

Project Co-ordinator Details

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Executive Summary

- Determined parameters for Broadcast prototype and defined initial requirements for MPEG-4 parallel delivery
- Royal Netherlands Meteorological weather reports selected as the basis for internet browser plug-in
- Constrained face to face transaction prototype ready for trials at the Post Office Concept Store. New languages have been added
- New Avatar constructed and applied to face to face system.
- Prototype browser plug-in to animate existing avatar demonstrated
- Prototype of initial GML developed
- Website established
- Consortium agreement finalised and management procedures established

1 – Overview

1.1 Objectives

<i>Objectives</i>	<i>Progress towards achieving objectives</i>
<p>Visicast will develop, evaluate and apply realistic virtual humans (avatars) to the generation of European deaf sign languages. The gesture description language and the associated real-time virtual humans will be used in the human-computer-interface of many applications. It will</p> <p>In the Applications Work Packages</p> <p>1. Enhance the status of Europe’s deaf citizens by improving their access to public services and entertainment, and enable them to develop and consume their own multimedia content for communication, leisure and learning. It will build applications for the signing system for:</p> <p>1.1 Television</p> <p>WP1: Television & Broadcast Transmission</p>	<p>WP1:</p> <ul style="list-style-type: none"> ▪ File specifications, formats and examples have been agreed and exchanged for prototype. ▪ TV Specification for MPEG-4 conformity made for IRT scenario files. ▪ Preliminary study done for motion parameters conversion to the MPEG-4 format. ▪ Development (in progress) of an MPEG-4 encoder/decoder to <ul style="list-style-type: none"> ▪ encode and multiplex scenarios into MPEG-4 streams, and ▪ decode MPEG-4 streams into video sequences.

1.2 Multimedia and the Internet

WP2 Multimedia and WWW Applications

1.3 Face-to-face transactions

WP3: Face-to-Face Transactions**It will in the Research Work Packages**

2 Develop systems for the generation, storage and transmission of virtual signing.

3 Refine user-friendly methods for capturing signs

(WP4 Animation and Modelling)

4 Create a machine-readable notation to describe sign-language gestures (hand, face and body) which can be used to retrieve stored gestures or to build them from low-level motion components.

5 Use this descriptive language to produce tools that can translate from both speech and text into signing.

(WP5 Language and Notation)

- Translated MaskVR motion parameters into MPEG-4 BAP/FAP file for arms, partially for fingers and in progress for torso.

WP2: Browser Plug-in

- Detailed planning of first deliverable achieved.
- Selected semi-automatic translation of weather reports into sign language as the relatively constrained application domain for the browser-plug-in.
- The Royal Netherlands Meteorological Institute has agreed to collaborate by providing a set of real-life weather reports of the four seasons.
- These are used as input material to drive a model, based on a structure of standard Dutch phrases which provide the format for the weather reports, which enables (semi-) automatic translation into sign language.

WP3

- Use of automatic deaf-signing in *constrained* face-to-face transactions investigated
- Developed V1 prototype of a system that can recognise the assistant's speech using a constrained lexicon and grammar and sign a limited set of messages.
- A preliminary evaluation has been held and the number of phrases extended as a result
- Formal evaluation planned for May in real life Post Office environment
- Added French, German, Welsh, Somali, Spanish text phrases to system
- Have refined the speaker adaptation for enrolment of new post office clerks
- Incorporated new avatar into system (ongoing)
- The hardware for twelve trial sites has been purchased

WP4

- Held Workshop to familiarised partners with motion capture technology and liase on technology transfer. Data and 3D model exchanged with INT and IRT
- Prototype WWW browser plug-in capable of playing animation demonstrated at a WP2 Workshop at IvD in Holland (March).
- Animation player was updated and given to UEA to enable the latest characters in the SSE parsing system to be implemented in the trial of the Post Office transaction system.
- Work to create a robust/industrial version of the MaskVR motion capture system started, with the improvement of the calibration routines.
- 3D Laser scan made of a human WP5 model to creation a new naturalistic Avatar.

WP5:

- Prototype of initial GML developed.
- Milestone 5.1 Interface Definitions / Semantic Rep Definition delivered

<p>6 Trial and evaluate the Application prototypes (WP6 Trials and Evaluation)</p> <p>7 Ensure effective management, external communications and publicity for the project (WP7 Project Management, External Communications and Publicity)</p> <p>8 Ensure appropriate exploitation and dissemination of results (WP8 Exploitation and Dissemination)</p>	<ul style="list-style-type: none"> ▪ Finalised Simon the Signer system documentation and updated its system specification to act as a bench mark for later evaluation of the Visicast systems <p>WP6:</p> <ul style="list-style-type: none"> • Criteria and documentation developed for qualitative and quantitative evaluation by deaf users of interactive face-to-face transaction systems for use in a PO environment ▪ Formal evaluations by 6 deaf people arranged for May. ▪ Planning of informal evaluations for qualitative evaluation with a larger number of deaf people in progress. <p>WP7</p> <ul style="list-style-type: none"> ▪ Website specification determined and enhanced to support full communication, co-ordination and reporting tools. Beta testing in progress. ▪ Backend database implemented to handle on line interactive progress and financial data. ▪ Public section finished and reviewed by consortium, additions being implemented <p>WP8</p> <ul style="list-style-type: none"> ▪ Consortium agreed action plans for each work package, risks to plans, main dependencies of deliverables, Consortium Agreement legal requirements and rights issues. ▪ Management, co-ordination and reporting strategies agreed and finance issues clarified. ▪ Recruitment took place ▪ Marketing and Exploitation framework started
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1.2 Milestones

<i>Milestone</i>	<i>Planned date</i>	<i>Actual date</i>	<i>Comments</i>
M5.1 Interface definitions / Semantic Representation Definition	03/2000	03/2000	Confirmed decision to use Discourse Representation Structures

1.3 Deliverables

<i>Deliverable Code & Name</i>	<i>Planned date</i>	<i>Actual date</i>	<i>Comments</i>
D7.1 Visicast website	03/2000	04/2000	Delay was caused by the need to change the interactive reporting forms, test it and include modifications requested by the consortium

1.4 Deviations from Plan

<i>Causes and Description</i>	<i>Corrective actions</i>
None	

2 – Contractual Arrangements

None

3 - Project Meetings (held and foreseen)

<i>Title</i>	<i>Data and Place</i>	<i>Main conclusions</i>
Consortium meeting Work Group Meeting	13-14/01/00 Hamburg 24-26/01/00 Norwich	Start-up meeting Familiarisation with Avatar and motion capture system
WP2 and WP5 meeting	08-09/03/00 IvD, Netherlands	To plan language work for first deliverables for WP2 and WP5
WP meeting	30/3/00 Norwich	Work planning
Consortium meeting	31/03/00 Norwich	Legal financial management and work progress issues resolved

4 - Dissemination / Promotional Information

4.1 Conferences and/or Workshops attended/organised/foreseen by the project

<i>Date</i>	<i>Title</i>	<i>No</i>	<i>Number of persons attended + other information</i>
6-10/12/99	50 th MPEG Meeting, Maui, Hawai (The principles behind the work to be done on Visicast were disseminated)	1	3D shape descriptors: Results and performance evaluation (M5592) Motion content set: New contributions (ISO/IEC/JTC1) Similarity measures for motion-based retrieval (ISO/IEC/JTC1/SC29/WG11, M5595)
1-3/2/2000	RFIA'2000 Conference, Paris, France	1	Pose 3D du visage dans des séquences vidéos : Estimation
20-24/3/2000	51th MPEG Meeting, Noordwijkerhout, Netherlands	1	Participation to the new AHG (<i>Ad-Hoc</i> Group) on 3D motion
28-30/3/2000	4 th International Conference on Automatic Face and Gesture Recognition (FG'2000), Grenoble, France	2	A robust model-based approach for 3D head tracking in
6/4/2000	IST/French Ministry for Education, Research & Technology joint Workshop on Information Technologies for Health Care, Paris, France	2	Presentation of IST ViSiCAST Project
12/04/00	6th Conference on Content-Based Multimedia Information Access (RIA0'2000), Paris, France	1	Presentation and demonstration of INT activities on signing, including IST ViSiCAST Project
6/4/00 6/4/00	IEE Colloquium London	4	1. Signing for the Deaf using Virtual Humans 2. An Overview of ViSiCAST

4.2 Articles Published, Press coverage, development web sites, etc.

<i>Date/ Type</i>	<i>Details</i>
	None attempted until we could reach the Deaf community first. It is important that this is done through official channels. These were investigated and have now been set up. Several approaches have been made to us for material for TV, radio and journals These will be followed up in June

5 – Main results

Description	Details
WP1-5 Defined actions	Actions by each partner needed to achieve deliverable 1 in each WP have been agreed and are being conducted in collaboration and on schedule.
WP2: Browser Plug-in	Royal Netherlands Meteorological Institute collaborating with IvD and a model has been developed to drive the plug in Browser.
WP3: Constrained Transaction System V1 prototype	Post Office prototype system produced that can recognise the assistant's speech using a constrained lexicon and grammar and sign a limited set of messages .
WP4 improved Mask VR Avatar system	Now providing a smooth, streamlined version capable of use in an "industrial" setting.
WP5 Bench mark ready	Simon the Signer system documented and updated to act as a bench mark for later evaluation of the Visicast systems.
Initial GML prototype	Produced and being incorporated into WP2 browser.
WP7 Website constructed	Visicast site has public and private sections The public section includes demos of the prototype and capture systems and allows access to progress details in the form of news publications and presentations. The private section supports V1 of in house developed, interactive software for project co-ordination and reporting tools.
WP8 Consortium Agreement	Agreed and in the process of being signed by all partners

*** Simple diagram of the Post Office Tessa Prototype**

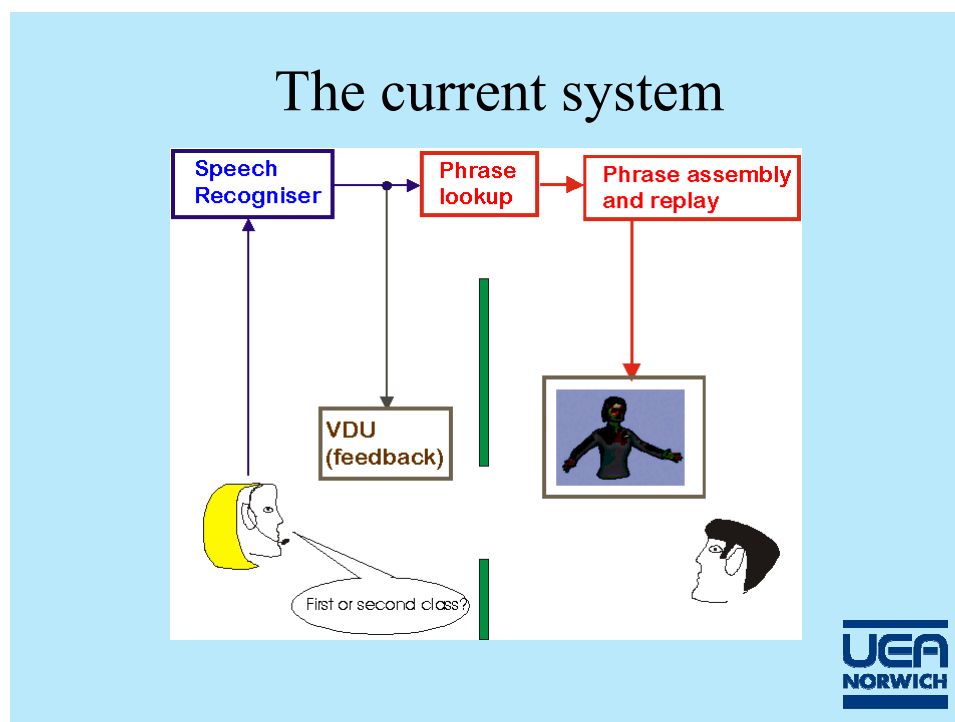


Table 6.1 Effort for the reporting period (% man months)

		Work Packages								TOTAL	
P	Short	1	2	3	4	5	6	7	8		
No	Name	Staff Name									
1	ITC	Jan Dobson	0					1.10	1.05	2.15	
2	IRT	Werner Brueckner	0.69							0.69	
		Christoph Dosch	0.50							0.50	
		Reinhard Gorol	0.20							0.20	
3	TV	Dan Archer									
		Steve Cullingford			0.34					0.34	
		Mike Dawson			0.23					0.23	
		Phil Collins			0.11					0.11	
		Bill Hubbard		0.17						0.17	
		Sanja Rankov	0.46	1.10	0.23	1.07				2.86	
		Matt Simper		0.00	0.29					0.29	
		Marcus Tutt		0.24	0.09	1.38				1.71	
		Jamie Warren		0.00	0.00	0.51				0.51	
		Mark Wells	0.06	0.06	0.17	0.34		0.23	0.06	0.91	
4	UH	Volkert Backs				1.32				1.32	
5	UEA	Richard Kennaway				0.99				0.99	
		Anne Anderson						1.21		1.21	
		Mike Lincoln		0.25						0.25	
6	INT	Françoise PRETEUX	0.50			0.5				1	
		Nicolas ROUGON	0.00			1				1	
		Marius PREDA	1.10			2.5				3.6	
		Titus ZAHARIA	1.00							1	
7	IvD	Han Frowein		0.7				0.5		1.2	
		Margriet Verlinden		0.9		0.3				1.2	
		Rick van Dijk		0.5						0.5	
		Erik Borgstein		0.3						0.3	
8	UKPO	Jo Coy		0.09						0.09	
9	RNID	Aisha Warburton					0.17			0.17	
		Samantha Lopez-Dias					0.10			0.10	
		Total	9.00	7.30	2.05	15.30	3.9	0.44	6.08	2.21	46.27

Table 6.2 Effort for the reporting period (person hours)

P	Short No	Name	Work Packages								Total		
			1	2	3	4	5	6	7	8	P	A	
			A	A	A	A	A	A	A	A	P	A	
1	ITC	Jan Dobson							144.4	137.8		282.2	
		WP Actual Hours							144.4	137.8		282.2	
		Planned Hours						98.38	98.4	196.8	282.2		
2	IRT	Werner Brueckner	91.8									91.8	
		Christoph Dosch	67.0									67.0	
		Reinhard Gorol	27.0									27.0	
		WP Actual Hours	185.8										
		Planned Hours	312.5							312.5	185.8		
3	TV	Dan Archer										0.0	
		1.313 Steve Cullingford				45.0						45.0	
		Qtr 787.5 Mike Dawson				30.0						30.0	
		Phil Collins				15.0						15.0	
		Bill Hubbard			22.0							22.0	
		Sanja Rankov	60.0	145.0	30.0	140.0						375.0	
		Matt Simper			37.5							37.5	
		Marcus Tutt		31.0	4.0	76.5						111.5	
		Jamie Warren				67.5						67.5	
		Mark Wells	7.5	7.5	22.5	45.0			30.0	7.5		120.0	
				WP Actual Hours	67.5	183.5	116.0	419.0		30.0	7.5		
				Planned Hours	60.0	200.0	90.0	400.0		30	7.5	787.5	823.5
4	UH	Volkert Backs						170				170.0	
		WP Actual Hours						170					
		Planned Hours		200				574			774	170.0	
UEA		Richard Kennaway					136.13					136.1	
		Anne Anderson						166.4				166.4	
		Mike Lincoln			34.4							34.4	
		WP Actual Hours			34.4		136.13		166.4				
		Planned Hours	60.0	200	400.0	400.0	420	80	170	1730	336.9		
6	INT	Françoise PRETEUX	63.6			63.6						0.0	
		Nicolas ROUGON				127.2						127.2	
		Marius PREDA	139.9			317.9						457.8	
		Titus ZAHARIA	127.2									127.2	
		WP Actual Hours	330.6			508.7							
		Planned Hours	226.5			550	50			826.5	712.1		
7	IvD	Han Frowein		84					60			144	
		Margriet Verlinden		108			36.0					144.0	
		Rick van Dijk		60.0								60.0	
		Erik Borgstein		36.0								36.0	
		WP Actual Hours		288.0			36.0		60				
		Planned Hours		390			57	60		507	891.0		
8	UKPO	Jo Coy			12							12.0	
		WP Actual Hours			12								
		Planned Hours			33						33	12.0	
9	RNID	Aisha Warburton						20.8				20.8	
		459.4 Samantha Lopez-Dias						11.9				11.9	
		WP Actual Hours						56.4					
		Planned Hours					200	259			459.4	32.7	
Total			2410.7	2368.5	949.3	4148.0	1957.4	133	1560.6	541.8	5626.6	3446.1	
Last Period Accumulated Total			0	0	0	0	0	0	0	0	0	0.0	
Accumulated Hourly Total			2410.7	2368.5	949.3	4148.0	1957.4	133	1560.6	541.8	5626.6	3446.1	