



MONET2

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1 Introduction

The MONET Project has completed all of the required deliverables for the first year of the Project. The deliverables not previously sent to the Commission are; B1, MBD1 and MBD2, are being submitted with this report.

1.1 First Year Achievements in Brief

Workpackage 0: Network Management

- *Deliverable WWW1* – The MONET Web site has been redeveloped and the information contained on it updated.
- *Deliverable MIR1* – The MONET Information Resource has been rebuilt and its operation and content has been updated.
- Increase in total Membership from 43 to 57 (with 7 other Institutions in the process of joining) and Active Members from 20 to 49.
- *Deliverable NN1 and NN2* – First and Second Newsletters produced and distributed, with the Second including a Special Edition featuring the work and aims of the Automotive Task Group.
- Articles on MONET have been published in MIT 'Technology Review Magazine' on 'The Next Robots' and in Advances Wales.

Workpackage 1: Automotive Task Group

- *Automotive Sector Questionnaire sent to domain experts and used as the basis for Deliverable A1 and in order to attract potential future project partners.*
- *Expression of Interest submitted for an Integrated Project under FP6.*
- *Deliverable A1 – The State of the Art Report outlined the automotive area as it stands and how best to move MBS & QR technologies further into this sector.*
- *Held an Automotive FP6 Integrated Project Meeting with interested parties.*

Workpackage 2: Bio-Medical Task Group

- *Fundamentals of Bio-Informatics Workshop October 2002.*
- *Working towards clustering with the medical group in EUNITE and whether the Task Group can work with Agentlink towards Bio-Medical agent applications.*
- *Deliverable B1 – The Status Domain Document identified the current state of the art and areas for potential industrial liaison projects.*
- *Organising Workshop at AIME'03 in order to fulfil the requirements of Deliverable B4.*

Workpackage 3: Education and Training Task Group

- *An Educational Workshop was organised at ITS2002, in order to bring together the main players in this area and forge stronger links within the field. This also provided the Consortia required by the Description of Work.*
- *Deliverable ED1 – To create a Database of (potential) educational MBS & QR users.*
- *Expression of Interest in Integrated Project under FP6.*
- *Created a forum of Educational MBS&QR experts.*

Workpackage 4: Model Based Fault Detection and Diagnosis Task Group (Bridge)

- *A Questionnaire on the MBD & FDI sector was sent to domain experts, the results were used to produce the Common Diagnostic Framework and also aided in the collection of Industrial Reference Problems.*
- *Expression of Interest submitted for an Integrated Project under FP6.*
- *Deliverable MBD1 – The Bridge DX'02 Workshop Proceedings and Report.*
- *Deliverable MBD2 – To produce a Common Diagnostic Framework Report.*
- *Began work on collection of Industrial Reference Problems (Deliverable MBD3).*

Workpackage 5: Summer School

- *The venue for the Summer School has been selected and booked.*
- *The syllabus and timetable have been designed to fulfil the objectives of the Summer School.*
- *The speakers have been contacted and have been sent the Summer School details and their lecture / demonstration topics.*

2 Year One Workpackage Descriptions

This section describes the progress that has been made by the project during its first year. The section is broken down into the Workpackages as described in the Description of Work, with deliverables / milestones, objectives, membership and any other achievements discussed for each section. Please note that in the following sections any text in *italic* in the main body of the report is a direct quote from the Description of Work.

2.1 Workpackage 0: Network Management

2.1.1 Year One Deliverables and Milestones

- **WWW1 – Revised and updated WWW site**

The MONET Web site is central to Project communications, both within the project and outside it. After research into the status of the old MONET website, the decision was taken not to update the existing site but to completely re-build it.

The new MONET Website has therefore been completely redesigned and was re-launched on the 19th of July 2002. We are still working to improve and expand the website and will be continuously updating it throughout the lifetime of the project.

The website also includes sections covering each Task Group and their activities, links to the MONET Information Resource (see below), Membership areas and a special page with an on-line application form. There are also sections about upcoming conferences of interest and calls for papers / participation.

The website has proved very successful and is being utilised by members and non-members alike. We have had several requests for information and members have been making use of our on-line expenses / application forms. On one occasion a systems failure meant that our website was off-line for an afternoon and in that short time we received three emails and one phone call from members asking why they could not access areas of the site.

- **NN1 – First Newsletter**

The first MONET Newsletter was due for publishing at the end of June 2002, but it was felt that some extra initial impetus would be beneficial to the Project and so the release was moved to the earlier date of the end of April 2002. This extra time meant that we might be able to publish three Newsletters in this first year. (Although ultimately the decision was taken to include the planned ‘third’ newsletter, a special edition on the Automotive Task Group and its aims and technologies, as a supplement to the second MONET Newsletter.)

The Newsletter was prepared as an introduction to the Network, the Project and the Task Groups that form the working areas of the Project. It was written by the Project Office and printed by the University of Wales, Aberystwyth’s Design Studio. It was taken to the DX’02 Conference and distributed by post to the Members at the beginning of May 2002.

- **MIR1 – Updated MONET Information Resource (MIR)**

This is a web based resource and contains information pertaining to the fields of MBS & QR, mainly holding a repository of journal citations. Work began on collection of further resources for MIR at the beginning of the Project and is (and will remain) ongoing. At this point we have moved all of the references from the old database into the new revised database and have also collected over 500 new references and nearly 80 whole papers (in pdf format).

As MIR is web based, the project also took the opportunity to look into re-designing and rebuilding this resource at the same time as the website in order to improve services to the end user. The process has taken some time and we are hoping to have the new database and querying structure in place as soon as possible. Until then the old database is still in use on the new site and this will be updated with the new references we have collected. The MIR will be continually developed and expanded throughout the lifetime of the Project. In order to achieve as much as possible a MIR Action Plan has been drawn up to gauge the way forward in developing the resource to suit the MBS & QR Community’s needs.

The MIR is at present undergoing final stages of testing, the database and all submission and administrative elements have been built and are fully operational. The final testing involves the integration with web browsers that may be used, this testing will soon be complete and then MIR will be launched onto the new MONET website and will be fully active in the near future.

- **NN2 – Second Newsletter**

The second MONET Newsletter was published in October 2002 and included an Automotive Task Group Supplement. It was felt that the Newsletter was an excellent vehicle for publicising not only the MONET Project but raising awareness of the MBS & QR Technologies as well as their successes within industry. We have therefore used this Newsletter to target mail the European Automotive industry. We plan to theme future Newsletters on the other Task Groups’ activities in a similar way. This Newsletter was edited and partly written by the Project Office, but contained more information and articles which were submitted by the Membership.

2.1.2 Objectives of the Network Management

The Network Management has the primary task of *providing services to the network* as well as ensuring the delivery of the Project objectives. The Network Management has its own prescribed objectives as a Project Workpackage, the stated objectives of the Network Management are as follows.

To provide a central contact point

The Project has a fulltime office situated at the University of Wales, Aberystwyth. This means that, throughout the three year project life, Members will always know where we can be contacted. Contact is primarily through electronic forms however we are available to our members whenever they need us and many take the opportunity of discussing matters face to face at meeting and conference venues. Most of the needs that we anticipate our membership requiring are housed through our online web and mail services, these are discussed in full below.

To ensure a good communication infrastructure which constantly offers access to several information modalities

The first step for the MONET Project, with regards to communication with the field, was to ensure that as many people and organisations as possible knew of MONET and its aims. The Project has worked hard to publicise itself at Conferences and Workshops (see below). MONET has also been mentioned in 'Technology Review Magazine' in the value added links section of an article on 'The Next Robots'.
<http://www.technologyreview.com/articles/focuson1202.asp>

On a more local UK level there has been an article on MONET published in the Advances Wales Magazine. On top of this MONET has registered its contact details with Business Connect Wales and has recently been listed in the Social Science Information Gateway administered by Bristol University.

The MONET website is the central information resource for our membership. It contains information on all of our activities as well as contact details for the Steering Committee, Network Management Team and the Task Group Leaders. The website is used to post information that has been requested by the Membership or that the Network Management / Steering Committee feels would be of use. To this end the website goes beyond merely being a repository for old information and is being used to inform members of future developments in this (and associated) fields. The housing of this website on a dedicated server has also aided our ability to provide a continuing service to our membership.

As stated previously, there are individual pages for each Task Group, which include details of the aims and objectives of each group as well as up to date information on their current activities and where appropriate, links to conferences in their specific areas.

Electronic mailing is now the primary communication path for many if not all of our membership. To aid in the contact with general or specific member groups the Network Management has created several grouped email lists for the Network to use. These lists can only be used to circulate information between the list members by persons on this list. This has proved very useful particularly for facilitating Task Group communication.

There are lists for each Task Group as well as one for the Membership as a whole. The Steering Committee also has its own mailing group and most recently the Automotive Task Group requested a mailing list for all the parties interested in working towards an FP6 Integrated project in the European Automotive Sector. As part of our conference web-hosting activates there are also three lists for the QR2003 conference. These mailing lists are fully maintainable by the Co-ordinating Node and can be amended at any time if required.

To co-ordinate the administration of MONET

This is by far the most significant work of the Network Management and the most important contribution that it makes to ensure the Project delivers its objectives. The Project has specific aims and goals, but the methods by which these are to be achieved are to be decided by the Steering Committee and actions implemented by the Co-ordinating Node. The Network is by definition a diffuse entity and it is the job of the Network Management to ensure that the Network, specifically the Task Groups, are made fully aware of their responsibilities and given all of the information and support that they require. The second duty is then to publicise the products of that work back through the Network as a whole and when appropriate to wider audiences of interest wherever they may be.

The Project Office was formed to co-ordinate the administration of MONET. The two full time members of staff oversee the daily running of the Project and the meeting of contractual obligations. This work involves the updating of the website, arranging meetings and strategic research and planning for future Project and Member requirements.

2.1.3 Membership

It is a stated objective of MONET to increase its membership as a whole and its active membership in particular. The following sections demonstrate that the Project is achieving these aims, with an increase of over 35% in contracted members, if the applicants are included this figure jumps to nearly 49%.

The initial number of members was 43, these were the 50 that originally signed up to the project, less seven that were not in a position to work with the project when it finally began; two of these seven have now withdrawn and the other five are still considering their application. At the end of the first year fourteen new organisations have joined, and there are a further two who are going through the application process. This gives us 57 organisations which are fully signed up members and 64 including those who are in the process of joining.

Total Membership

Members	Project Start	First Year End	Including Applicants
Total	43	57	64
University	33	45	47
Industry	10	12	12
Industrial members who are SME's	3	4	4

The success of the first year of MONET2 has been reflected in an increase in the number of member institutions for that period of over 44%. More significant still is the increase in the number of interested persons within those institutions to 102 persons, an increase of over 126%.

Active Membership

Members	Project Start		First Year End	
	Institutions	People	Institutions	People
Total	20	20	49	53
University	15	15	39	42
Industry	5	5	10	12
Industrial members who are SME's	2	2	3	3

The Project has a stated aim to draw affiliate Members up to Full active membership status and this has been achieved throughout the first year by an increase of nearly two and a half times the number of active member institutions. We define an active member as one who is contributing to the goals of one or more of the Task Groups.

2.1.4 Other Achievements

Conference Web Hosting

The MONET web site is being used to assist major international conferences in the MBS & QR fields. The two main events in this calendar are the International Workshop on the Principles of Diagnosis (DX'03) and the International Workshop on Qualitative Reasoning (QR'03). The MONET web server is hosting both of their web sites for the year 2003 and we shall be offering our services for the following years.

Web services are very important to these events, partly for reasons of advertising and information, but mainly due to all pre-conference communications being web based. These sites will host mailing lists, information requests and also all of the on-line paper submission and approval services.

Conference / Workshop Attendance

MONET is a Network of experts in the fields of MBS & QR and thus we understand that we are only as good as the expertise that we can find and combine, thus MONET has attempted to ensure that we create a critical mass of domain expertise. To this end MONET has endeavoured to ensure that few people, if any, within the MBS & QR community are unaware of the Project and its aims. To achieve this MONET attended several conferences and events throughout its first year; the following is a list of those events.

- DX'02 - Thirteenth International Workshop on the Principles of Diagnosis 2002. (Semmering, Austria). 1st – 3rd of May 2002. Presentation of MONET to the Conference by Iain Russell.
- QR'02 – Sixteenth International Workshop on Qualitative Reasoning. (Sitges, Spain). 10th – 12th June 2002. MONET Network Presentation given by Chris Price.
- SABER Users Workshop (Munich, Germany). 7th – 9th October 2002. Chris Price gave a presentation to a largely automotive workshop and in that context discussed MONET.
- FP6 Workshop – Singleimage (Cambridge, UK). 25th October 2002. Attended by Iain Russell. (Workshop funded by UWA, External Liaison Office and travel funded by MONET).
- IST2002 (Copenhagen, Denmark). 4th – 6th November 2002. Attended by Iain Russell & Janet Thomas.

- FP6 Proposal Writing Workshop – UKRO (Cardiff, UK). 21st November 2002. Attended by Iain Russell.

Industrial Visits

Due to publicity activities MONET has received requests from companies interested in understanding exactly what MBS&QR technologies may have to offer two such companies are SPORE Ltd and Jaguar Ltd. After their requests Chris Price delivered MBR presentations to both these companies.

Clustering

The MONET Project is in the process of aligning itself with other Networks and projects that work in similar or complementary fields. Several members of our Automotive Task Group are involved with another Project called IDD. This is now coming to an end and we are confident that MONET and especially the Automotive Task Group will benefit from this experience.

The Project is also in discussions with Agentlink to see if common ground can be identified and mutually exploited.

The Bio-Medical Task Group has been in discussions with the Medical Group from EUNITE about possible combined areas of interest and joint future work. The MONET Project as a whole has also been working with a representative of ELSNET in an attempt to reform the Network of Networks.

Application for Ecological QR Workshop

Although there is no Ecological QR Task Group within MONET, the Description of Work identified Ecological Application of MBS & QR as important areas of the field. For this reason the project sought alternative funding to further this important work. To this end a proposal was submitted to the European Science Foundation for funding to hold an Ecological QR Workshop during 2003. The Workshop would have been investigating the state of current technology both in use and the QR alternatives. The Workshop would work to illustrate regions of overlap and conflict in order to identify potential areas in which QR solutions could offer a serious alternative to present technologies. Unfortunately, our proposal was not successful but we are looking into other avenues of external funding for this event, as the members involved are keen to progress this area of work.

Application Utilisation

John Scott, a Lecturer in New Zealand, uses our web based QR Example in his classroom teaching.

2.2 Workpackage 1: Automotive Task Group

2.2.1 Year One Deliverables and Milestones

- **A1 - Reports on the current state of use, and the opportunities for, MBS & QR in the European Automotive Sector**

This report is entitled 'Model Based Systems in Automotive Domains: Applications and Trends.' and was delivered with the MONET Six Month Report as Annex 3. This report outlined the current state of the art and how these technologies may develop in the future.

The report drew, not only from the academic work of the Task Groups, but on the Industrial expertise of several major companies in the European Automotive Sector.

The report itself is divided into three sections; firstly outlining the basics of Model-Based Diagnosis, then discussing the applications and projects in this area and then a look forward to the areas into which the research could be extended.

- **Compilation of companies to be targeted**

This was done through the knowledge of the members of the Task Group and through each expert investigating their own area of expertise. The list that was generated was used to identify who would receive the Automotive Task Group Questionnaire. Each institution and person who responded to this questionnaire was sent a report on its findings; the respondents also became a core of interested parties from which the Task Group could draw for the *creation of consortia* for future project. The questionnaire report also served to assist one of the identified goals for the Task Groups: to *promote the dissemination of results obtained in research*.

- **Preparation and distribution of publicity and technical material to targets**

Being our flag ship Task Group, the Automotive Group already had previous *results obtained in research and application projects* with which it could advertise the experience of the Task Group; and in doing so the Network as a whole.

After initial discussions surrounding this topic it was decided that a double sided A4 flyer would be very useful in promoting the Task Group and the technological applications they stood for. This could be slipped into Project literature and would serve well at *events in the automotive sector, such as trade fairs, exhibitions and conferences*. Soon after beginning work to identify what this flyer would contain, it became evident that the wealth of valuable information would far surpass a two sided document. After further discussion the decision was taken to produce a Newsletter style publication for the Automotive Task Group which would be added to the MONET Newsletter as a Supplement, but one which would also stand alone for more specific use. This Newsletter and Supplement were sent out to members in October and also taken and distributed to interested parties at the IST2002 event in Copenhagen.

- **Organization of events in the targeted companies to present the technology and to create links between these companies and centres active in MBS/QR**

The Task Group is specifically charged to *initiate and support visits* to and from industry and research centres. Two such visits took place in October 2002 by Prof Chris Price. We received a request from SPORE for a visit and Prof Price took the opportunity to visit Jaguar at a nearby site to see if they could be encouraged to consider membership of the Network. The main Task Group however decided that although visits would be of benefit in some cases; for a cross sector technology transfer the ideal situation would be to bring many of the major automotive players together. This was achieved at a Project Initiative meeting in December (described below).

2.2.2 Objectives of the Automotive Task Group

The Automotive Task Group have had a very successful first year, culminating in a meeting of 19 institutions (12 of whom where industrial partners) who came together with the express intention of participating in an Integrated Project within the MBS&QR technology area of the Automotive Industry. This was a considerable step towards ensuring that *by the conclusion*

of this phase of the network, every major European automotive player has a full understanding of the advantages of MBS.

The Task Group met for the first time in Paris in April 2002 to start off their work and also with the aim of gathering the information that they would require to produce the State of the Art Deliverable (A1) and an Expression of Interest in FP6. After this meeting it was decided that the best way forward would be to produce a Questionnaire that could be sent out to industrial and academic experts in the field. This was done to gauge both the current state of the art and what these experts felt were the most significant areas for development. This also aided in raising the sector's awareness of the Automotive Task Group and the MONET Project as a whole, the success of which can be seen in the number of major automotive sector institutions that turned up to the Paris Project meeting in December.

Following is a list of all of the Participants at the Project Initiative meeting in December.

ACTIA
 AUDI AG
 BMW
 CLEARSY
 DaimlerChrysler AG
 FirstEarth
 FIAT Research Centre
 LAAS-CNRF
 MONET Network of Excellence
 OCC'M Software
 R.O.S.E Informatik
 TRIALOG
 Università di Torino
 University del Piemonte Orientale
 University of Paris 13
 University of Wales, Aberystwyth
 VW-AUDI AG

2.2.3 Membership

The membership of this Task group has grown throughout its first year. However many of the Automotive Industry representatives at the recent Integrated Project Meeting are not yet members. The Project Initiative meeting has caused them to express an interest in becoming members of the Network. If they do join, the Automotive Task Group will contain many of the major Automotive companies in Europe.

Members	Project Start		First Year End	
	Institutions	People	Institutions	People
Total	7	7	10	11
University	3	3	5	6
Industry	4	4	5	5
Industrial members who are SME's	2	2	3	3

2.2.4 Other Achievements

FP6 Expression of Interest

The Automotive Task Group, together with some industrial partners, submitted an Expression of Interest in Framework Programme 6. The project was entitled 'Tools for Improving Vehicle Availability, Reliability and Safety'. The information that was required was similar to the research that was carried out for Deliverable A1. The Expression of Interest was submitted to the Commission and was attached to the MONET Six Month Report as Annex 4.

2.3 Workpackage 2: Bio-Medical Task Group

2.3.1 Year One Deliverables and Milestones

- **B1 - The Domain Status Document**

This document is the result of work carried out by the Task Group in gathering information about the status of MBS & QR technology in the Bio-Medical Domain. The document provides three important insights into the status of the bio-medical domain. Firstly it gives a rationale of why MBS & QR technologies are worth exploring in the context of biomedicine. Secondly, it provides an overview of various successful MBS & QR research results in biomedicine. Finally the document reports on the status of MBS & QR technologies in the health-care and bio-medical industry

- **Initial discussion of the interaction between biology, medicine and MBR (at macro and micro levels)**
- &
- **Identification of suitable industrial liaison projects**

An Exploratory Workshop in October on Bio-Informatics has enabled the Task Group to surpass their intentions for the first Deliverable B1 the Bio-Medical Status Domain Document. It also identified the position of bio-medical MBS & QR in industry as a precursor to *identify and clarifying emerging biomedical problems* which could be exploited for an industrial liaison project.

2.3.2 Objectives of the Bio-Medical Task Group

The Bio-Medical Task Group has experienced some delay during 2002 as both Task Group leaders have been moving to other universities. However, the Biomedical Task Group became fully active around July 2002. The first activity of the Biomedical Task Group was the organisation of an Exploratory Workshop on the Fundamentals of Biomedical Informatics. This was held on 27th-29th October 2002 at Mennorode Conference Centre, Elspeet, in The Netherlands, and was funded by ESF, MONET and NWO. The aim of the workshop was to *facilitate communication amongst researchers* from the fields of model-based and qualitative reasoning, machine learning and bioinformatics in order to discuss the role and place of fundamental, AI-oriented research in the biomedical field. There were also two invitees from the USA present at the workshop. Key papers of researchers who were invited to the workshop were printed in the workshop proceedings. These proceedings, along with discussions with experts at the workshop, assisted in fulfilling the requirements for deliverable B1, which was completed following this event.

The next major event will be a workshop on Model Based and Qualitative Methods in Biomedicine to be held during AIME'03, in Cyprus, 18th – 22nd October 2003. With the

proviso that the proposal for the workshop still needs approval from the conference organisation, the output of this workshop will be used as further input to the Domain Status Document. This workshop will both fulfil requirement B4 and help to *identify and formulate strategies for effective use of MBR in biomedical research and development*. It is also the intention of the Task Group to exchange views as much as possible through organising meetings at conferences and workshops of joint interest and, in addition, to discuss relevant issues by means of the Task Group's mailing list.

2.3.3 Membership

The Task Group's membership has grown throughout the year, although not by a vast amount. This is however a relatively small area of the field. Though as the Task Group sets about further arrangements for its workshop and possible connections with EUNITE (and their workshop) and Agentlink, there is every expectation that these numbers will grow.

Members	Project Start		First Year End	
	Institutions	People	Institutions	People
University	5	5	7	7
Industry	0	0	0	0

2.3.4 Other Achievements

The Task Group has been working to facilitate communication amongst researchers and industrialists with an interest in the application of MBR to biomedical problems. To this end the Task Group is holding discussions with the Medical Committee of EUNITE with regard to the possibility of organising a joint Workshop / discussion session at the next EUNITE symposium to be held July 2003 in Oulo, Finland. The Workshop would be focussed on issues involved with gene expression data, their interpretation and the modelling of their form. This Workshop / discussion session would complement the medical workshop to be located at AIME'03 and would be a link with another Network of Excellence, thereby also enhancing clustering.

2.4 Workpackage 3: Education and Training Task Group

2.4.1 Year One Deliverables and Milestones

- **ED1 - A database of (potential) users and researchers active in applying QR/MBS to educational settings.**

The primary task for the Education and Training Task Group was to identify potential users of this technology and stimulate their interest in the field of MBS & QR related educational applications. This deliverable was sent to the European Commission in July 2002 as Annex 5 of the MONET Six Month Report.

- **First half year - construct a forum**

One of the major aims of this Task Group was to identify an expert base from which to work towards their allotted objectives. The Task Group examined the field and identified partners, in addition to the current membership, which would form a solid basis for development. These parties were approached and this resulted in a meeting and workshop at ITS2002 (see below). This group will now work at exploiting MBS&QR technologies in the education and training fields.

- **0.5 - 1.5 year - review of state of the art and commence at least one project exploiting MBD in education**

The Education and Training Task Group has submitted an Expression of Interest in Framework Programme 6 entitled 'Web of Interrelated Knowledge Articulation and Knowledge Communication Tools'. In preparing the Eol for Framework 6, the Education and Training Task Group made contact with a number of industrial companies interested in working in this area. A full list can be found in the Eol in Annex 7 of the MONET Six Month Report.

This research has lead to the collection and collation of a large amount of educational QR data which will be used in the coming months to fulfil the State of the Art report for Deliverable ED2.

2.4.2 Objectives of the Education and Training Task Group

The Education and Training Task Group organised a workshop on 'Model Based Systems and Qualitative Reasoning for Intelligent Tutoring Systems' at the Intelligent Tutoring Systems Conference (ITS2002) in San Sebastian in June 2002. The proceedings from the workshop were also sent with the MONET Six Month Report. This was bound separately as Annex 6.

2.4.3 Membership

Membership of the Education and Training Task Group has almost doubled this year after their efforts to identify experts in the field for the forum building exercise. It is envisaged that as they seek to commence projects in this area the membership will grow still further.

Members	Project Start		First Year End	
	Institutions	People	Institutions	People
University	6	6	10	11
Industry	0	0	0	0

2.4.4 Other Achievements

Bert Bredeweg gave a MBS & QR presentation to the 3rd Conference of the International Society for Ecological Informatics (ISEI) (<http://www.isei3.org/>) and in doing so provided information regarding MONET. The goal of this presentation was to promote Qualitative Reasoning in this area, particularly to 'facilitate knowledge sharing of conceptual models between multiple agents' active in ecology. This area is applicable to both teaching and research areas. The area of 'knowledge communication' is an important aspect of education and training as well as scientific activities in general. The research will considerably aid the work of the Task Group.

The presentation has proved very successful and has a group in Jena are to hold a Workshop dedicated solely to this area. The principle aim of the 'First Workshop for Qualitative Reasoning Models on Stream Ecosystem Recovery' is to foster QR for ecology (stream ecology). These 'conceptual models' play an important role in both educational applications as well as for scientists to share their ideas and insights. The workshop is organized by the University of Jena, Germany and the University of Amsterdam, The Netherlands.

The Group responsible for this workshop 'Institute of Ecology at the University of Jena' (http://www2.uni-jena.de/biologie/ecology/mainframe_e.htm) 'JENA' also invited Bert Bredeweg to present MBS & QR as well as MONET at a recent meeting in December 2002.

2.5 Workpackage 4: Model Based Fault Detection and Diagnosis (BRIDGE) Task Group

2.5.1 Year One Deliverables and Milestones

- **MBD1 – Session at DX2002 and associated report**

Due to the late start of the Project, the deadline for Workshops at DX'02 had already passed. Bridge did however hold a meeting at this event to encourage participation and in November 2002 they held the Bridge Workshop in Toulouse.

- **MBD2 – Common Diagnostic Framework specification**

The Common Diagnostic Framework proved challenging. However, after the Bridge Workshop in Toulouse during November 2002 a paper was completed which drew together the combined expertise of many of Europe's finest FDI and DX practitioners.

- **Agreement on definition of industrial technology transfer problems to be solved**

The issue of Industrial Reference Problems was discussed at the October 2002 Steering Committee Meeting and although the Bridge Task Group was well on the way to collecting these, members of the Steering Committee suggested that they might have some input that would prove useful. Industrial Reference Problems will therefore be submitted by other Task Groups and they will alert the Bridge Task Group to any areas or issues that they feel may prove of use.

Bridge is dedicated to the resolving of Industrial problems and is certain of its ability to aid European Industry. Its ability to do so was demonstrated by the response Bridge received at the Automotive Integrated Project Meeting in Paris in December 2002. Louise Travé-Massuyès made a presentation to this meeting to illustrate the work of the Bridge Task Group and the important role it could play in the Automotive Sector. The attendees of the meeting were all impressed by what they heard and stated that they considered this 'Bridging' technology to be of considerable consequence to the European Automotive Industry.

2.5.2 Objectives of the Bridge Task Group

The stated aim of the Fault Detection and Diagnosis Task Group, known as 'Bridge' is to *eliminate the kind of parallel development in research disciplines that could slow the attainment of solutions to problems*. Their work is devoted to analysing the MBD methods of AI and comparing and contrasting them with those of the Control theory from the engineering community. Both these fields are working on the same problems but they have very different methods. Bridge is looking at the underlying commonalities and underlying principles of these two disparate communities. As the work continues the differences are becoming clearer; for example, FDI is primarily focused on fault detection, but within the DX community it is fault isolation which is the main aim. Due to this difference there is a very good chance for these two technologies to complement each other.

The fact that this is by definition a cross disciplinary Task Group will considerably aid their ability *to support the transfer of this technology into industry related disciplines*. They have

already collaborated with the Automotive Task Group and the Integrated Project FP6 Proposal that the Automotive Group are preparing will contain strong elements of the work in the Bridge Task Group.

Their specific objectives, along with technology transfer were to *help identify for participants from different backgrounds the requirements of diagnostic processes in industry, and to relate the existing theories, methods, techniques, and systems to these requirements.* To this end the Bridge Task Group has put considerable effort into gaining as wide a diversity of expertise as it can. Their first activity was to hold an evening meeting at the International Workshop on Principles of Diagnosis (DX'02). This meeting brought together 17 members of the Diagnostic and Fault Detection Communities who expressed an interest in Bridge; the discussion was strongly focussed on working towards the Common Diagnostic Framework and the Industrial Reference Problems.

The Task Group also decided that a questionnaire of the area as a whole would prove to be very useful in deciding the current state of the art and therefore the way forward.

The results of the questionnaire have not only supplied a good baseline from which to work but it also provided the detail for an Expression of Interest in FP6 which was submitted by the Bridge Task Group. This was done to ensure the presence of DX and FDI techniques in the Sixth Framework and also the garner more interest in the field itself and aid its take up in European Industrial Sectors.

2.5.3 Membership

During its first year, Bridge has experienced unrivalled growth in the number active participants, so much so that it has nearly trebled in size in just one year.

Members	Project Start		First Year End	
	Institutions	People	Institutions	People
University	6	6	17	19
Industry	1	1	3	5

2.6 Workpackage 5: Summer School

2.6.1 Year One Deliverables and Milestones

There are no deliverables for this Workpackage during this time period but work has been done to further its objectives. The Project Office has searched for a destination to hold the Summer School using many resources, including outsourcing to fee-free conference finding companies. First we needed to find a date that was amenable to all of the MBS & QR Community and the options that were available were very narrow due to other conferences from May to August 2003, placing the Summer School in the first two weeks of September, slightly later than month 18 specified in the Description of Work. After further consultation the first week 6th – 12th of September was selected as the preferred option. We have also located and booked a suitable venue and have prepared the timetable, syllabus and lectures in partnership with our members and guest lecturers. Speakers have already been invited to attend the Summer School and this event will be progressed further in the coming months.

2.6.2 Objectives of the Summer School

The timetable of the Summer School has been carefully designed to fulfil the objectives set within the Description of Work, primarily our aim is to *inspire and prepare the next*

generation of researchers in the field of MBS & QR. To this end we have devised a programme that will be both appealing and informative and one which fits the different needs of those from an academic background as well as students from industrial partners.

In order to *convey to young industrialists the potential of MBS & QR* it was decided to make the technologies the prime focus of the event. This will mean that much more of the sessions will be practical and interactive demonstrations of available software and models. Students will be able to use and understand just how powerful and versatile MBS & QR modelling can be and in many cases they will be learning about the software from the very person or people who developed it.

In order to demonstrate the *potential of MBS & QR technology* it is important to put the existing *state of the art* in context, however it is even more important to show the *opportunities for the near future*. To this end a session will be dedicated to the future of the field and how it may develop in the years to come. It was felt that this was especially important in this concept because it will be those very students there present that will be taking the technology into that future.

3 Year Two Workpackage Deliverables

3.1 Workpackage 0: Network Management

3.1.1 Deliverables

NR1 – First Annual Report. Month 13.

This Report.

TR1 – Technological Roadmap (Version 3). Month 18.

Technological Road maps have been increasing in emphasis in recent years. At this year's IST2002 Conference, Copenhagen, many Commission representatives and Experts voiced the significance of these reports. The Roadmapping exercise that MONET has before it will be addressed at two levels. Firstly each of the Task Groups is to produce a Roadmap of their own area of expertise and then the Co-ordinating Node and Steering Committee will bring these together to form a Roadmap for the technology as a whole. MONET is planning to have a concentrated meeting, in April 2003, in order to write these roadmaps.

NN3 – Newsletter 3. Month 18. & NN4 – Newsletter 4. Month 24.

The Newsletters to be published in the coming year will build upon the success of the first year's publications. Each of them will contain a supplement to profile the work of another of the Task Groups as well as bring the membership up to date with the progress of the Project as a whole. Articles will be drawn from the membership and the technology as a whole, with the exact content reflecting the evolving field and the wishes of the membership. We will also consider publishing the results of the Roadmapping exercise.

NR2 – Second Annual Report. Month 25.

This Report will be drawn up to reflect the progress of the Project at the close of its second year.

3.1.2 Milestones

Year 2

- **Month 18**
 - **MONET Summer School**

The Summer School will be taking place from the 6th to the 12th of September, bringing together the next generation of both industrialists and academics in the fields of MBS&QR. The event will take place at the Aldemar Cretan Village Conference Centre near the town of Hersonissos on the Island of Crete.

The venue and schedule for the Summer School have been set, but work will continue throughout the year to plan and publicise the event. We shall be advertising the event through our own newsletter / website and also through other AI Community publications.

- **Technological Roadmap (version 3)**

The project is preparing to have a concentrated week long meeting where we shall bring together the Co-ordinating Node and Steering Committee and shall produce a document which covers the future of all four fields within the project and the MBS & QR technologies as a whole.

- **Third Newsletter (after summer school)**

Due to moving the Summer School dates, the third newsletter will be published before this event. The Summer School will therefore be featured in the fourth Newsletter, although an article advertising the value of the Summer School will be in this issue. This third publication will show successes of MONET and what it has achieved in its first year and how it will build upon this in the following two years.

- **Month 24**
 - **Fourth Newsletter**

This newsletter will profile the Summer School and its attendees as well as containing another Task Group supplement.

- **MIR Data Entry up to Date**

The entry of the vast majority of references on the MIR database has already been done, however it is the intention of the Project to go beyond this and put whole papers / journal articles onto the MIR site. This work will continue throughout the lifetime of the project, with the hope that it will be used far beyond it.

- **Second Annual Report**

This will report our progress to the Commission and the Membership and shall be produced over the new year of 2003 / 2004.

3.2 Workpackage 1: Automotive Task Group

3.2.1 Deliverables

A4 – Automotive Technological Roadmap (Version 1). Month 16.

The Automotive Task Group will be holding concentrated meetings at the Roadmapping event in April 2003. It is their intention to use the information from the Questionnaire and other research conducted for Deliverable A1 as well as their expertise to generate a full and comprehensive Technological Roadmap.

A2 – Outline of areas for potential new projects etc. for European automotive sector. Month 19.

The Automotive Task Group has been looking into potential new Projects for the Automotive Sector. This issue has been discussed at meetings and over email, however the Group felt that what was required was genuine requirements from industry. This was one of the driving forces behind the December Project Initiation meeting in Paris. At this meeting, many members of the European Automotive Sector met to discuss real requirements for their field. The views put forward, at this meeting, represented what the Industry itself felt it needed to both; solve existing problems and to move the Industry forwards. Effectively these issues addressed how the Industry would remain competitive and how it would increase its competitiveness in the future.

The following list of Projects, are genuine requirements and concerns of the European Automotive Sector.

- Requirement for analysis tools for project testing, in order to generate prototypes and introduce them into Industry.
- There is a need for a model based testing tool for model generation (one which could cover every project). This must also be generic, online, etc. The aim is to produce one model for the whole plant.
- Main goals for future development are in preventive diagnosis and fault prevention. This could be in the design phase (reliability, fault tolerance), onboard (early warning, risk analysis) or after sales (statistical analysis, fault information, risk analysis, support for preventive maintenance).
- Requirement for a process of specifying a high level model for use throughout the entire design process (especially at the start) and not just at the end.
- Aim to reuse the same models for different types of electronic analysis to support the entire process from design to diagnosis.
- Whole car simulation.
- Abstracted model results reuse, thus reducing the computation required.
- Function detection and faulty component isolation.

The initial analysis of these requirements, by the Task Group, has grouped them into the following four general areas of development.

1. Tools for Knowledge Management of Technical Knowledge via Models.
2. On-board systems.
3. Model-based Testing.
4. Preventative Diagnosis.

The Task Group is meeting with Automotive Sector representatives in early February to discuss how these requirements can be taken forward into an Industrial Project.

3.2.2 Milestones

Second year

- **holding of series of 'exchange centres' with the goals of**
 - transferring technologies
 - singling out opportunities for the application of the technology
- **First version of Roadmap**
See Above.

Second/Third year

- **commencement of projects resulting from network influence**
 - application projects
 - projects to identify potential new research opportunities, to address new problems emerging from applications
- **Final version of Technological Roadmap**

3.3 Workpackage 2: Bio-Medical Task Group

3.3.1 Deliverables

B2 – Biomedical Technological Roadmap (Version 1). Month 16.

The Bio-Medical Task Group will be holding concentrated meetings at the Roadmapping event in April. Drawing from their expertise and the research that has been put into generating the Status Domain Documentation they shall distil all of the required information into a Bio-Medical Roadmap. This information will include information that is being collected in preparation for the Bio-Medical Workshop.

B4 – Biomedical Workshop. Month 20.

The Bio-Medical Task Group will be having a workshop on Model Based and Qualitative Methods in Biomedicine to be held during AIME'03, at Cyprus, 18th-22nd October 2003. Preparations for this event are already well under way, with the proviso of approval by the AIME'03 Programme Committee.

As well as this workshop the Task Group is holding discussions with the Medical Committee of EUNITE with regard to the possibility of organising a joint Workshop / discussion session at the next EUNITE symposium to be held July 2003 in Oulo, Finland.

B5 – A Report on the Role and Synergies Possible between MBS & QR and other approaches to the Solution of Bio-Medical Problems. Month 30.

Work on this Deliverable has already begun via links with EUNITE and other Networks; also there are many people in the field already working on this and the Task Group has taken steps to identify them and shall be contacting them throughout the coming year. Deliverable B1, the Domain Status Document, will also form the introduction to this work by providing a picture of where synergies lie.

3.3.2 Milestones

Year 2

- **Development of B2 and Publication of First Version**

See Above.

- **Workshop at a Major Bioinformatics / Medical AI Conference (B4)**

See Above.

3.4 Workpackage 3: Education and Training Task Group

3.4.1 Deliverables

ED2 – Review of MBS/QR technologies and their usefulness for teaching. Month 15.

Current theories on cognition and learning emphasize the idea that learning is a constructive process during which learners actively construct their knowledge. Instead of 'just receiving it' (e.g. by listening to a teacher in a classroom) they have to engage into activities that create awareness, understanding and insight. Simulation models are well suited to support such activities, because they allow learners to interact with a virtual reality that may enable constructive learning. In addition, simulations often trigger extra motivation on behalf of the learners, which adds on to the effectiveness of such interactions.

It will be the task of the Educational Group to work to integrate these principles with the aims of the MONET Project. The work that was done to collect ideas for the Expression of Interest will help considerably in bringing such research efforts together under the umbrella of a set of common themes and starting points in order to collaboratively profit from the research. One of the interesting and modern research problems is to develop theory and corresponding tools, which foster knowledge negotiation and the development of significant beliefs on behalf of the learners. The goal is to develop interactive simulations that are knowledgeable about the insights they capture and that can operate as agents in a knowledge negotiation activity. Such simulations would in fact be artificial agents in the overall community of practice and capture a little part of the beliefs held by the community.

An accomplishment of this task would mean that any information communicated to the learner would be done so in a way which was intuitively 'tuned' to the way the learner actually learns. Thus they will gain a considerably greater benefit even from the same amount of information; by being taught in a manner in which they learn best. This will be one of the main focuses of the 'Review of MBS & QR Technologies and their usefulness (applicability) for teaching and training artefacts, particularly for industrial settings' (Deliverable ED2).

ED4 – Education and Training Technological Roadmap (version 1). Month 16.

The Education and Training Task Group will be holding concentrated meetings at the Roadmapping event in April. These meetings will combine their knowledge of the area with research discussed at their workshop at ITS2002. The Task Group have also conducted extensive research on the topic of 'Web of Interrelated Knowledge Articulation and Knowledge Communication Tools'. This research resulted in their Expression of Interest in FP6 and will be of considerable value to them during the Roadmapping exercise.

3.4.2 Milestones

0.5 - 1.5 year - Review of State of the Art and Commence at Least One Project Exploiting MBD in Education.

A Review of the State of the Art was conducted for the Task Groups Expression of Interest in FP6. The section regarding need and relevance of this work describes the project as follows.

Knowledge articulation and communication tools are important means to support a constructive approach to learning. A range of ideas is being (and has been) developed in this respect by different research institutes in Europe. However, the goals of these research efforts often seem very unrelated, addressing topics such as 'external representations', 'qualitative reasoning', 'collaborative learning', 'inspectable learner models', 'concept maps', and 'simulation-based learning'. As a result, interrelationships and important results are often difficult to assess and consequently valuable solutions may not disseminate to a larger community. There is need to bring such research efforts together under the umbrella of a set of common themes and starting points in order to collaboratively profit from the research. Such an approach will create awareness among the participants, encourage them to formulate insights in a wider context, and potentially foster a wide range of reusable and commonly accepted software products. The common theme we propose is to work on the development of a 'Web of Interrelated Knowledge Articulation and Communication tools' (ART-COM).

1.5 - 2.5 year - Review QR/MBS & WWW / Multimedia. Initiate Collaborative Project Utilising Training Over the Web.

The exact work that goes towards this aim will be decided based upon the results of the State of the Art Review.

3.5 Workpackage 4: Model Based Fault Detection and Diagnosis (BRIDGE) Task Group

3.5.1 Deliverables

MBD3 – Collection of Industrial Reference Problems. Month 15.

A set of Industrial Reference Problems has already been collected and these now require collation and review. The goal is to review the problems so that they represent all the different existing dimensions and that they are spread over the whole spectrum of available methods. The review of the problems will be facilitated by agreeing a format by which all the reviewers will use to analyse the reference problems. It has also been decided that the reference problems will be restricted to strictly defined FDI tasks. However, the relevance of these FDI outputs on the inputs of other supervision tasks (i.e. fault accommodation, reconfiguration, etc.) will be mentioned in the report. The preliminary work will be performed via email exchanges and will be followed by a dedicated meeting at the beginning of March 2003.

MBD6 – MBD / FDI Technological Roadmap (Version 1). Month 16.

The Model Based Fault Detection and Diagnosis (Bridge) Task Group will be holding concentrated meetings at the Roadmapping event in April. A considerable amount of relevant information has already been collected by the Task Group with their work on the Common Diagnostic Framework and their Collection of Industrial Reference Problems. This

information will be drawn together and developed into a Technological Roadmap for the area.

3.5.2 Milestones

Year 2

- **Collation of Technology Transfer Problem Specifications (MBD3)**

See Above

- **Production of Tutorial Materials (MBD4)**

A set of articles and two tutorials are already available from the DX'01 Bridge Workshop and have been used to initialise the references. This collection of tutorial materials will be completed by the following:

- Articles that will be selected for publication in the Special Issue of the IEEE SMC Part B on BRIDGE, presently in preparation.
- Articles and invited talks that will be selected for publication in the joint SafeProcess / DX 2003 BRIDGE workshop day.
- Other papers.

- **Production of first version of Roadmap (MBD6)**

See Above.

3.6 *Workpackage 5: Summer School*

3.6.1 Deliverable

SS1 – Summer School. Month 18.

Preparations for the Summer School have been going on through 2002 and will continue through 2003. The main body of the preparatory work in the coming months will be focused on advertising the Summer School and in reviewing the lecture and demonstration materials.

The Summer School will be open to both academic and industrial attendees, however the Project will actively seek to ensure that there is as high a proportion of industrial students in attendance as possible. This will be achieved through contacts with our Industrial Members and specific targeted advertising.

SS2 – Summer School Educational Resources. Month 18.

The Summer School will bring together some of the leading experts in MBS & QR techniques and also some of the latest software modelling packages. All of the details of the Summer School shall be available on the web and after the event all of the resources shall also be posted on the web. These resources will include the lectures that will be given to the students as well as the model based and educational software that will be demonstrated at the Summer School.

The resources are being placed on the web so that students who attend will be able to review the lecture slides and re-examine the software. For those who did not attend the

resources will provide a useful basis with which they can forward their own learning of MBS & QR technologies.

3.6.2 Milestones

- **Month 18 - the Summer School event**

See Above.

- **Month 21 – Provision of Educational Resources on the Web**

See Above.

4 List of Members

Member Number	Organisation Name
1	University of Wales, Aberystwyth
2	University of Aberdeen
3	Universiteit van Amsterdam
4	British Maritime Technology Ltd
5	Robert Bosch GmbH
6	Centre Nationale de la Recherche Scientifique (CNRS-LAAS)
7	Ecole Polytechnique Federale de Lausanne
8	University of Edinburgh
9	Daimler Chrysler AG
10	Heriot-Watt University
11	Spore Ltd
12	Intelligent Applications Ltd
13	Instituto di Mathematica Applicata e Technologie Informatiche – CNR, Pavia
14	Universidad de Valladolid
15	University Koblenz-Landau
16	Instytut Podstawowych Problemow Techniki Polskiej Akademii Nauk
17	Institut National de Recherche en Informatique et Automatique
18	Brunel University
19	University of Lancaster
20	University of Leeds
21	OCCM Software GmbH
22	Universite Paris 13
23	University of Strathclyde
24	Technische Universitaet Muenchen
25	Dipartimento di Informatica – Università di Torino
26*	Loughborough University
27	Universidad Pontificia Comillas de Madrid
28	Dipartimento di Matematica e Informatica, Università di Udine
29*!	Unilever Nederland BV
30	Technische Universitaet Berlin
31	Dipartimento di Elettronica per l'Automazione, Università degli Studi di Brescia
32*	CORUS (UK) Ltd
33	Universitat Politècnica de Catalunya
34*!	Cranfield University at Royal Military College of Science
35*	Sheffield University
36	Università degli Studi del Piemonte Orientale “Amedeo Avogadro”
37	Fundacio ESADE

38	C.R.F. Società Consortile per Azioni
39	FirstEarth Ltd
40	Universitat de Girona
41	Institut für Technische Informatik, Technische Universität Graz
42	Universidad de Sevilla
43	Universitaet Klagenfurt
44*	Max-Planck Gesellschaft zur Foerderung der Wissenschaften e.V.
45	Institute of Information Systems, Technische Universitaet Wien
46	Potsdam-Institut fur Klimafolgenforschung
47*	Rolls-Royce Plc
48	Universitat Rovira I Virgili
49	TUHH – Technologie GmbH
50	Universitie des Sciences et Technologies du Lille
51*	Norwegian University of Science and Technology
52	Institute of Computing and Information Sciences, University of Nijmegen
53	Institute für Informationsverarbeitung und Computergestützte Neue Medien – Arbeitsgruppe für Softwaretechnologie
54	Linköping University
56*	ACTIA S.A.
57	University of South Australia
58	France Telecom
60	University of Ferrara
62	University of Huelva
63	Laboratoire d'Automatique de Grenoble
65	Technische Universitaet Dresden
66	Vanderbilt University
67	Friedrich Schiller University Jena
68	R.O.S.E Informatik GmbH
69	University of Brasilia
70	University of Hull

* These organisations are still in the process of joining.

*! These organisations have withdrawn from membership.

5 Accounts

The MONET first year accounts are presented on the following page and are broken down by budgetary section and by calendar quarters. The figures in brackets represent percentages, for example, Networking Costs, Year 1 Section Total, gives the figure of 14,366.05 with (95.16) below it. This indicates that a total of £14,366.05 has been spent in this nominal category and this equates to 95.16% of that categories first year budget. Please note that the figure for the Summer School category of 168.49% of Year One budget does not actually represent an overspend. The budget for this year was to cover only the Student Bursaries and not the Summer School itself, however we were required to pay the deposit for the Summer School event in this years budget.

<u>Year One - Annual Review</u>										
	Task 1	Task 2	Task 3	Task 4	Task 5	Task 6				
	Personnel Costs	Promotion and Publicity	Networking Costs	Support Costs	Infrastructure Overheads	Automotive Task Group	Fault Detection & Diagnostic Task Group	Educational Task Group	Biomedical Task Group	Summer School Task Group
Start Level	51,671.88	7,045.50	15,097.50	13,084.50	5,017.25	15,097.50	8,052.00	8,052.00	8,052.00	5,032.50
Q1	8,798.60	0.00	1,639.88	1,911.12	1,254.31	0.00	0.00	0.00	0.00	0.00
Q2	13,191.64	566.00	6,047.32	3,290.79	1,254.31	913.43	505.31	393.81	0.00	2,604.00
Q3	13,191.64	309.00	1,980.50	1,043.19	0.00	0.00	0.00	1,478.88	0.00	5,875.50
Q4	13,191.64	0.00	4,698.35	119.30	0.00	1,086.28	3,660.06	723.34	840.78	0.00
Year 1 Section Total	48,373.52	875.00	14,366.05	6,364.40	2,508.62	1,999.71	4,165.37	2,596.03	840.78	8,479.50
Percentage of Annual	(93.62)	(12.42)	(95.16)	(48.64)	(50.00)	(13.25)	(51.73)	(32.24)	(10.44)	(168.49)
Year 1 Total	90,568.98	(66.50)								
Remaining Budget	3,298.36	6,170.50	731.46	6,720.10	2,508.63	13,097.79	3,886.63	5,455.97	7,211.22	-3,447.00
Total Remaining	45,633.65	(33.50)								
	% Check	(100.00)	Must equal							100

6 List of Annexes

Deliverables

B1 – Domain Status Document

MBD1 – Bridge DX'02 Workshop Report

MBD2 – Common Diagnostic Framework

Extra Deliverable

Report on Integrated Projects in FP6

7 References

N/A

8 Document History

<i>Version</i>	<i>Date</i>	<i>Changes made to document</i>	<i>Changed by</i>
1.1	31 st January 2003	Produced by Co-ordinating Node	Co-ord
1.2	3 rd October 2003	Updated to standard format. Text unchanged so release date remains Jan 03	RIR