

# *FollowMe*

Project Progress

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# *FollowMe - Vital Statistics*

- Started 1<sup>st</sup> October 1997
  - Duration 18 months
  - Total Effort 23 person years
  - APM Effort 3.75 person years over 12 months
  - 50% Funding - supported through close coupling to ANSA
- Partners
    - APM
    - FAST - Project manager
    - INRIA
    - TCM
    - UWE



# Goals

## ● ANSA

- Understand Agents
  - Negotiation
  - Location
  - Scalability
  - Security
- Understand Implications of Mobility and Autonomy for FlexiNet

## ● APM

- Cages as “Safe Houses”
  - Safe Service Environment
  - Safe Conversation Environment
  - Trust Model

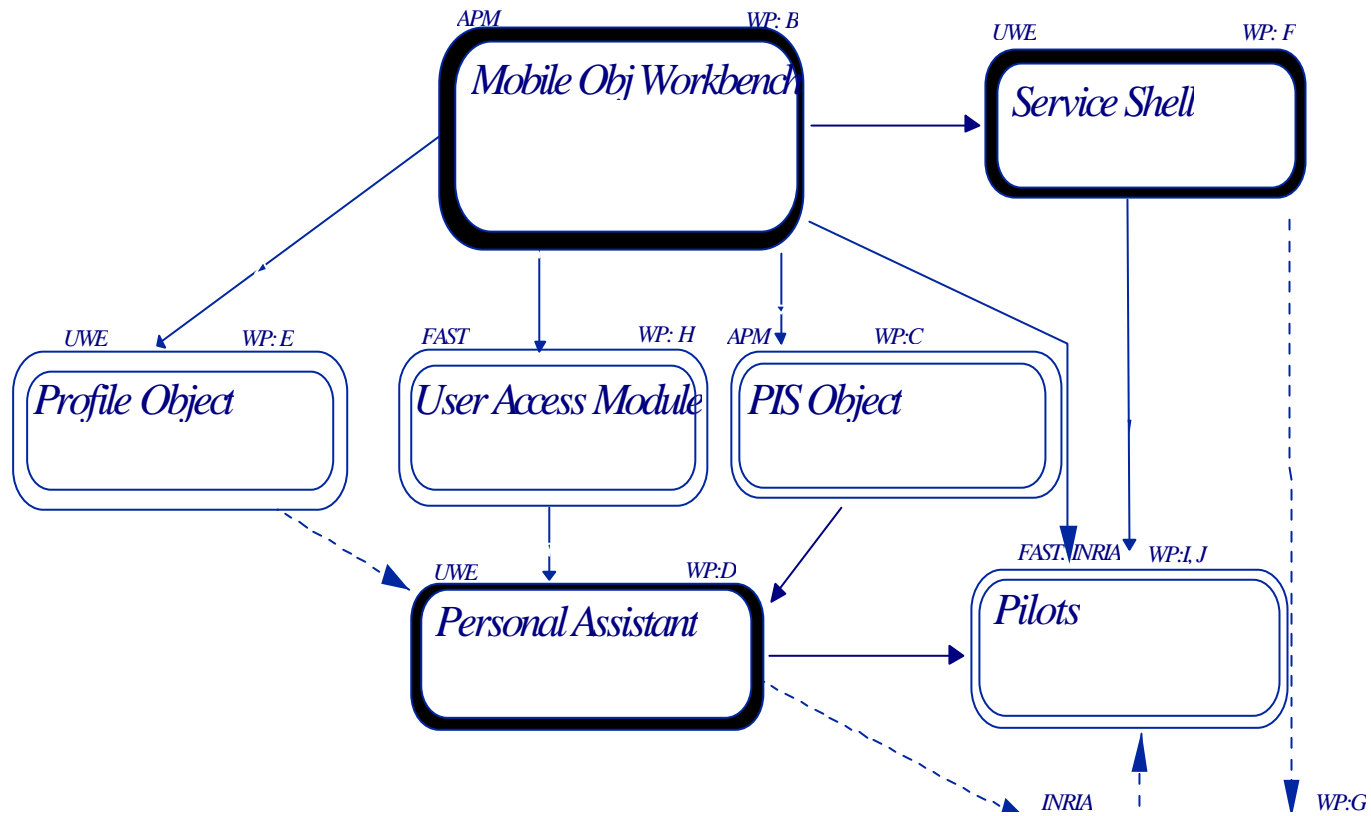


# Work Packages

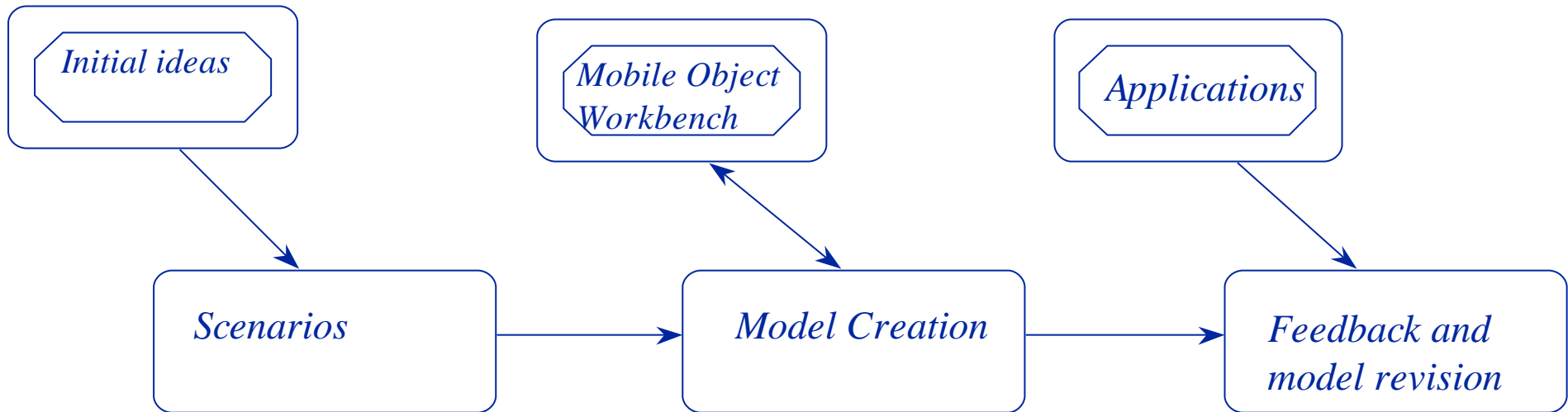
<i>WP</i>	<i>Title</i>	<i>Leader</i>	<i>Deliverable Description</i>	<i>Deliverable Name</i>
<b>A</b>	Architecture	APM	ODP models describing overall system	Architecture Report
<b>B</b>	Mobile Object Workbench	APM	(1) Mobile object infrastructure (2) Mobile object for general data storage	Mobile Object Workbench Mobile Data Object
<b>C</b>	Personal Information Space	APM	Access to, and maintenance of, users' personal data	PIS Object
<b>D</b>	Autonomous Agents	UWE	(1) Personal agent for performing autonomous tasks (2) General framework for developing agents	Personal Assistant Task Agent Shell
<b>E</b>	Personal Profiles	UWE	Object based service for creating, maintaining and querying a user's profile	Profile Object
<b>F</b>	Service Interaction	UWE	Framework for creating and hosting services - to be accessed by agent software	Service Shell
<b>G</b>	Service Deployment	INRIA	Framework and mechanisms for dynamic service deployment	Service Deployer
<b>H</b>	User Access	FAST	Device independent user access	User Access
<b>I</b>	Pilot Application 1	FAST	Agent based access to internet services	Bavaria Online Pilot Application
<b>J</b>	Pilot Application 2	INRIA	Agent based access to newspapers	Etel++
<b>K</b>	Exploitation	FAST	Ensuring commercial success of project	Exploitation
<b>L</b>	Project Management	FAST	Timely running & delivery of project	Project Management



# Overall Structure



# Architecture



		Month:																	
TASK	NAME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
TA1	Scenarios																		
TA2	Model Creation		D				D						D						

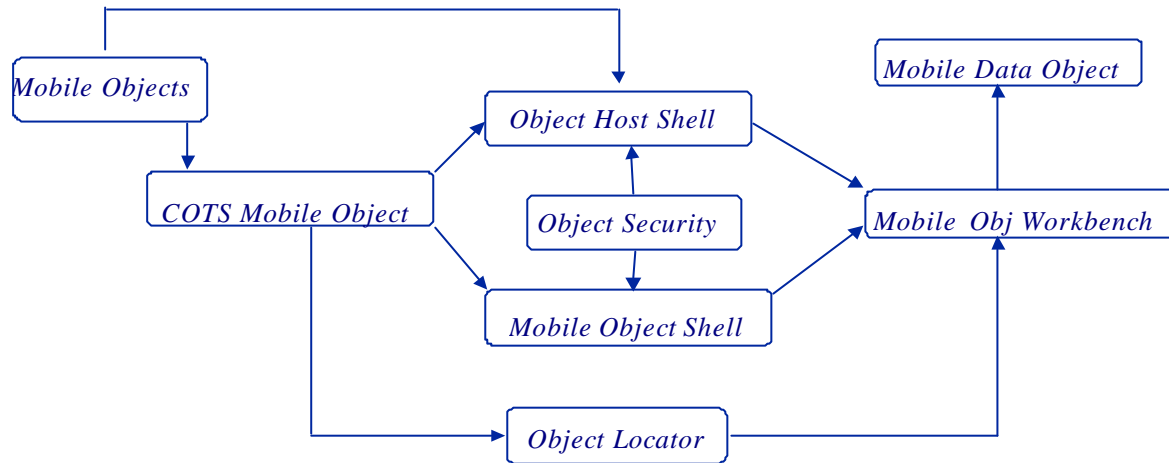


# *Architecture work so far*

- Feed requirements from different work packages
  - Stratify work
- Document evolves through the project
  - don't over-specify before we have requirements
  - change as we need to
- Fix responsibilities for components with packages
- Be aware of dependencies



# Mobile Object Workbench



TASK	NAME	Month:																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
TB1	Survey	D																	
TB2	Requirements		D																
TB3	Design			D															
TB4	Interface Specification			D															
TB5	Implementation																		
TB6	Tests																		
TB7	Deployment				D	D		D		D			D						



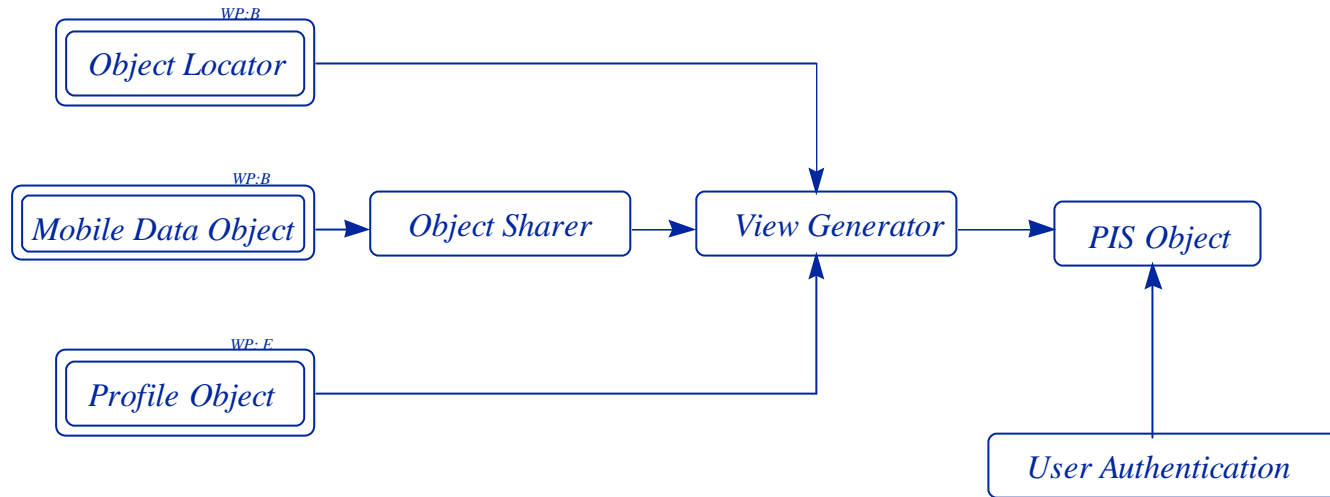


# *Mobile Object Workbench work so far*

- Comparison of mobile agent systems
- Set of possible ‘axioms’ produced
- State diagrams
- Naming models addressed



# Personal Information Space



Month:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
NAME																	
Requirements			D														
Design				D													
Interface Specification					D												
Implementation																	
Tests																	
Deployment						D			D				D				



# *Mobile Object Workbench*

A Way Forward



	<i>Aglets</i>	<i>Kafka</i>	<i>Voyager</i>	<i>Odyssey</i>
<b>Can an agent migrate?</b>	Yes	Yes	Yes	Yes
<b>Can a host force an agent to migrate?</b>	Yes	Yes	Yes	Yes
<b>100 % Java?</b>	Yes	Yes	Yes	Yes
<b>Security policies?</b>	Yes	Yes	Yes	Yes
<b>Security policies configurable?</b>	Partly, through Tahiti	Yes	Yes	Yes
<b>Security policies modifiable?</b>	No	Yes	No	Yes
<b>Status?</b>	Alpha 5b	Beta 1.4	1.0.1	Beta 2.0
<b>Documentation?</b>	Good - growing	Poor	Very Good	Poor
<b>Ease of use?</b>	Very accessible	Low level programming	Very accessible	Quite accessible
<b>Extensibility?</b>	Medium	High	Medium	High
<b>Other ORB support?</b>	None explicit	Yes (HORB)	None explicit	None explicit
<b>Transport layer protocol</b>	ATTP	RMI or HORB		RMI / IIOP / DCOM
<b>Can agents communicate with host?</b>	Yes	Yes	Yes	Yes
<b>Can agents communicate with each other?</b>	Yes	Only via host	Yes	Only via host
<b>Synchronous and Asynchronous messages?</b>	Yes	Yes	Yes	Only synchronous
<b>Can agents transport data?</b>	Yes	Yes	Yes	Yes
<b>Directory service?</b>	No	Yes	Yes	No
<b>Persistent Agent</b>	No	No	Yes	No
<b>Event service?, Event Delegation?</b>	Yes	No	Yes	Yes
<b>User acceptance?</b>	High	?	?	?
<b>Source available?</b>	Partially	Yes	No	Partially
<b>Commercial license available?</b>	No (no plans)	Not yet determined	Yes	Not yet determined
<b>Lifespan tracking?</b>	No	No	Yes	No
<b>UID (Unique Identifier)</b>	Yes	No	Yes	No
<b>GUI provided?</b>	Yes	Simple tool	No	No



## *A Way to Meet Our Needs*

- Take Mobility from Kafka
- Take Interoperability and service model from FlexNet
- Add location services
- Add autonomous objects
- Add Security models
- The right functionality with minimum re-engineering
- Full source Access

