# Foundation for Intelligent Physical Agents

Source: L. Chiariglione

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# **Resolutions of Durham meeting**

- 1. FIPA notes the report of the Board of Directors concerning:
  - The election of Manuel Aparicio as Secretary to the Board of Directors and Donald Steiner as FIPA Treasurer.
  - The setting up of a FIPA 97 interoperability experiment at the Seoul meeting. Donald Steiner will lead the discussions on a FIPA reflector (Seoul interop@fipa.org) with the purpose of defining the conditions of the experiment and the way of carrying it out. The following members have declared an interest in joining this experiments: ADETTI (Trigueiros), Broadcom (Sullivan), Comtec (Suguri), CSELT (Bellifemine), Fujitsu (McCabe), IBM (Aparicio), Nortel (Buckle), Siemens (Steiner).
  - The need to speed up the validation of FIPA specifications and to create a showcase of agent-based applications to be presented to the industry at large. M. Aparicio, L. Chiariglione, A. Mamdani, D. Steiner and H. Suguri will hold discussions with Dr. Doug Dyer, the Manager of the DARPA CoABS program. The group shall, within the shortest possible time,
    - identify a FIPA agent-based application covering a large geographical area
    - define the time line for a possible implementation and
    - make proposals to the membership.
  - The need to act to promote acceptance of FIPA results by industry. The Board of Directors will hold discussions within the Board and with industry representatives and make proposals to the membership.
- 2. FIPA approves the President's report (fipa8a05)
- 3. FIPA appoints

Francis G. McCabe (Fujitsu Laboratories of America)

Donald Steiner (Siemens)

as new Directors. The Directors appointed at The Tokyo meeting will hold office for one more year as per article 7 clause 3 of the FIPA Statutes.

Rob Hadingham (Nortel)

Yasuhiko Miyazaki (NTT)

Bernard Burg (Motorola)

as new Members of the Finance and Audit Committee replacing

Ian Dickinson (HP Labs) Motohisa Funabashi (Hitachi)

and

Charles Pow (Lockheed Martin) as new Member of the Membership and Nomination Committee. fipa8a06 gives the current FIPA organisation.

- 4. FIPA appoints KPMG as auditors for the 1998-99 accounts.
- 5. FIPA acknowledges the nomination of Mr. Alain Briançon, a Vice President of the Communications Enterprise of Motorola, made by the Membership and Nomination Committee. As the candidate is unfortunately absent from this meeting, the FIPA membership looks forward to the opportunity to get acquainted with him at the Seoul meeting and to act upon the nomination.
- 6. On the proposal of the Finance and Audit Committee FIPA approves the derogation of 1996-97 accounts (fipa8a11) the 1997-98 accounts (fipa8a12) the 1998-99 budget (fipa8a13)
- 7. Resolutions of Technical Committees

### **TC1 Resolutions**

TC1 proposes that FIPA adopt the following recommendations:

1) To issue the following specifications:

FIPA98 Part 10 : Security Management (v.1.0)

FIPA98 :Part 11 : Agent Management Support for Mobility (v.1.0)

FIPA98 Part 1 : Agent Management (v.1.0) FIPA97 Part 1 : Agent Management (v.2.0

- 2) To allow TC1 to continue editing FIPA98 parts 1, 10 and 11 for a month (till 30<sup>th</sup> November 98). This will allow TC members to reformat the specifications using the ISO template, correct typos, rectify inconsistencies between the 3 agent management specifications, and clarify expression.
- 3) To acknowledge the consistent and dedicated work of all those who contributed to the production of the 3 specifications in TC1 during 1998, in particular: Fabio Bellafemine, Phil Buckle, Bernard Burg, Jonathan Dale, Wayne Jansen, Rob Hadingham, Tom Karygiannis, Kari Koivuniemi, Frank Macabe, Donnie O'Sullivan, Marius Tesselar, Steve Willmott, Tianning Zhang.

# **TC2 Resolutions:**

- Acknowledgements
  - TC2 thanks Major Doug Dyer who, as a representative of DARPA, permitted FIPA to include chapter 2 of OKBC version 2.0.3 specifications as a box in its Fipa98 Part 12 specifications. The following note has been added: "For an accurate understanding of this knowledge model, the reader should directly refer to [3]. However, for quick reference and to simplify the reading of this document, the following box is an integral reproduction of the

- Chapter 2 of the OKBC specifications, version 2.0.3. This has been added to the specification for the convenience of the reader."
- TC2 asks the board of directors to acknowledge the authors of the OKBC specs by sending them a letter saying that this organization has taken their work as point of reference
- TC2 thanks Asuncion Gomez-Perez who permitted FIPA to use large parts of her paper in the Annex B of Fipa98 Part 12 specifications
- TC2 asks the board of director to acknowledge Asuncion Gomez-Perez by sending her a letter saying that this organization has taken her work as point of reference
- TC2 thanks Alain Leger and Nicola Guarino for their intense work to write Annex A and Annex B

# - Communication with TC10

- TC2 requests TC10 to extend FIPA97 Part 2 specification to consider the ontology extension. A document was already submitted to TC10 in Dublin to clarify this need. In addition, TC2 requests to consider performance issues by, possibly, specifying a defaulting mechanism for Ontology extension within a conversation
- TC2 requests TC10 to clarify the semantics of the *result* predicate in Fipa97 Part 2. For this purpose, a document has been prepared and submitted, on behalf of TC2, by Suguri-san
- TC2 requests TC10 to clarify the usage of the error handling messages, i.e. not-understood, failure, and refuse, within the Fipa97 part 2 document and to define a standard set of error propositions. For this purpose, TC2 suggests to consider also the proposal submitted by Roldano Cattoni (IRST)
- TC2 approves its version 1.0 of Part 12 of FIPA 98 specifications and asks FIPA 1 month to solve minor editorial issues.

# **TC 8 Human-Agent Interaction**

- TC 8 acknowledges the work of its members in 1998, which has led to a document that promises to be asubstantive contribution to FIPA specifications.
- TC 8 asks FIPA to approve its specifications as FIPA 98, part 8.
- TC 8 encourages TC 2 to develop means for specifying interaction protocols.
- TC 8 appreciates feedback on its specifications and encourages FIPA99 applications to develop human-agent interaction systems that can be used to validate the FIPA98, part 8.

# TC9: Product Design and Manufacturing

- 1) This specification will not be published as Part of FIPA 98, due to its insufficient development at this point in time. However, there is sufficient interest and new leadership (Berry and Ivezic) now driving this effort and wishing to use a completed document for driving this industry with FIPA standards. Fundamental problems about the size of this domain and the complexities of the expertise required are being addressed.
- 2) Divide and conquer. A grid of areas of responsibility (industry and FIPA agent dimensions) has been established and a list of volunteers so far (and potential recruits) to address particular areas has been drafted. Aparicio will nominally remain the chair, but the editorship and writing of content will be clear and distributed. A subcommittee structure will be adopted at meetings.
- 3) A new CFP will not be issued, but this current FIPA98 work will be extended into 1999. As a precedent to now follow, all application specifications will be finalized in April of each year. Product Design and Manufacturing will be published April 1999 as a first case.

- 4) A fipa-manufacturing reflector has been established and will be used for work outside FIPA meetings. This will be open to a select list of other critical industry experts to help in this work.
- 5) Draft of work (once improved) and publicity will be made available not only through the FIPA pages but through other web sites including, but not limited to ORNL's (Ivezec), Agent Link (Steiner), and SNL (Berry).
- 6) The TC9 chairman wishes to especially thank Ivezic and Berry for this initiative and leadership. Thanks also to the interests and volunteers such as Zhang, Parvan, O'Brien, Stephens, and Herman who have agreed to support this renewed effort.

## **TC 10**

# TC10 proposes that the Plenary accept:

- Version 0.4 of the FIPA 97 Developer's Guide (including the FIPA 97 FAQ).
  - Sample implementation (similar to FIPA 97 Part 5)
  - Example of negotiation of transport protocol
  - Example of failure/refuse messages
  - Example (informative) use of RDF as a content language
- An update of the FIPA 97 Issue Tracker (html format).
- A final version of the Developer's Guide (minor editorial updates only) will be provided as Version 1.0 to the Secretariat by November 20<sup>th</sup> 1998. Members and TC Chairs in particular are requested to provide comments to Phil Buckle.

### TC10 invites FIPA members to:

• Read the Developer's Guide and advise corrective actions where appropriate.

### TC10 welcomes the Secretariat:

• Propose that the Secretariat undertake the role of focus for comments to FIPA, including the maintenance (or replacement) of the FIPA 97 Issue Tracker.

# TC10 proposes that the Plenary acknowledge the following actions:

- Changes to FIPA 97 Parts 1 & 2 have been made during 1998, in particular:
  - Addition of DF search mechanisms
  - Resolution of addressing inconsistencies between Parts 1 & 2
  - Clarification of device mobility issues
  - No changes were made to FIPA 97 Parts 3 7 during 1998, however minor type-setting consistency should be undertaken **on all parts** before final release as FIPA 98 Version 2.0.

# TC10 would like to thank those that contributed to the Developer's Guide in 1998.

- 8. FIPA approves the resolutions of the SIG
- The SIG website will be transferred to www. fipa.org
- A digital library will be installed and maintained at the SIG website.
- 9. FIPA approves version 2 of the following specifications:

FIPA 97	Part 1	Agent Management
	Part 2	Agent Communication Language

Version 2 parts supersede the corresponding version 1 parts.

These documents will be revised by a professional hired by the Secretariat for editorial consistency and published as books.

10. FIPA approves version 1 of the following specifications:

FIPA 98	Part 1	Agent Management
	Part 8	Human/Agent Interaction
	Part 10	Agent Security
	Part 11	Agent Mobility
	Part 12	Ontology Service
	Part 13	FIPA 97 Developers' Guide

These documents will be revised by a professional hired by the Secretariat for editorial consistency and published as books.

- 11. Publication of FIPA 98 part 9 (Product Design and Manufacturing) is deferred to April 1999 as the specification is not considered to be technically mature.
- 12. The following table gives the current status of FIPA specifications

	FIPA 97 version 1	FIPA 97 version 2	FIPA 98 version 1
1		Agent Management	Agent Management
2		Agent	
		communication	
		language	
3	Agent/software integration		
4	Personal travel assistance		
5	Personal assistant		
6	Audio-visual entertainment		
	and broadcasting		
7	Network management and		
	provisioning		
8			Human/Agent Interaction
9			(Product Design and Manufacturing)
10			Agent Security
11			Agent Mobility
12			Ontology Service
13			FIPA 97 Developers' Guide

13. FIPA approves its Fifth Call for Proposals for FIPA 99 applications and technologies with thanks to Donald Steiner and Abe Mamdani for their efforts in putting the document together. A reflector (cfp5 discuss@fipa.org) will be established to conduct discussion between members sharing similar interests.

- 14. FIPA thanks Yasuhiko Miyazaki for serving as TC 8 Chair at the Palo Alto, Osaka and Dublin meetings and Wolfgang Pohl for chairing the TC at the Durham meeting.
- 15. FIPA approves the Durham Press Release (fipa8a03)
- 16. FIPA approves its workplan

Year	Month	Days	Place	Work items	Action	
1998	Oct	19-23	Durham, NC	1 <sup>st</sup>	FIPA 97 ver. 2.0 published	
			, , , , ,	$2^{\rm nd}$	FIPA 98 ver. 1.0 produced	
				3 <sup>rd</sup>	5 <sup>th</sup> Call for Proposals issued	
1999	Jan	25-29	Seoul	1 <sup>st</sup>	Field trial results	
				$2^{\rm nd}$	Field trial results	
					FIPA 98 ver. 1.1	
				3 <sup>rd</sup>	Proposals received	
					Baseline draft spec produced	
					6 <sup>th</sup> Call for Proposals issued	
1999	Apr		Europe	1 <sup>st</sup>	Field trial results	
	1		1	$2^{\rm nd}$	FIPA 98 ver. 1.2	
					Field trial results	
				3 <sup>rd</sup>	FIPA 99 ver. 0.1	
1999	Jul		Bay Area	1 <sup>st</sup>	Field trial results	
				2 <sup>nd</sup>	FIPA 98 ver. 1.3	
					Field trial results	
				3 <sup>rd</sup>	FIPA 99 ver. 0.2	
1999	Oct		Asia	1 <sup>st</sup>	Field trial results	
			$2^{\text{nd}}$	FIPA 98 ver. 2.0 published		
				3 <sup>rd</sup>	FIPA 99 ver. 1.0 produced	
				4 <sup>th</sup>	7 <sup>th</sup> Call for Proposals issued	

- 17. FIPA welcomes the list of FIPA 97-related software developed by members (fipa8a08) and the intention stated by Siemens to make software available by the Seoul meeting. Nortel Networks is thanked for donating FIPA-compliant software to FIPA members for non-commercial purposes. The software provided (on request) is Java parsers for ACL and SL. A Java ACC for use with OrbixWeb and VisiBroker (not tested) is also available for experimental use. Interested parties should contact Phil Buckle by email (pbuckle@nortel.co.uk).
- 18. FIPA welcomes the description of FIPA field trials being conducted or planned by members and consortia (fipa8a07).
- 19. FIPA thanks the following individuals for providing demonstrations of FIPA implementations:

	Title	Name	Affiliation
1.	Mobile electronic commerce agent	Aparicio	IBM
2.	Personal travel assistant	Steiner	Siemens
3.	FIPA 97 implementation	Suguri	Comtec
4.	JADE - Java Agent Development Kit	Bellifemine	CSELT

5.	FIPA agent communication based on OMG MASIF	Zhang	GMD Fokus
	technology		
6.	Memory agent	Stevens	IBM

and invites companies to make further demonstrations of agent-based products and applications at the next FIPA meeting in Seoul.

- 20. FIPA would like to thank the Secretary Ms. Teresa Marsico for coming to this meeting to meet the membership, explain the organisation of the Secretariat and assist the Finance and Audit Committee in reviewing the FIPA accounts and preparing the 1998-99 budget.
- 21. FIPA thanks DARPA, IBM, Nortel Networks, North Carolina State University, and Object Services and Consulting, Inc. for offering FIPA excellent meeting facilities and friendly support in Durham in the hosting of its 11<sup>th</sup> meeting, in particular:

Manny Aparicio (IBM)

Tiffany Lee (IBM)

Linda Hunter-Nash (IBM)

Munindar Singh (NCSU)

Anuj Jain (NCSU)

Sudhir Rustogi (NCSU)

Mahadevan Venkatraman (NCSU)