

	OMNIPRES <i>IST-2001- 39237</i> <i>Omnibus Presence Technology Assessment and Measurement Groups</i>
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Periodic Progress Report N°:1
Covering period 01.10.2002-30.09.2003

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Partners: Eindhoven University of Technology (CO); University of London Goldsmiths College

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Executive Summary

This Periodic Progress Report provides a comprehensive account of the progress made by the OMNIPRES project during its first year (Oct. 2002 – Sept. 2003), the resources expended, and the planned activities for the remainder of the project. Any changes to the original workplan or the manner of its execution are highlighted and motivated in the current report. The first bi-annual report (**D3**), produced in view of the Venice review meeting (05.05.2003), reviewed progress between October 2002 and March 2003. As the current report covers the complete first year, it integrates the results reported in the first bi-annual report, with additional detail following the reviewers' recommendations.

The aim of the OMNIPRES project is to provide a key theory and measurement service function to the Presence Research Initiative as a whole, helping individual project success but, more importantly, increasing the theoretical integration, measurement validity, and larger R&D impact of the initiative. The two central thrusts of the OmniPres Project can be briefly characterized as:

1. Presence theory and measurement modelling (WP3, WP5)
2. Presence community building and engagement (WP2, WP4, WP5)

The OMNIPRES project started on 1 October 2002. All workpackages have been active over the reporting period. During its first year, **the OMNIPRES project has made substantial progress and has delivered all planned deliverables on time, and within budget.**

Workpackage 1 is concerned with project management, financial coordination, and communication between partners and between the project and the Commission. The information infrastructure (**D1**) has been put in place, effectuated through:

- (i) the creation of the OMNIPRES Board of Directors (with representatives from each of the 11 FET PR projects, the OMNIPRES team, and project officers from the EU Presence Research initiative), and
- (ii) the OnProject collaborative work software (www.onproject.com), purchased by OMNIPRES to support the Board of Directors (and the Commission) in working together.

Workpackage 2 is specifically aimed at presence research community building. This workpackage has been particularly active over the reporting period. OMNIPRES has:

- co-organised the PRESENCE 2002 conference (**D2**) in Porto (9-11 October 2002),
- organised the Theory and Measurement Integration Meeting (**D4**) at PRESENCE 2003 in Aalborg,
- interacted with several FET Presence Research projects, through site visits, and by providing measurement advice and tools, and
- ensured that all PRESENCE conferences will be held in Europe over the duration of the FET Presence Research Initiative (2002-2005), through negotiation with the International Society for Presence Research (ISPR).

Workpackage 3 deals with presence theory integration and measurement development. Work has started on the Presence Model and Measurement Compendium (**D5**), due in month 18. An OmniPres initiated model (called the Three Pole Model of Presence) was developed and presented to the wider presence community. In addition, reviews of concepts and measurement methods in (social) presence research are being produced, and will provide input to **D5**.

Workpackage 4 is aimed at developing an EU Presence Research Support Webcentre. The primary goal of the webactivities of OMNIPRES is to provide both a public and private forum to share research on presence. Although formally the web support centre is due only in month 18 (**D6**), these activities have been accelerated significantly in order to provide continuous support to the Presence Initiative from the outset. Specifically, www.presence-research.org has been adopted as a public site accessible to all presence researchers and the general public. This site is a highly successful vehicle of communication that supports the EU- and worldwide presence community, and related research areas and industries, by making a range of presence research related information available free of charge. It has become the leading web resource in the field, with over 7000 unique page views over the reporting period (year 1 of the project)..

Workpackage 5 is concerned with presence research integration and dissemination. Although formally this workpackage is due to commence in month 34, work has been advanced in planning and preparing the Presence Handbook (**D7**), due in month 36. Furthermore, considerable dissemination activities are a continuously ongoing component of the OMNIPRES project. Highlights include:

- Members of the OMNIPRES team have been involved in editing and contributing to a book solely devoted to the study of presence, entitled *Being There: Concepts, Effects and Measurements of User Presence in Synthetic Environments*, edited by G. Riva, F. Davide, and W.A. IJsselsteijn, and published by the IOS Press, Amsterdam, 2003.
- Co-Organiser ICOB'03 – Organiser of Special session on Presence Engineering, Berlin, Germany, 29-30 January 2003, <http://bs.hhi.de/ICOB-Workshop/>
- Co-Organiser special session on presence at ICA 2003, 23-27 May 2003, <http://www.icahdq.org/events/conf2003.html>
- Co-Organiser Mini-track on Awareness Systems, HCI International 2003, Crete, Greece, 22-27 June 2003, <http://hcii2003.ics.forth.gr/> (together with Panos Makopoulos, ASTRA project)

1. Overview of Primary Research Objectives

Presence research is a new, fast growing, research area. It is a crossroads where researchers from hardware engineering, software engineering, philosophy, psychology, communication, and other fields meet. Presence research bridges these areas because it deals with the central nature of user experience with media technologies that have been variously described as the sense of “being transported to another place,” “the sense of immersion in another world,” the feeling that the interface has “disappeared.” Presence is most often succinctly defined as the sense of “being there,” present inside the world of the medium as opposed to here, where the body is physically present. Understanding the mechanisms and causes of this experience has become a central problem in new media research because it may characterize the phenomenal experience of users when “media work” and may be a key feature of users’ optimal experiences with media. Furthermore, creating a higher level of presence is the explicit goal of the hardware design of many immersive systems such as virtual reality or augmented reality, or the design goal in many applications such as training simulations, 3D gaming, and tele-collaboration. Finally, presence may be related to user performance in both older and new media systems.

The OMNIPRES project was created to address several barriers or issues that face the community of researchers within the FET Presence Initiative as they address the theories and methodologies of presence research. The OMNIPRES researchers had a significant role to play in drawing up the call for the Presence Initiative. The team has had experience in the various key areas and approaches to presence research including philosophy, psychological theory, measurement theory, hardware engineering, and software engineering. The OMNIPRES project plays an integrative role within the Presence Initiative seeking to insure that the initiative achieves many of the goals of the call. Therefore, the two central thrusts of the OMNIPRES Project can be briefly characterized as:

1. Presence theory and measurement modelling (WP3, WP5)
2. Presence community building and engagement (WP2, WP4, WP5)

Below we detail the scope of each theme and outline our current activities and progress on each, per workpackage.

2. Work Progress Overview

2.1 Overview of the progress of the project during the reporting period

2.1.1 Description of deliverables accomplished and any other concrete results achieved

The OMNIPRES project started on 1 October 2002. All workpackages have been active over the reporting period. Below we report on the progress per workpackage.

Workpackage 1 – Administration

Workpackage 1 is concerned with project management, financial coordination, and communication between partners and between the project and the Commission. The information infrastructure (**D1**) has been put in place, effectuated through the creation of the **OMNIPRES Board of Directors** (with representatives from each of the 11 FET PR projects, the OMNIPRES team, and project officers from the EU Presence Research initiative), and supported by the **OnProject collaborative work** software.

Two Board meetings have taken place during the reporting period (London, 9-10.01.2003; Venice, 07.05.2003), with agendas sent out to all project representatives beforehand, and minutes afterwards. These documents are also available from the OnProject website. A third Board meeting took place early October (Aalborg, 06.10.2003), just outside of the current reporting period.

Based on requests from the majority of project representatives at the first OMNIPRES Board of Directors meeting, the bi-monthly teleconference and monthly project reports were replaced by reporting highlights from each project to OMNIPRES on a regular basis.

Following the reviewers' recommendations, an **OMNIPRES Board Charter** (see *Appendix 1*), approved by the Board and the Commission, has been put in place, as well as guidelines that structure the discussion and decision procedures during the meetings (known as Roberts' Rules of Order). In addition, further management resources have been and will be engaged to ensure the project's smooth administrative communication.

Workpackage 2 - Presence Research Community Building

This workpackage has been particularly active over the reporting period. Immediately at the start of the Presence Research Initiative, OMNIPRES **co-organised the PRESENCE 2002 conference (D2)** in Porto (9-11 October 2002). It was sponsored by the UFP M.I.N.D. Lab, the International Society for Presence Research, and the OMNIPRES project. Sixty abstracts were submitted and after blind review, 34 papers were presented. Fifty-eight participants from around the world attended. In addition to providing review, program, and editorial assistance, individual presentations and chairing sessions, OMNIPRES hosted a social event to stimulate the exchange of ideas and collaboration.

Deliverable 4, the **Theory and Measurement Integration Meeting (D4)** took place as a special session at PRESENCE 2003 in Aalborg, on the 7th of October 2003 – just outside

the reporting period for this deliverable. However, since this deliverable was planned within the reporting period (month 12), and most of the preparatory work took place in this period, we are reporting on it in this report. In this one-and-a-half hour interactive session on '**Presence Models**', with 3 speakers and substantial discussion, various models of presence causes and correlates were presented and discussed. One of the integrative OMNIPRES contributions was the paper by dr. Freeman, "Converging evidence on the structure of presence", which showed how different approaches to measuring presence show considerable convergence in terms of the underlying dimensions of the presence construct. The ensuing lively discussions testified to the timeliness and relevance of the session.

A second session was co-organised by OMNIPRES, in collaboration with PRESENCIA. This session on '**Presence Foundations**' was dedicated to the concern that, since presence is a relatively new area of scientific inquiry, some very fundamental differences may exist in how people conceptualise presence. As different meanings and interpretations of the presence concept are likely to impede progress in the field, we considered it an important topic to highlight at PRESENCE 2003, in order to explore if there is common unifying ground.

OMNIPRES has had **several in-depth interactions with FET PR projects**, through site visits, and by providing measurement advice and tools to several projects (i.e. BENOGO, EMMA, MEC, PRESENCIA, POEMS, ASTRA¹).

Beyond these planned activities, OMNIPRES has engaged in numerous (mostly uncoded) additional activities, directly related to WP2, that further support the objectives of OMNIPRES and the goals of the Presence Research Initiative as a whole. These include negotiating with the Board of the International Society of Presence Research (ISPR) to assure that **all PRESENCE conferences will be held in Europe over the duration of the FET Presence Research Initiative (2002-2005)**. This action initiative by the OMNIPRES group will assist greatly in providing the optimum forum for the Presence Initiative, increasing the international visibility of European Presence Initiative Projects, assisting in integrating the presence research community into one group, and lessening the cost of presenting presence research to an international audience by having all meetings in Europe.

Workpackage 3 - Presence Theoretical and Measurement Model

Workpackage 3 is concerned with the development of a theoretical and measurement model of presence. Specifically, the aim of this WP is to (i) stimulate the development and advancement of presence theory in the Presence Initiative projects, (ii) provide integrative reviews or new integrated perspectives on presence theory and measurement, and (iii) challenge the Presence Research community by stimulating debate and interaction on key theoretical questions.

Although no deliverables are due for this workpackage within the reporting period, substantial progress has already been booked. Specifically, an OMNIPRES initiated

¹ IST ASTRA is not funded under the FET PR Initiative as such, but as a short FET Assessment project its goals are closely related to the goals of the FET PR Initiative, and it fills an important research niche on social presence and awareness systems which remains unexplored by other FET PR projects. It was recommended by the PO, Loretta Anania, to incorporate results from ASTRA as much as possible in the overall synthesis of the FET PR Initiative.

model (called the Three Pole Model of Presence) was developed and presented during the Venice meeting (05.05.2003) which seeks to alter how the locus of presence is conceptualized. After presentation, members from several projects including I-LEARNING, EMMA, and PRESENCIA indicated interest in the ideas, especially the recognition of the role of mental imagery. This model has stimulated critical scientific debate (see e.g. the July 2003 paper at Presence-Connect.com), a.o. by making a number of assumptions in presence theory more explicit. The model was explored in more depth at the OMNIPRES session on Presence Models (D4) at PRESENCE 2003.

Further work includes a review of social presence and connectedness work, in collaboration with the ASTRA project, providing insights into current approaches in Presence Engineering, in particular related to telecommunications, with a focus on user requirements and current measurement tools. The results were presented as an invited paper to SPIE VCIP 2003 (Lugano, 2003), and a paper at PRESENCE 2003.

Workpackage 4 - EU Presence Research Support Web Centre.

The primary goal of the webactivities of OMNIPRES is to provide both a public and private forum to share research on presence. Although formally the web support centre is due only in month 18 (D6), these activities have been accelerated significantly in order to provide continuous support to the Presence Initiative from the outset. Two web enabled support systems have been created to support the Presence research community and the Presence Initiative specifically.

1. www.presence-research.org - A public site accessible to all presence researchers and the general public. This site is a highly successful vehicle of communication that supports the EU- and worldwide presence community, and related research areas and industries, by making a range of presence research related information available free of charge. It has become the leading web resource in the field. In 2002, over 7000 unique page views were logged, and for 2003, up until October, over 5000 unique page views were logged. Given the fairly modest size of the "core" presence community, even worldwide, this indicates a much wider interest.
2. www.onproject.com - This site is part of the Information Infrastructure (D1, WP1), and is complementary to the presence-research.org site in that it allows for the secure and private exchange of information, a feature not supported by the public site, as well as document version management, which facilitates collaborative writing of papers or bookchapters. The site will gain in importance as cross- and within-project collaborations on the Handbook of Presence (D8, due month 36) will intensify.

Workpackage 5 - Presence Research Integration and Dissemination.

Although formally this workpackage is due to commence in month 34, work has started already in planning for and preparing the Presence Handbook (D8), due in month 36 (see also Appendix 2: Handbook Schedule and Plan).. Furthermore, considerable dissemination activities are a continuously ongoing component of the OMNIPRES project, an overview of which is presented in Chapter 6 of the current report. Highlights include:

- Members of the OMNIPRES team have been involved in editing and contributing to a book solely devoted to the study of presence, entitled *Being*

There: Concepts, Effects and Measurements of User Presence in Synthetic Environments, edited by G. Riva, F. Davide, and W.A.IJsselsteijn, and published by the IOS Press, Amsterdam, 2003.

- Co-Organiser ICOB'03 – Organiser of Special session on Presence Engineering, Berlin, Germany, 29-30 January 2003, <http://bs.hhi.de/ICOB-Workshop/>
- Co-Organiser special session on presence at ICA 2003, 23-27 May 2003, <http://www.icahdq.org/events/conf2003.html>
- Co-Organiser Mini-track on Awareness Systems, HCI International 2003, Crete, Greece, 22-27 June 2003, <http://hcii2003.ics.forth.gr/> (together with Panos Makopoulos, ASTRA project)

DELIVERABLES TABLE (covering the reporting period)

Project Number: IST-2001- 39237

Project Acronym: OMNIPRES

Title: Omnibus Presence Technology Assessment and Measurement Groups

Del. No.	Revision	Title	Type ¹	Classifi- cation ²	Due Date	Issue Date
1	N	Information Infrastructure	O ²	Rest. ³	31.03.03	09.01.03
2	N	PRESENCE 2002	W	Public	30.11.02	09.10.02
3	Y ⁴	Bi-annual report	R	Int.	30.04.03	21.04.03
4	N	Meeting: Theory and Measurement Integration (Special session at PRESENCE 2003)	W	Public	30.09.03	07.10.03 ⁵

¹ R: Report; D: Demonstrator; S: Software; W: Workshop; O: Other – Specify in footnote

² Int.: Internal circulation within project (and Commission Project Officer + reviewers if requested)

Rest.: Restricted circulation list (specify in footnote) and Commission SO + reviewers only

IST: Circulation within IST Programme participants

FP5: Circulation within Framework Programme participants

Pub.: Public document

² Infrastructure

³ Circulation restricted to FET Presence Research Initiative and Commission Project Officers

⁴ Following reviewers' and the Commission's recommendations, the current report covers the whole first year, thereby incorporating the work reported in the first bi-annual report.

⁵ Formally, this date falls outside the current reporting period by a week, but since the deliverable was planned within the reporting period, we are reporting on it here.

DELIVERABLE SUMMARY SHEET

Project Number: IST-2001-39237

Project Acronym: OMNIPRES

Title: Omnibus Presence Technology Assessment and Measurement Groups

Deliverable N°: D1 – Information Infrastructure

Due date: 31.03.03

Delivery Date: 09.01.03

Short Description:

The Information Infrastructure is an explicit vehicle of communication and decision making between OMNIPRES, the Commission, and the other FET Presence Research Initiative projects. It is put in place through:

- (i) the creation of the OMNIPRES Board of Directors, with representatives from each of the 10 FET PR projects, the OMNIPRES team, and project officers from the EU Presence Research initiative. Two Board meetings have taken place during the reporting period (London, 9-10.01.2003; Venice, 07.05.2003), with agendas sent out to all project representatives beforehand, and minutes afterwards. These documents are also available from the OnProject website. Following the reviewers' recommendations, an OMNIPRES Board Charter, approved by the Board and the Commission, has been put in place, as well as guidelines, known as Roberts' Rules of Order, that structure the discussion and decision procedures during the meetings (see Appendix 1 for the OMNIPRES Board Charter).
- (ii) the OnProject collaborative work software (www.onproject.com), which has been purchased by OMNIPRES to support the Board of Directors and the Commission in working together. The site facilitates various levels of privacy and access, allowing groups to use it. It supports private file exchange and management, discussion groups, calendars, task allocation, project timelines, etc. The site will be further refined in the upcoming months and is critical to the support of **D8**, *Presence Handbook*, the final and highly visible output of OMNIPRES and the PR Initiative as a whole, produced by WP5 in month 36.

Partners owning: TU/e

Partners contributed: All

Made available to: OMNIPRES; Commission; FET Presence Research Initiative projects

DELIVERABLE SUMMARY SHEET

Project Number: IST-2001-39237

Project Acronym: OMNIPRES

Title: Omnibus Presence Technology Assessment and Measurement Groups

Deliverable N°: D2 – Meeting Presence 2002

Due date: 30.11.02

Delivery Date: 09.10.02

Short Description:

Presence 2002, the 5th Annual International Workshop on Presence was held at Fernando Pessoa University in Porto, Portugal on 9-11 October, 2002. It was sponsored by the UFP M.I.N.D. Lab, OMNIPRES, and the International Society for Presence Research (ISPR). Sixty abstracts were submitted and after blind review, 34 papers were presented. Fifty-eight (58) participants from around the world attended. In addition to providing review, program and organizational assistance, individual presentations and chairing sessions, OMNIPRES hosted a social event.

Partners owning: All

Partners contributed: All

Made available to: FET Presence Research Initiative projects; Public.

DELIVERABLE SUMMARY SHEET

Project Number: IST-2001-39237

Project Acronym: OMNIPRES

Title: Omnibus Presence Technology Assessment and Measurement Groups

Deliverable N°: D3 – Bi-annual Report

Due date: 30.11.02

Delivery Date: 09.10.02

Short Description:

The first bi-annual report provides an overview of the progress of the OMNIPRES project over the reporting period October 2002 – March 2003.

Because of issues raised by the reviewers regarding the completeness of the first report, the current report (the second bi-annual report) actually covers the whole first year, i.e. the first two reporting periods, October 2002 – September 2003.

Partners owning: All

Partners contributed: All

Made available to: EC FET PR Project Officers; Project Reviewers

DELIVERABLE SUMMARY SHEET

Project Number: IST-2001-39237

Project Acronym: OMNIPRES

Title: Omnibus Presence Technology Assessment and Measurement Groups

Deliverable N°: D4 – Meeting: Theory and Measurement Integration

Due date: 30.09.03

Delivery Date: 07.10.03

Short Description:

The Theory and Measurement Integration Meeting took place as a Special session at PRESENCE 2003 in Aalborg, specifically session 6 (OMNIPRES Symposium 1.1) on Presence Theory and Measurement Models on Tuesday 07.10.03 (see the conference programme at: <http://www.benogo.dk/presence2003/program/outlineA3.html>).

Presence research is maturing to the point that attempts to generate more comprehensive models of presence are emerging. In this session various models of presence causes and correlates were presented and discussed. The format allowed for somewhat longer presentations than usual (25-30 minutes) with active questions from the chair discussant (Frank Biocca, OMNIPRES) and audience questions. Presentations were made by Jonathan Freeman (OMNIPRES/EMMA), Peter Vorderer (MEC) and Mel Slater (PRESENCIA).

Partners owning: All

Partners contributed: All

Made available to: FET Presence Research Initiative projects; Public

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Progress Overview Sheet1

Organisation name: TM/cc

WP	Planned effort ²	Planned Date ³		Actual Date ⁴		Resources employed ²	Cumulative Resources ²
	Whole Project	Start	End	Start	End	This Period	Since start
1: Administration	3,5	1	18	1		1	1
2: Presence Research Community Building	5	1	18	1		3,8	3,8
3: Presence Theoretical and Measurement Model	3	1	18	1		1,5	1,5
4: EU Presence Research Support Web	5,8	1	18	1		1	1
5: OmniPres Presence Research Integration and Dissemination	4	34	36	1		0,2	0,2
	21,3					7,5	7,5
One person month is equal to		125 Person hours					

Main contribution during this period⁶

Workpackage/Task	Action
1: Administration	i) Ongoing project management, local management, including preparation annual review and in-depth review ii) Communication and coordination between project partners (conference calls, face to face meetings) iii) Financial management and reporting iv) Communication with representatives of the European Commission, including in-depth review v) Communication with other projects
2: Presence Research Community Building	i) Preparation for OMNIPRES event at P2002 (D2), assistance with preparation for OMNIPRES Board Meetings (London, Jan 2003; Venice May 2003; Aalborg, October 2003) ii) Co-organisation of PRESENCE 2003 (programme chair, special sessions - D4)
3: Presence Theoretical and Measurement Model	i) Review of Presence Measurement literature (physical and social presence) ii) Development of Three-pole Model of Presence (theoretical integration activities)
4: EU Presence Research Support Web	i) Revision, maintenance, and continuous updating of presence-research.org communicating relevant public information to and from FET PR initiative. ii) Development of cross-project areas and OMNIPRES-only areas at Onproject.com
5: OmniPres Presence Research Integration and Dissemination	i) Many international presentations and publications highlighting the FET Presence Research Initiative, including co-organisation of ICOB 2003, a special session on presence at ICA 2003, and a mini-track on Awareness Systems at HCI International 2003 ii) Handbook planning and scheduling

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Progress Overview Sheet1

Organisation name:

GOLDSMITH

WP	Planned effort ²	Planned Date ³		Actual Date ⁴		Resources employed ²	Cumulative Resources ²
	Whole Project	Start	End	Start	End	This Period	Since start
1: Administration	1	1	18	1		0,7	0,7
2: Presence Research Community Building	2	1	18	1		1,3	1,3
3: Presence Theoretical and Measurement Model	2	1	18	1		1,3	1,3
4: EU Presence Research Support Web-Center	0	1	18	1		0	0
5: OmniPres Presence Research Integration and Dissemination	0,6	34	36	1		0,4	0,4
	5,6					3,7	3,7
One person month is equal to		119,58		Person hours			

Main contribution during this period⁶

Workpackage/Task	Action
1: Administration	i) Ongoing local management of project activities, including preparation for annual review and in-depth review ii) Communication and coordination between project partners (conference calls, face to face meetings) iii) Financial administration and reporting, including preparation of scheduled and additional Management/ Resource usage Reports iv) Communication with representatives of the European Commission, including in-depth review
2: Presence Research Community Building	i) Site visits to Benogo, EMMA projects. Set-up of site visit to Presencia. ii) Preparation for OMNIPRES event at P2002, preparation and hosting of first OMNIPRES Board Meeting (London, Jan 2003), assistance with preparation of OMNIPRES Board Meeting (May 2003) in Venice, assistance with preparation of OMNIPRES Board Meeting Aalborg (October 2003, Presence 2003) iii) Attendance and presentation at ICOB 2003, Berlin
3: Presence Theoretical and Measurement Model	i) Dissemination of ITC-SOPI presence questionnaire ii) Database tracking of usage of ITC-SOPI in preparation for confirmatory factor analysis (Q1 2004) iii) Review of presence measures (in association with EMMA project) iv) Integration work on common structure of presence emerging from diverse starting points, clearly mapping commonalities across different theories and pointing towards 3 dimensions of presence (sense of physical space, sense of engagement, sense of naturalness/ecological validity) v) Proposal for a common set of questionnaire items to be used by all FET PR projects presented at FET PR Board Meeting (Venice, May 2003)
4: EU Presence Research Support Web-Center	no input
5: OmniPres Presence Research Integration and Dissemination	i) Presentation on Presence Measurement at ICOB 2003 ii) Presentation to BBC Innov8 Sports Futures Conference (March, 2003) iii) Presentations at Presence 2002 (Dillon) iv) Presentation of integration work conducted in WP3 at Presence 2003 and related conferences v) Planning work on compendium contents and chapters Goldsmiths will be making contributions to.

[1] Each partner should fill in its own Progress Overview Sheet for the period in question.

2.2 Comparison of planned activities and actual work

Workpackage 1 (Administration) is progressing according to plan, with the Board of Directors installed with at least 1 representative from each of the various FET PR projects. During the reporting period two meetings have been held. Following the reviewers recommendations, after the Venice review, the process of holding the board meetings was made more explicit and transparant to everybody in the Presence Initiative, by formulating the Board's Charter and employing Robert's Rules of Order during subsequent Board meetings. Furthermore, the reviewers' comments regarding Project Management were taken into account, and additional care was taken to ensure more complete project reporting.

Based on requests from the majority of project representatives at the first OMNIPRES Board of Directors meeting (London, 9-10.01.2003), the bi-monthly teleconference and monthly project reports were replaced by reporting highlights from each project to OMNIPRES on a regular basis.

Workpackage 2 (Presence Research Community Building) has been highly productive, and has delivered its first deliverable (**D2** - PRESENCE 2002) a month ahead of schedule. The Theory and Measurement Integration Meeting (**D4**) was delivered at PRESENCE 2003 in Aalborg, one week after its due date (this way it had the highest impact and visibility).

WP2 has engaged in various community building activities that are not a formal deliverable, but are of use to the project or the Presence Research Initiative as a whole. One such activity is ensuring that the yearly PRESENCE conferences will be held in Europe over the duration of the Initiative (2002 - 2005).

Workpackage 3 (Presence Theoretical and Measurement Model) had no formal deliverables in the reporting period. The workpackage is progressing as planned, with developments in both reviewing presence measures, as well as formulating a coherent theoretical model, in view of theoretical integration of the various perspectives.

Workpackage 4 (EU Presence Research Support Web Centre) has accelerated work, adapting the www.presence-research.org site into a succesful vehicle of communication between OMNIPRES, the Presence Research Initiative, and the worldwide presence community. Thus, deliverable **D6** (EU Presence Support Web-Centre), although planned for launch in month 18, has in fact already been delivered, although this deliverable can be regarded as a 'living deliverable' if you will. Web Support is only really useful when it is continuously up-to-date and responsive to current events, which is exactly the raison d'être of this website, and an activity we aim to continue over the full lifetime of the project, and likely thereafter.

Workpackage 5 (Presence Research Integration and Dissemination) is another accelerated activity of OMNIPRES. The main formal deliverable is the Presence Research Handbook (**D8**). This book is clearly not an OMNIPRES-only activity, but a highly visible output of the Presence Initiative as a whole. Planning requires

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substantial interactions with all other projects, to invite, review and edit contributions, and produce a high quality, comprehensive book on the state-of-the-art in presence research. In view of the magnitude of this activity, communication with potential contributors, and planning of chapters and timelines, including contacting a well-known publisher, has already commenced (see also Appendix 2: Handbook Schedule and Plan, which has been circulated to all projects).

3. Planned work for the next reporting period

Over the next six months (October 2003 – March 2004), the following activities are planned:

Workpackage 1 (Administration):

Proceed as planned in the Annex, with regular interactions between OMNIPRES members, and communication between OMNIPRES and Commission representatives.

Workpackage 2 (Presence Research Community Building):

The next Board meeting is planned to be held in Aalborg (06.10.2003), connected to PRESENCE 2003. It will follow Roberts' Rules of Order. Items on the agenda will include how to comfortably share measurement tools and results, and the Handbook of Presence. The next Board meeting after that will likely be connected to the next review meeting, time and location still to be decided.

Workpackage 3 (Presence Theoretical and Measurement Model):

Over the next 6 months, this workpackage will become the main focus of the project, resulting in **D5**, the EU Presence Model and Measurement Compendium. This Compendium will attempt to integrate the various theoretical perspectives, and review the significant number of presence measures available in the literature, either used or proposed to date, with their strengths and weaknesses. In order for this document to be maximally useful to the presence community, it will be integrated within the EU Presence Research Support Web Centre (WP4) as part of the www.presence-research.org website. This will enable linking the compendium to online resources and papers, thus making it extra useful as a research tool. The online version will be continuously updated over the lifetime of the project, as more measures become available.

Workpackage 4 (EU Presence Research Support Web Centre):

This workpackage has one of its main deliverables (**D6**, EU Presence Support Web-Centre) planned in month 18. In fact, as was mentioned previously, this Support Web Centre is already fully operational, and continuously being updated. Nevertheless, a considerable ongoing effort is required to keep this website up-to-date, and extend it further with the online Model and Measurement Compendium – in particular the measures section.

Workpackage 5 (Presence Research Integration and Dissemination):

WP5 will continue its activities as planned. Dissemination activities will take place at various opportunities, most notably PRESENCE 2003 in Aalborg, which OMNIPRES is co-organising together with the BENOGO project. Editorial work on the Handbook will shape up further as input from other projects will allow judging overlaps and gaps in proposed book chapters.

4. Project Management and Coordination

During the period covered by this report, a number of coordination meetings have been organized between the partners in the project. The relatively small size of the project allows for such meetings to coincide with other, presence-related events, such that travel budget can be saved, whilst not compromising on effectivity of the meetings. These meetings have the function of talking through and deciding on any open issues, as well as detailing out the planning for subsequent stages of the project.

When issues are at play that need coordination between partners, or when presence-related events are not frequent enough to remain in close mutual understanding, the project's coordination takes place through teleconferences, which are carefully planned, including an agenda beforehand, and minutes afterwards.

Projects meetings have taken place at the following dates:

- 9-11 October 2002, PRESENCE 2002, Porto
- 9-10 January 2003, 1st OMNIPRES Board meeting, London
- 5- 7 May 2003, 1st Presence Research symposium and Review, and 2nd OMNIPRES Board meeting, Venice
- 25 June 2003, HCI International 2003, Crete
- 2-3 July, In-depth Review, Brussels
- 16 September 2003, OMNIPRES internal meeting, London

Returning topics included the Presence Theory and Measurement Model, the Handbook of Presence, the potential for cross-project metrics, how OMNIPRES may best be of service to other projects wishing to use its expertise, and how to heighten the impact of the FET Presence Research Initiative as a whole – i.e. a communication strategy. Minutes of these meetings are available.

Comparative Information on Resources (Person months)

Effort in person months for reporting period 1/10/2002 -30/09/2003

Contractors

		Partner 1: TMCC				Partner 2: GOLD				Total			
WP/ Task		Period		Total		Period		Total		Period		Total	
		Est.	Act.	Est.	Act.	Est.	Act.	Est.	Act.	Est.	Act.	Est.	Act.
WP1	Administration	2,3	1,0	3,5	1,0	0,7	0,7	1,0	0,7	3,0	1,7	4,5	1,7
WP2	Presence Research Community Building	4,0	3,8	5,0	3,8	1,3	1,3	2,0	1,3	5,3	5,1	7,0	5,1
WP3	Presence Theoretical and Measurement Model	2,0	1,5	3,0	1,5	1,3	1,3	2,0	1,3	3,3	2,8	5,0	2,8
WP4	EU Presence Research Support Web-Center	3,3	1,0	5,8	1,0	0,0	0,0	0,0	0,0	3,3	1,0	5,8	1,0
WP5	OmniPres Presence Research Integration and Dissemination	0,0	0,2	4,0	0,2	0,4	0,4	0,6	0,4	0,4	0,6	4,6	0,6
	TOTALS	11,60	7,50	21,30	7,50	3,70	3,70	5,60	3,70	15,30	11,20	26,90	11,20

Period:

Est.: estimated

Act.: actual

Total:

Est.: estimated

Act.: accumulated effort to date

Comparative information on resources (Costs)

Costs in euro for reporting period 1/10/2002 -30/9/2003

	Partner 1: TMCC				Partner 2: GOLD				Total			
	Period		Total		Period		Total		Period		Total	
Cost category	Est.	Act.	Est.	Act.	Est.	Act.	Est.	Act.	Est.	Act.	Est.	Act.
Direct costs												
1. Personnel	36.700,00	35.170,86	73.500,00	35.170,86	9.729,00	7.267,13	14.989,00	7.267,13	46.429,00	42.437,99	88.489,00	42.437,99
2. Durable equipment	6.000,00	2.128,22	6.000,00	2.128,22	1.000,00	111,89	1.000,00	111,89	7.000,00	2.240,11	7.000,00	2.240,11
3. Subcontracting	12.500,00	0,00	18.000,00	0,00	11.700,00	11.623,81	18.000,00	11.623,81	24.200,00	11.623,81	36.000,00	11.623,81
4. Travel and subsistence	15.000,00	15.806,99	40.384,00	15.806,99	8.000,00	7.272,36	12.000,00	7.272,36	23.000,00	23.079,35	52.384,00	23.079,35
5. Consumables									0,00	0,00	0,00	0,00
6. Computing									0,00	0,00	0,00	0,00
7. Protection of knowledge									0,00	0,00	0,00	0,00
8. Other specific costs	7.000,00	1.326,08	22.000,00	1.326,08	0,00	0,00	0,00	0,00	7.000,00	1.326,08	22.000,00	1.326,08
Subtotal	77.200,00	54.432,15	159.884,00	54.432,15	30.429,00	26.275,19	45.989,00	26.275,19	107.629,00	80.707,34	205.873,00	80.707,34
Indirect costs												
9. Overheads	12.940,00	10.886,43	28.377,00	10.886,43	3.746,00	2.930,28	5.598,00	2.930,28	16.686,00	13.816,71	33.975,00	13.816,71
Total	90.140,00	65.318,58	188.261,00	65.318,58	34.175,00	29.205,47	51.587,00	29.205,47	124.315,00	94.524,05	239.848,00	94.524,05

Period:	Est.: estimated costs in contract for period	124.315,00	Act.:	actual costs in period	94.524,05
Total:	Est.: estimated cumulative costs to date in	239.848,00	Act.:	cumulative actual costs to date	94.524,05

Coordination costs not included

6. Dissemination

In the table below, OMNIPRES Publications and presentations are organised by Key Areas and Workpackages:

◆◆◆ = Strong emphasis on project sub-area
 ◆◆ = Emphasis on project sub-area
 ◆ = Contribution to project sub-area

Publications & Presentations (NB: OMNIPRES team members are printed in boldface)	<i>Presence Theory and Measurement Model (WP 3)</i>		<i>Community Engagement</i>	
	<i>Theoretical Models</i>	<i>Measurement Models</i>	<i>Research Integration (WP5)</i>	<i>Community Building (WP 2)</i>
Biocca, F. & Harms, C. (2002). Defining and measuring social presence: Contribution to the Networked Minds Theory and Measure. <i>Proceedings of PRESENCE 2002</i> , pp. 7-36, Porto, Portugal, 9-11 October 2002.	◆◆◆	◆◆		
Biocca, F. , Inoue, Y., Lee, A., Polinsky, H. & Tang, A. (2002). Visual cues and virtual touch: Role of visual stimuli and intersensory integration in cross-modal haptic illusions and the sense of presence. <i>Proceedings of PRESENCE 2002</i> , pp. 376-394, Porto, Portugal, 9-11 October 2002	◆◆◆	◆◆◆	◆◆	
Biocca, F. (2002). The evolution of narrative towards "being there" in non-linear narrative worlds. In M. Green & J. Strange & T. Brock (Eds.), <i>Narrative Impact: Social and Cognitive Foundations</i> . Hillsdale, NJ: Lawrence Erlbaum	◆◆◆			
Biocca, F. (2003). Looking for mind in the heart of presence. In G. Riva, F. Davide & W. IJsselstein (Eds.), <i>Being there – Concepts, effects and measures of user presence in synthetic environments</i> . Amsterdam: IOS Press	◆◆			
Biocca, F. A., Rolland, J.,	◆◆	◆◆		

Plantegenest, G., Reddy, C., Harms, C., Owen, C. B., et al. (2003). Approaches to the design and measurement of social and information awareness in augmented reality systems. <i>Proceedings of HCI International</i> , Crete.				
Biocca, F. , Harms, C & Burgoon, J. (in press). Towards a more robust theory and measure of social presence I: Review. <i>Presence: Teleoperators and virtual environments</i> (MIT).	◆◆◆		◆◆◆	
Biocca, F. , Harms, C. & Burgoon, J., (in press). Towards a more robust theory and measure of social presence II: Criteria. <i>Presence: Teleoperators and virtual environments</i> (MIT).	◆◆◆		◆◆◆	
Biocca, Z. , & Biocca, F. (2002). Building bridges across fields, universities, and countries: Successfully funding communication research. <i>Journal of Applied Communication Research</i>				◆◆
Daugherty, T., Li, H., & Biocca, F. (in press). Experiential commerce: A summary of research investigating the impact of virtual experience on consumer learning, <i>Society of Consumer Psychology: Online Advertising</i> . Mahwah, NJ: Lawrence Erlbaum Associates	◆◆			
Dillon, C. , Keogh, E., & Freeman, J. (2002). 'It's been emotional': Affect, physiology, and presence. <i>Proceedings of PRESENCE 2002</i> , pp. 223-232, Porto, Portugal, 9-11 October 2002.		◆◆◆		
Freeman, J. & Lessiter, J. (2003). The Why and How of Measuring Presence. Paper presented at ICOB '03, Berlin, Germany, 29-30 January 2003.	◆◆◆		◆◆◆	
Freeman, J. (2003). Immersing the Viewer. Paper presented at Innov8 BBC Sports Futures Conference, BBC Television Centre, White City, London, UK, 18 th March 2003.		◆◆◆		
	◆◆.		◆◆◆	◆◆
Gouveia, F., & Biocca, F. (Eds.).	◆◆◆	◆◆◆	◆◆◆	◆◆◆

(2002). <i>Presence 2002 Proceedings</i>. Porto, Portugal: University of Fernando Pessoa Press. Dillon, C., Freeman, J. & Keogh, E. (2003). Perceptions of places and reports of being there. In 'Remote', Ed. E. Posey. Bloc Press, Wales. IJsselsteijn, W.A. & Riva, G. (2003). Being There: The experience of presence in mediated environments. In: Riva, G., Davide, F., & IJsselsteijn, W.A., (eds.), <i>Being There - Concepts, Effects and Measurement of User Presence in Synthetic Environments</i>, Amsterdam: IOS Press.	◆◆ ◆◆ ◆◆ ◆◆◆
IJsselsteijn, W.A. (2002). Elements of a Multi-level Theory of Presence: Phenomenology, mental processing and neural correlates. <i>Proceedings of PRESENCE 2002</i>, pp. 245-259, Porto, Portugal, 9-11 October 2002.	◆◆◆
IJsselsteijn, W.A. (2003). Presence Engineering: Keeping the Human in the Picture. Paper presented at ICOB '03, Berlin, Germany, 29-30 January 2003.	◆◆◆ ◆◆
IJsselsteijn, W.A. (2003). Presence in the past: What can we learn from media history? In: Riva, G., Davide, F., & IJsselsteijn, W.A., (eds.), <i>Being There - Concepts, Effects and Measurement of User Presence in Synthetic Environments</i>, Amsterdam: IOS Press.	◆◆◆
Markopoulos, P., IJsselsteijn, W.A., Huijnen, C., Romijn, O., Philopoulos, A. (2003). Supporting social presence through asynchronous awareness systems. In: Riva, G., Davide, F., & IJsselsteijn, W.A., (eds.), <i>Being There - Concepts, Effects and Measurement of User Presence in Synthetic Environments</i>, Amsterdam: IOS Press.	◆◆ ◆◆
Parrien, P., Hua, H., Del Vento, B., Biocca, F., & Rolland, J. (2002). Head-mounted projective	◆ ◆

displays for creating remote collaborative environments, <i>Proceedings of the SPIE</i>	
Riva, G., Davide, F., & IJsselsteijn, W.A. , (eds., 2003), <i>Being There - Concepts, Effects and Measurement of User Presence in Synthetic Environments</i> , Amsterdam: IOS Press.	◆◆◆ ◆◆◆ ◆◆◆ ◆◆◆
de Ruyter, B., Huijnen, C., Markopoulos, P., & IJsselsteijn, W.A. , (2003). Creating social presence through connected Consumer Electronic devices. To be presented at HCI International 2003, Crete, Greece, June 22-27 2003.	◆◆ ◆◆
IJsselsteijn, W.A. , Markopoulos, P., & Lanen, F.v. (2003). Staying in touch: Social presence and social awareness through synchronous and asynchronous communication media. To be presented at HCI International 2003, Crete, Greece, June 22-27 2003.	◆◆ ◆◆
IJsselsteijn, W.A. , Bierhoff, I., Slangen-de Kort (accepted, pending revision). Duration Estimation and Presence. Accepted for: Presence: Teleoperators and Virtual Environments.	◆◆◆
Slangen-de Kort, Y., IJsselsteijn, W.A. , Kooijmans, J., & Schuurmans, Y. (accepted). Virtual environments as research tools for environmental psychology: A study of the comparability of real and virtual environments. Accepted for: Presence: Teleoperators and Virtual Environments.	◆◆ ◆◆

Appendix 1: Board of Directors Charter for OmniPres

The Board Of Directors for OMNIPRES serves as the representative body for the FET Presence Initiative to integrate, communicate and share research progress and advice and plans for the Initiative. The Board consists of a Research and Methods representative from each of the FET Projects (ADAPT, BENOGO, Touch/HapSys, PELOTE, POEMS, PRESENCIA, I-Learning, EMMA, MEC, and TDIS), the OMNIPRES project members and the FET Presence Program Managers.

Administrative Process

Meetings

- The Board will meet every 6 months, maybe in conjunction with annual FET Presence meetings (usually around late April/ early May) and the annual Presence conferences (usually around late September/ early October). For the avoidance of doubt, the Board will remain in place until the end date of the FET PR initiative, September 2005.

Attendees

- To support the development of shared understanding between the FET Presence Research projects through the Board, it is expected that each project's nominated attendee (member) will be the same person throughout the existence of the Board and will attend each meeting, wherever possible.

Meeting scheduling

- Meetings dates, times and locations will be announced by email with sufficient advance notice for all members to ensure they can attend.

Agendas

- A draft agenda for each meeting will be circulated by email at least 4 weeks in advance of each meeting, to allow members to request amendments and/or additions to the agenda.
- The final agenda along with documents for discussion at each meeting will be circulated to all members 2 weeks in advance of the meeting, to allow members to deliver considered input reference these documents at the meeting.

Minutes and Documents

- Minutes of each meeting will be circulated to members within 3 weeks of the meeting, though where considered necessary by the OmniPres project and/or the Commission a short "urgent actions" list will be distributed to all members within 3 working days of the meeting.
- All documentation relating to meetings, including agendas, minutes, and papers/presentations discussed at the meetings will be made available on the OmniPres Board of Directors area of the OnProject website.

Decision Making Process

Formats

- Meetings of the Board of Directors will be conducted using an abbreviated version of Robert's Rules of Order for Conducting Meetings. Formal meeting formats following Robert's Rules will be used for binding decisions of the Board. Open and informal formats, temporarily suspending Robert's Rules of Order, will be use for brainstorming and other informal discussions.

Communication Role of Representations

- Decisions made by the Board will be communicated to all member's projects by each project's representative.

Decisions will seek unanimity with option for majority support.

- Where a proposal or suggestion is made to the Board that does not receive unanimous approval by members, each project's and the Commission's representative member of the Board will be eligible to cast one vote on the proposal. A simple majority will be sufficient to carry the proposal.

Commission veto

- The Commission reserves the power to veto any decision made by a simple majority vote.

Appendix 2: Handbook Schedule and Plan (draft)

Some Introductory Background on the Presence Initiative's: "Handbook of Presence Research."

The EU Presence initiative is a milestone in presence research. Your work promises conceptualization, measurement, and technological creation of presence. Communicating and disseminating the anticipated contributions of your project are important to the field and to the initiative. Cross-project conference panels and publicity associated with the introduction of the volume in 2005 will help make the presence, HCI, engineering and other research communities aware of your work. The handbook will be a visible vehicle which we can work on together to communicate the depth and breath of presence research.

The goals of the volume include to:

- Provide a key locus for the accomplishments of the Presence Initiative
- Summarize the state-of-the-art in all presence research
- Provide a "one stop" central source for future researchers in presence.
- Provide a long lasting record of the work of the FET Presence Initiative.

In one volume researchers and students will be introduced to the key research questions, findings, and trends in presence technologies.

The Handbook as a Vehicle for Communicating the Findings of Your Project

The handbook will be an excellent vehicle to make presence researchers aware of the findings of your project. In this role it will be both valuable and important that other researchers coming to the field have a complete and authoritative source of the findings of your project

Editorial Organization

Using an organization similar to Handbook of Human-computer Interaction and other handbooks, our handbook will be organized into major thematic sections. Each major section will be supervised by an editor supported by a volunteer editorial board. The editorial boards will be organized in October and November of 2003.

Editorial boards

Each book section will have an editorial board. Editorial boards will play a significant role in shaping the book. Members will be consulted and may review chapters within this section. They will work with the section editor in determining the structure of the chapters within the section.

Editorial team

Members of OmniPres will assist in organizing and editing the handbook.

Summary of the writing and publishing schedule

A more detailed schedule is found in the Handbook Gantt chart. Here is a short summary:

Proposal

A proposal to our top ranked publisher will be assembled in the fall from project input and submitted in January 2004.

Editorial board and other invited chapters

The editorial board of each section will evaluate the relationship between their goals regarding scope and depth for each section, and the current lineup of drafts. If additional chapters are deemed desirable, then authors outside the Presence Initiative may be invited. Invitations will occur in late fall, 2003.

Chapter writing timelines

The period to write chapters will be more than 1 ½ years (18 months). The EU Presence Initiative wants to have the book assembled and off to the publisher prior to the end of the Initiative and prior to final review.

Extended Outline, February 3, 2004

An extended outline of the chapter will be used to prepare for editorial review and manage possible redundancies and overlaps across chapters.

Preliminary Drafts March 1, 2005

Preliminary drafts of chapters will be due March 1, 2005. (For projects ending before this date, the chapters should be provided at the end of the project).

Note: It is understood that some projects will be still collecting data, and that the chapters will be subject to revision based on results. But the general direction of the projects research and finding will most likely be evident in the last six months of the project pending final analysis. This can form the basis for the first draft.

Review

All chapters will be reviewed by the editors, some members of the editorial board, and/or outside experts to provide feedback to authors and to assist in presenting the work in its best light.

Revised Drafts August 1, 2005

Final drafts will ideally be submitted as soon as possible after reviews, but not later than August 1 to allow time for the publisher to assemble and print the book before the end of the year.