FOUNDATION FOR INTELLIGENT PHYSICAL AGENTS

Document title:	FIPA Work Plan "Agents in Ad-hoc environments"		
Document number:	f-wp-00020	**Document source:**	(see authors below)
Document status:	updated version	**Date of this status:**	2003/08/23
Change history:			
2002/02/15	Revised version from TC Gateways 2nd workplan		
2003/08/23	Revised version by TC Ad hoc, focus adjusted, milestones adapted		

Michael Berger
michael.berger@mchp.siemens.de

Heikki Helin
heikki.j.helin@sonera.com

Problem Statement: Ad-hoc networks based on communication facilities like Infrared, Bluetooth and Wireless LAN as well as using technologies like JXTA, Jini and UPnP enables new applications in the area of local range networks. Mobile devices, such as mobile phones and Pocket-PCs, equipped with that technology, make the communication of two devices or the establishing of an ad-hoc group with more than two devices possible.
Once working in that ad-hoc and short-range area, probably a device has no wide-range connection (e.g. there is no coverage at the moment or a user does not want to establish such a connection because of the cost). In that context, the agents on two mobile devices, originally created on different platforms, have to discover each other allowing them to communicate with each other. This case is also applicable if there are agents on more than two devices involved.

Objective: There are three main objectives of this work plan:
- Definition of mechanisms and protocols for agents and/or agent platforms to discovery each other in ad-hoc environments
- Usage of existing approaches in the ad-hoc and P2P world which provide support on different levels
- Writing a white paper about problems and possible mechanisms / solutions

Technology: The approaches will be based on developments in the area of ad-hoc and short-range wireless networks technologies such as Bluetooth, IrDA, Wireless LAN, Jini, UPnP and fixed network technologies (e.g., P2P mechanisms like JXTA).

Specifications generated: There will be a new specification which will take all existing specifications into account, which define FIPA2000 compliance and/or there will be changes to some or all the existing specifications listed below.

Plan for Work and Milestones: The plan is for a 24 month program of work and includes the following steps:

FIPA24	Publish work plan and get acceptance from FAB
FIPA24	Establish TC, open call for technical technology (CFT)
FIPA25-FIPA29	Discussion of technical contributions
FIPA30	Deliver first draft of preliminary specification
FIPA31	Making specification as experimental, deliver white paper

Dependencies:
- FIPA Abstract Architecture Specification
- FIPA Nomadic Application Support Specification
- FIPA Agent Communication and Content Languages Specifications

- FIPA Agent Security Management Specification
- FIPA Agent Management and Configuration Specifications
- FIPA Agent Message Transport Specifications

Additional References:

- Bluetooth
- IrDA
- Wireless LAN
- Jini
- UPnP
- JXTA
- P2P

Support:

- Fabio Bellifemine (TI Labs)
- Bernard Burg (HP Labs)
- Patricia Charlton (Motorola)
- Heikki Helin (Sonera)
- Kari Koivuniemi (Minutor ltd)
- Heimo Laamanen (Sonera)
- Jamie Lawrence (MIT Media Lab Europe)
- Stefan Poslad (Queen Mary, University London)
- Steven Querologico (Aether Systems)
- John Shepherdson (British Telecommunications)
- Steven Willmott (EPFL)

FAB Comments: