure 1 : To conform to UML 2, the protocol name was placed in a boundary, « x » is removed from the diamonds (xor is now the default), and the template box was removed</li> <li>• Added note on usage of conversation-id</li> <li>• <b>Added section 1.2 on meta-policy for canceling/terminating the protocol</b></li> </ul>
35G	fipa-subscribe - Misty Nodine, Jim Odell	<ul style="list-style-type: none"> <li>- Page 1, Figure 1 : The «not-understood» communication was removed</li> <li>- Page 1, Figure 1 : Reworked the protocol flow to insert an optional «agree». Deleted the explicit cancel from the protocol diagram because it has been moved to the meta-protocol section. Added guards to the diagram to indicate that the protocol may be terminated by reaching the end of the conversation-length.</li> <li>- Page 1, Figure 1 : To conform to UML 2, the protocol name was placed in a boundary, « x » is</li> </ul>

		<p>removed from the diamonds (xor is now the default), and the template box was removed.</p> <ul style="list-style-type: none"> <li>- Page 1, line 42 : Modified description of subscribe interaction protocol.</li> <li>- Page 1, line 51 : Added a new section 1.1 entitled « Explanation of the Protocol Flow »</li> <li>- Page 1, line 51 : Renumbered old section 1.1 to section 1.2. Added a paragraph explaining the not-understood communication and its relationship with the IP, and the cancel meta-protocol.</li> <li>• Page 1, line 54 : Added References and ChangeLog sections</li> <li>• Page iii : Regenerated Table of Contents</li> </ul>
37I	ACL – Fabio Bellifemine	<ul style="list-style-type: none"> <li>- Page 6, line 202: Added a footnote about the usage of <i>cancel</i> to terminate the effect of a <i>subscribe</i> and <i>request-whenever</i> communicative act.</li> <li>- Page 28, line 242 :Corrected the formal model of <i>request-whenever</i>.</li> <li>- Page 29, line 244 :Corrected the formal model of <i>subscribe</i>.</li> </ul>
61F	ACL params – Fabio	<ul style="list-style-type: none"> <li>- Page 5, line 191 :added requirements to control the conversations</li> </ul>
67F	MTS – Fabio	<ul style="list-style-type: none"> <li>- All document: Removed reference to [FIPA00073] and to WAP specifications</li> <li>- Page 4, line 186 : Added a sentence about possibility for an ACC to discard a message.</li> <li>- Page 6, line 259-260 : Added a sentence about possibility for an ACC to discard a message</li> <li>- Page 6, line 276-285 : Added clarification on the generation of failure message for non-delivered messages</li> <li>- Page 9, line 366-367 : Added a note that references [FIPA00023] for the closure of fipa-agent-management ontology</li> </ul>
69E	Bit efficient Envelope – Heikki Helin	<ul style="list-style-type: none"> <li>- Page 2, line 56: removed sentence</li> <li>- <b>Page 4, Line 158: Content value changed from BinExpr to BinString</b></li> <li>- <b>Page 4, Lines 193–196: Added Sign to DateTimeToken</b></li> </ul>
75F	IIOP MTP – Fabio Bellifemine	<ul style="list-style-type: none"> <li>- <b>Page 3, line 149 : Removed strings type definition</b></li> <li>- <b>Page 4, line 210: Removed encrypted field</b></li> <li>- Page 6 : Added Informative Annex A</li> </ul>
84D	HTTP MTP - Heikki Helin	<ul style="list-style-type: none"> <li>- Entire specification: Changed “ContentType” header field to “Content-Type”.</li> <li>- Page 3, Lines 110-115: Removed paragraph related to MIME boundaries.</li> </ul>

		<ul style="list-style-type: none"> <li>- <b>Page 3, Line 126:</b> Changed the envelope part Content-Type to enable use of any FIPA specified envelope encoding.</li> <li>- Page 3, Line 135: Clarification to message part Content-Type definition.</li> <li>- Page 4, Line 177: Removed unnecessary and incorrect Section about envelope encoding.</li> <li>- Page 4, Lines 180-194: Moved the section as an informative appendix.</li> <li>- Page 5, Line 200: Removed reference to specification number 85.</li> <li>- Page 6, Line 262: Removed “encrypted” envelope header field.</li> <li>- Page 6, Line 234: Corrected the Content-Type header field value.</li> <li>- Page 7, Line 273: Corrected the Content-Type header field value.</li> <li>- Page 7, Line 289: Added quotes to ACL content.</li> </ul>
85I	XML Envelope – Jonathan Dale	<ul style="list-style-type: none"> <li>- <b>Entire specification:</b> Removed all references to the encrypted parameter</li> </ul>
88B	bit-efficient Envelope – Heikki Helin	<ul style="list-style-type: none"> <li>- <b>Page 3, Line 128:</b> Removed the “encrypted” field.</li> <li>- <b>Page 3, Line 146:</b> Removed a production related the “encrypted” field.</li> <li>- <b>Page 4, Line 159:</b> Added optional UserDefinedParameter to the ReceivedObject.</li> <li>- <b>Page 4, Line 203:</b> Changed the identifier byte of the UserDefinedParameter from 0x04 to 0x05.</li> <li>- <b>Page 4, Lines 210-222:</b> Added Sign to DateTimeToken.</li> <li>- Examples: Removed the “encrypted” field and updated the bit-efficient versions accordingly.</li> </ul>
91C	Device Ontology – Heikki Helin	<ul style="list-style-type: none"> <li>- Document: Symbols in lower case letters.</li> <li>- <b>Page 9, Line 165:</b> Added a function for getting the device information.</li> <li>- Page 16, Line 244: Example message 4 changed to use device-information function.</li> <li>- Page 16, Line 361: Example message 5 updated to be a proper reply to message 4.</li> </ul>
<b>TODO</b>	<b>ALL</b>	<p>check all the examples and put in lower case all the symbols defined by FIPA</p> <p>check in all the examples the proper usage of new slot names (ontologies, languages, protocols) and that encrypted field is no more used</p>

## 8 Issues kept pending for the next meeting

- no. 38, ambiguity in SLEncoder.
- no. 56, AMS lease-time
- no. 57, AMS federation
- no. 10.4.1, definition of a well-known port number for HTTP-MTP

### **STILL TO DO:**

- naming space and naming scheme (Steve+)

## 9 Resolutions

The X2S TC recommends FIPA to approve the following resolutions:

- recommend FIPA to publish the minutes of this X2S meeting, the list of approved changes, and all the modified specifications in the public X2S area of the FIPA Web site for review from the entire community. All membership is invited to carefully consider and review all the approved changes that, in some cases, breaks compatibility of the existing implementation.
- recommend FAB to produce a guideline document for maintenance of the specifications and publish it on the public area of the Web site (see for instance the doc. no. 61 and doc. no. 37)
- invite membership to collect information about implementations and usage of the FIPA specifications
- considered that the formal semantics model of the cancel and subscribe communicative acts has been now corrected, X2S recommends FIPA FAB to promote to experimental the specification no. 35, fipa-subscribe Interaction Protocol and to include that specification in the list of documents to be proposed for standard on October
- the following specifications have been identified not to be proposed for standard because they do not meet the X2S quality criteria:
  - o spec no. 31, [FIPA English Auction Interaction Protocol Specification](#)
  - o spec no. 32, [FIPA Dutch Auction Interaction Protocol Specification](#)this decision can be reconsidered if, before the next FIPA meeting, X2S was made aware of any existing implementation or of any FIPA member still wishing to propose them to standard
- recommend the promotion of document no. 14 “Nomadic Application” to Informative document
- recommend FAB to approve the creation of a new normative document that contains the subset of document no. 14 where the QoS ontology is defined.
- recommend FIPA to register the name fipa in the IETF/IANA name space. Steve Willmott will prepare all the necessary documentation for such a registration to be done by FIPA next week (the Board?)
- thank all those people who have contributed to the meeting by sending comments or by actively participating to the discussion and, in particular, the editors of the documents: Jonathan Dale, Jim Odell, Misty Nodine, Heikki Helin.