

## 7. WORKPLAN AND DEMONSTRATORS.

### 7.1 Demonstrators

#### **Scenario 1.**

##### Demo 1: Health Monitoring

- July 1, 2002: Design of the basic system, simulation via Simulink.
- November 1, 2002: Demonstration of the adaptation of the above system to a specific user, simulation via Simulink.
- January 1, 2003: Exposing the self-evaluation property, simulation via Simulink.
- April 1, 2003: Incorporating the IMC module in the basic AT#3 architecture, simulation via Simulink.
- June 30, 2003: Final version of the single-user demo, use of online captured data.
- October 31, 2003: Handling Multi-user cases.
- December 31, 2003: Implementation of final architecture.

#### **Scenario 2**

##### Demo 2: Car Hazard Avoidance

- June 15 2002: the KCL car-driving simulator includes the basic engine needed for the simulation. Sensor readings of the aforementioned variables are provided to the collection of the ORESTEIA Artefacts.
- June 31, 2002: the simulator will also include city type environmental events.
- July 31, 2002: pre-processing in level 2 is included.
- October 1, 2002: the four level 3 artefacts mentioned in the demo will be included.
- January 31, 2003: the Hazard voidance (level 4) artefact will be included.
- June 1, 2003: Learning for one user.
- September 1, 2003: Learning for multiple users.
- December 31, 2003: Implementation of final architecture.

### 7.2 Workplan

#### Participating partners

1. NTUA: Level 3 artefact architecture based on the CAM-SPM model, including user adaptation, self-awareness, attention modulation and learning.
2. UM: Level 3 artefact architecture based on PAC meditation. Main focus on the sub-symbolic/symbolic transformation. Includes as well attention modulation and learning.
3. KCL: Level 4 artefacts and overall architectural design. Main focus on fusion of sub-symbolic/symbolic information, attention-based control and artefact collections. Technical and overall coordinator.
4. ICSTM: Level 1/2 - implementation issues with regard to achieving self-powered artefacts with wireless communications. They provide guidance on 'realistic' assumptions about the sampling and transmission issues of the sensors present.

5. ALTEC/DATAMED: Data collection for single/multiple user(s) cases, creation of a-priori knowledge, as well as extraction and insertion and of it in the form of fuzzy rules in the artefact architecture, adaptation of these rules, training and validation of them based on all existing information. Administrative coordinator.

#### Work-packages

For the remaining time period it is suggested to re-partition the work as four work-packages. The work-packages WP3, WP4, WP5 and WP6 are abandoned. WP1 and WP0 (DC intra-project cooperation) remain in place. Especially links with e-Gadgets, 2Wear and Smart-Its will be maintained and used for exploring problems of common interest under the new re-definition of the work. The new work-packages are:

- NWP1: Artefact design and creation of artefact collections. (1 Jun 2002 – 31 Jan 2003)
- NWP2: Learning on artefact collections. (1 Feb 2003 – 31 Oct 2003)
- NWP3: Micropower generation and wireless communications (1 Jun 2002 – 31 Oct 2003)
- NWP4: Final architecture and refinements (1 Nov 2003 – 31 Dec 2003)

The ICSTM tasks under NWP3 are essentially as outlined in the ORESTEIA 1<sup>st</sup> Year Progress Report, with the exception of task N3.8 and its associated deliverable ND3.4. We propose to organise a workshop, open to all projects under the DC initiative, to explore hardware issues associated with autonomous artefacts.

It is suggested that the leader for NWP1 should be KCL. For NWP2, UM should be the leader. NWP3 will be managed by ICSTM. NWP4 will be managed by NTUA.

#### Suggested time allocation per partner

Workpackage	WP1	NWP1	NWP2	NWP3	NWP4	Man-Months/ Partner
Leader	ALTEC	KCL	UM	ICSTM	NTUA	
ALTEC	9	4	4	0	2	19
NTUA	0	9	7	1	5	22
UM	0	10	12	1	2	25
KCL	12	12	7	1	2	34
ICSTM	0	2	2	16	2	22
Man-months/ WP	21	37	32	19	13	122

### Tasks and Deliverables

In the following tables tasks are highlighted using italic style and deliverables using bold style.

#### NWP1:

<b>Task/ Deliv.</b>	<b>Description</b>	<b>Start</b>	<b>End</b>	<b>Partners</b>
<i>N1.1</i>	Design of level 2 pre-processing artefacts.	1/6/02	1/7/02	KCL/UM/NTUA
<i>N1.2</i>	Design of state representations and feedback control.	1/7/02	1/11/02	KCL/UM/NTUA
<i>N1.3</i>	Decision-making systems for level 3 artefacts.	1/7/02	1/11/02	UM/NTUA
<b>ND1.1</b>	Feedback and decision-making mechanisms up to level 3.		1/11/02	UM/NTUA/KCL
<i>N1.4</i>	Goal/User database/rule representation. Monitor construction.	1/11/02	31/12/02	KCL/UM/NTUA
<i>N1.5</i>	Overall Level 3 artefact creation including user adaptation and self-awareness.	1/11/02	1/01/03	UM/NTUA
<b>ND1.2</b>	Overall level 3 architecture and demos up to level 3.		1/01/03	UM/NTUA/KCL
<i>N1.6</i>	Level 4 artefact architecture and collection of artefacts.	1/12/02	31/01/03	KCL/UM/NTUA
<b>ND1.3</b>	Overall level 4 artefact architecture.		31/01/03	KCL/UM/NTUA
<i>N1.7</i>	Initial user profile adaptation.	1/12/02	31/01/03	UM/NTUA
<i>N1.8</i>	Second year project report	1/11/02	20/12/02	ALTEC/KCL
<b>ND1.4</b>	Second year report		20/12/02	All
<i>N1.9</i>	Preparation of user databases for single user training	1/07/02	1/12/02	ALTEC/KCL
<b>ND1.5</b>	Data description, sampling methods, experiment design.		1/12/02	ALTEC/KCL

#### NWP2:

<b>Task/ Deliv.</b>	<b>Description</b>	<b>Start</b>	<b>End</b>	<b>Partners</b>
<i>N2.1</i>	Learning for level 3 artefacts.	31/01/03	1/05/03	UM/NTUA
<b>ND2.1</b>	Learning for single user in level 3 artefacts.		1/05/03	UM/NTUA
<i>N2.2</i>	Learning for level 4 artefacts.	31/01/03	1/06/03	KCL/UM/NTUA
<b>ND2.2</b>	Learning for single user in level 4 artefacts.		1/06/03	KCL/UM/NTUA
<i>N2.3</i>	Learning for level 3 & 4 for multiple users.	1/05/03	1/09/03	UM/NTUA/KCL

<b>ND2.3</b>	Learning for multiple users in level 3 & 4 artefacts.		1/09/03	UM/NTUA/KCL
<i>N2.4</i>	Emergence and context switch	1/09/03	1/11/03	UM/NTUA/KCL
<b>ND2.4</b>	Hierarchy of artefacts in artefact collections .		1/11/03	UM/NTUA/KCL
<i>N2.5</i>	Preparation of user databases for multiple user training.	1/12/02	1/05/03	ALTEC/KCL
<b>ND2.5</b>	Data description, sampling methods, experiment design (multiple users).		1/05/03	ALTEC/KCL

NWP3:

<b>Task/ Deliv.</b>	<b>Description</b>	<b>Start</b>	<b>End</b>	<b>Partners</b>
<i>N3.1</i>	Analysis of micro-power generator topologies.	01/06/02	01/08/02	ICSTM/KCL
<i>N3.2</i>	Fabrication and test of initial prototype generator.	01/06/02	31/12/02	ICSTM/KCL
<b>ND3.1</b>	Micro-power supply structures.		10/01/03	ICSTM
<i>N3.3</i>	Analysis of wireless communication schemes.	01/06/02	01/08/02	ICSTM/KCL
<i>N3.4</i>	System level simulation of radio module.	01/08/02	31/12/02	ICSTM/KCL
<i>N3.5</i>	Design of generator electronics.	01/01/03	01/06/03	ICSTM/KCL
<i>N3.6</i>	Design of radio module.	01/01/03	01/06/03	ICSTM/KCL
<i>N3.7</i>	System evaluation.	01/06/03	30/09/03	ICSTM/KCL
<b>ND3.2</b>	Micro-power radio module.		30/09/03	ICSTM
<b>ND3.3</b>	Micro-power generator .		31/10/03	ICSTM
<i>N3.8</i>	Organisation of workshop on hardware issues.	01/08/02	01/12/02	ICSTM/KCL
<b>ND3.4</b>	Workshop on hardware issues.		01/12/02	ICSTM

NWP4:

<b>Task/ Deliv.</b>	<b>Description</b>	<b>Start</b>	<b>End</b>	<b>Partners</b>
<i>N4.1</i>	Final Architecture and further refinements	01/11/03	31/12/03	All
<b>ND4.1</b>	Project Final report		31/12/03	All
<b>ND4.2</b>	Dissemination of results		31/12/03	All

Note: Deliverables D16 and D23 of WP1 are identified with deliverables ND1.4 of NWP1 and ND4.1 of NWP4 respectively. Deliverables D24 and D25 of WP1 are merged to one new deliverable ND4.2 of NWP4.