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**E**Nabled **T**echnology

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## Table of Contents

Document Information .....	2
Disclaimer .....	3
Table of Contents.....	4
Figures.....	5
Tables.....	6
Summary .....	7
Executive Summary.....	8
1 Introduction.....	9
1.1 Outline.....	9
1.2 Sources of Information.....	9
1.3 Workpackage 4.2 & Diligent Dissemination Activities.....	9
2 Roadmap.....	12
2.1 Objectives.....	12
2.2 Strategy & Planning .....	13
2.3 Management Tools and Committees.....	13
3 Progress of Work.....	15
3.1 Objectives .....	15
3.2 Activities .....	15
3.2.1 The web site.....	15
3.2.2 Dissemination .....	16
3.2.3 Liaison.....	19
3.3 Achievements .....	20
3.4 Events .....	22
3.5 Short-termed planned Activities.....	27
4 Dissemination Products.....	29
4.1 Material.....	29
4.1.1 DILIGENT Technical Brochure .....	29
4.1.2 DILIGENT Posters.....	31
5 Conclusions.....	32
References .....	34

## Figures

<i>Figure 1: DILIGENT Technical Brochure</i>	30
<i>Figure 2: DILIGENT Posters</i>	31

## Tables

<i>Table 1: Performed Dissemination Events</i> .....	22
<i>Table 2: Short Term Planned Events</i> .....	27
<i>Table 3: Summarisation of Activities</i> .....	32

## Summary

This document reports on the DILIGENT project's dissemination activities performed during the second year of the project (months 13-24). It provides brief background information on the concepts that guide dissemination in DILIGENT and introduces both the activities performed during this period and the material and instruments produced. Furthermore planned activities and foreseen actions for the last year of the project are introduced.

## Executive Summary

The DILIGENT project Dissemination Report, presents the Dissemination and Liaison Activities that took place during the second year of the project, from September 2005 up to and including August 2006.

DILIGENT's dissemination plan (D4.2.2) attempts to capture almost each and every potential opportunity for distributing information on the project and its products that might rise during the project's lifetime. It targets and supports activities ranging from the simplest one-way dissemination, such as news reports, up to tight bidirectional collaborations with external task forces acting in the areas of Digital Libraries, Distributed Information Retrieval and the Grid. The activities performed as outcome of this plan make use of traditional instruments and modern e-Tools, which are also provided and supported by the plan.

In tight collaboration with the exploitation activities of the project, dissemination ones have to support also the special case of relation that the project will have with the users of the platform to be provided by DILIGENT. Aiming at sustainability of its outcome, the project undertakes the task of promoting its product (i.e. the DILIGENT platform) and supporting its users.

Due to this wide scope of operations, a very large number of tasks have been carried out during this 12-month period, most of them relating to:

- Project's web-site maintenance and updating, which even involves a plan for visual and structural revision of its contents.
- Production of dissemination material, such as posters and brochures, mainly to support participation in major events.
- Presentation of project's objectives and activities to interested external parties, mainly through conferences and open meetings.
- Participation to events that promote collaboration among projects, such as face-to-face meetings and workshops.
- Initiation or strengthening of relations with other projects, relevant task forces, and communities, via typical means of communication, such as e-mails, phone conference, but also face-to-face meetings.
- Organisation of joint events that target both resource economy and impact maximisation.
- Scientific publications that both prove the concepts developed in the project and spread the word about its achievements.

Up to now DILIGENT has managed to be well respected and has raised high expectations on the communities it addresses. This is indicated by the degree to which is participation to major events is welcomed by both the organizers and the attendants. Since the the first DILIGENT prototype system is not yet available to raise this interest of the public, the respectability of the project is partially owed to the quality of the dissemination activities. Furthermore, the limited amount of resources consumed during this period, vs the number and size of activities undertaken, indicates that all steps have been taken in a realistic, cost-effective manner and resources allocated for dissemination tasks are consumed in a near optimal manner.

## 1 INTRODUCTION

### 1.1 Outline

This document contains the Dissemination report of the DILIGENT project. The remainder of the document is organized as follows:

- The rest of this section presents a brief reasoning for information sources and the background of the effort that is related to its content.
- Section 2 (Roadmap) defines the objectives set during these 12 months and delivers an overview of the strategy and plan behind the Dissemination activities.
- Section 3 (Progress of Work) describes the actual activities that took place in order to implement the objectives that are reported in the former chapter. The achievements and relevant events are also presented in this section in a chronological order, structured in 2-months-periods.
- Section 4 (Dissemination Products) describes the material produced aiming to support Dissemination activities.
- Finally, Section 5 (Conclusions) briefly recapitulates the issues and opportunities addressed in this document and highlights the next steps to be taken.

### 1.2 Sources of Information

Apart from the Conclusions section, all of the content presented in this document is collated from previous DILIGENT documents into an integrated report. The reason is that this report, apart from being an update of its previous version, submitted after the end of the 1<sup>st</sup> year of the project, it is a recapitulation of the activities performed during the last period. These activities have already been covered in previous documents that form part of the typical project's obligations i.e. the bi-monthly Interim Management Reports, which contain, beside others, all the activities related to Dissemination and Liaison. Furthermore the concepts and reasoning behind dissemination activities and their overall planning can be found in the D4.2.2 Dissemination and Liaison Activities Plan.

### 1.3 Workpackage 4.2 & Diligent Dissemination Activities

Dissemination activities in DILIGENT are covered mostly as part of Workpackage 4.2 workplan. However the nature of such activities requires that each and every DILIGENT partner participate in them, either implicitly or explicitly. This that can be easily concluded by examining the event list: presentations, paper publications, dissemination material etc, mainly have their basis on work done in the various technical parts of the project. The foundations of the activities and the production of the dissemination event/material content are supported by the actual performers of the technical work, who might not be explicitly involved in a particular dissemination activity. Furthermore dissemination and exploitation, of the project and its products, are two partially overlapping task groups, since exploitation requires or performs dissemination, but also on the other hand in some cases dissemination is actually exploitation!

Prior to presenting the actual activities performed the work plan of WP4.2 is presented once more, with minor updates as compared to the previous period one, mainly due to partner participation changes.

The main objectives of the dissemination workpackage are to organise and carry out the dissemination of the knowledge produced by both research and development work done throughout the duration of the DILIGENT project. Additionally it has to manage bidirectional "links" with related projects or taskforces in order for the project to increase its impact in

the related areas of the digital libraries, distributed information retrieval and grid computing<sup>1</sup>.

The activities of this WP constitute the interface of the entire project to the outside world and must ensure DILIGENT's "intense" and "trustworthy" presence, in order to obtain the capability to influence the beyond-state-of-the-art trends.

To achieve these objectives, some actions have already been taken and many more will be initiated throughout the duration of the project. The dissemination WP has been defined around three tasks:

- Task 4.2.1, DILIGENT Project Website, covering the design, development and hosting of the project's official web site. This site is the main public point of reference for the DILIGENT project;
- Task 4.2.2, Dissemination Activities, including various activities past and present to disseminate project results;
- Task 4.2.3, Liaison with Other Initiatives, whose main objective is the identification and management of various forms of cooperation with other projects, communities and organisations.

The detailed activities identified within these tasks are defined with potential users or target groups in mind.

Dissemination is an ongoing activity that will be active for the full duration of the DILIGENT project. All partners are involved in all aspects of dissemination, by:

- regularly updating content on the DILIGENT project website,
- disseminating their progress and results within the context of this plan, and
- actively liaising with other projects and communities to promote DILIGENT objectives.

Partners' contribution to the project's dissemination enhances the project's visibility in both the digital library and grid communities, but also within other domains such as cultural heritage and the environmental sector via the user communities.

The dissemination of project findings and results via all available means and the tight collaboration with relevant working groups and taskforces will lead to the optimisation of resource usage both for DILIGENT and the involved external parties.

Project partners involved in WP4.2 are:

- UoA (WP Leader): Dissemination, Liaison activities, Web site.
- ERCIM Web site, Liaison activities.
- CNR-ISTI: Dissemination, Liaison activities, Web site.
- USG: Dissemination, Liaison activities.
- ENG: Dissemination, Liaison activities.
- ESA: Dissemination, Liaison activities.
- CERN: Dissemination, Liaison activities.
- FhG-IPSI: Dissemination, Liaison activities.
- UNIBAS: Dissemination, Liaison activities.
- FAST: Dissemination, Liaison activities.

The WP4.2 runs full project duration, and has the following deliverables:

- D4.2.1: Web site (M2).

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<sup>1</sup> The special case of the relation with the EGEE project is managed by another Workpackage (WP3.1).

- D4.2.2: Dissemination plan (M6)
- D4.2.3: Report on activities (M12, M24 , M36)

Dissemination activities heavily depend on the progress of work carried out in other workpackages than WP4.2, such as:

- Official WP deliverables.
- Intermediate WP results produced.
- Issues being resolved.

Ambitious dissemination plans, such as the one adopted in DILIGENT which apart from requiring to be present in all significant events in Europe and worldwide, it also spans a magnitude of diverse activities, introduce significant administrative overheads and financing issues. This raises the need for close partners collaboration in order for the activities to be efficiently managed and performed. Continuous communication, reuse of facilities, content and material as well as exchange of contacts and detailed experience are among the primary actions of intra-project collaboration in this field.

Additionally, dissemination activities such as publications and presentations of work in a large complex environment such as DILIGENT need close coordination and careful handling. Apart from the initially allocated effort for performing Dissemination Activities, an additional amount of 10.000€/year has been reserved for strengthening the WP tasks. In particular, actions such as printing material, enhancing the styling and visuals of the material / site, or supporting the organisation of events are being funded by this additional budget.

## 2 ROADMAP

### 2.1 Objectives

DILIGENT dissemination objectives, as they have already been presented in the Description of Work document (Annex I) and the D4.3.2 on Dissemination and Liaison Activities Planning, aim to achieve a number of targets under the overall prism of promoting European and global state-of-the-art in the scientific and application areas addressed by the project.

These objectives are being briefly presented below:

- Widen the scope of application by facing new challenges through the collection of more requirements and wishes from interested user parties.
- Create a wide community that adopts DILIGENT products that will promote sustained development of the DILIGENT platform.
- Validate the products of the project and obtain feedback by expert groups, scientists and interested user communities.
- Maximize reuse of knowledge and technology at Project, European or even worldwide level by showing and exporting products of DILIGENT and importing state-of-the-art findings of other communities.
- Promote emerging or even launch new standards through synergies with appropriate task forces.

DILIGENT's dissemination strategy introduces the need for a wide spectrum of activities, which can be grouped in two major groups:

- Pure dissemination activities.
- Liaison Activities.

Dissemination activities include publicity activities and scientific announcements. Their main objective is to get the project and its results known to all potentially interested communities and relevant task forces, in the fields of Digital Libraries (DL), Information Retrieval (IR) and Grid Computing. Although dissemination activities offer a mainly one-way flow of information, i.e. from the project to the public, feedback is expected both implicitly (e.g. by acceptance) and explicitly (by interested parties).

Differently from the dissemination activities, liaison activities have a main objective of creating collaboration links with other projects, task forces or user groups so that resources are best utilized under a global perspective. Liaison activities include commonly organized activities as well as exchange of technology and knowledge among collaborating parties.

Liaison activities are primarily focusing on the establishment of bidirectional links with other communities and go beyond the scope of typical dissemination activities and aim at:

- Feeding of relevant taskforces with issues to be resolved, by exporting these scientific issues whenever met,
- Help focusing the project's effort on project core objectives, by offloading handling of several issues to other, more appropriate working groups.

These will ease the following:

- Focused, quick dissemination of DILIGENT findings,
- Promotion of standardization on related areas,
- Promotion of exploitation of project results, referring both to tools produced by the project workgroups and knowledge obtained through the whole process of design production

- Receiving concrete feedback on quality and applicability of the project's results.

A final side effect of liaison activities, which is quite important for the project economy, is the expected minimization costs of dissemination activities coupled with a maximization of benefit, i.e. target group penetration, though the common organization of events.

## 2.2 Strategy & Planning

In order to achieve the desired results in both collaboration and dissemination, DILIGENT has to carry out a series of actions to ensure that all of the above mentioned activities will be performed effectively.

In order to achieve that, the objectives are refined and they are being accompanied by a concrete roadmap that leads to their fulfilment. Additionally, rules have been settled and officially presented as part of D4.2.2 so as to safeguard important concepts such as quality, IPR, etc.

The DILIGENT Dissemination plan consists of a number of steps, which are being defined at this early stage and will be maintained and refined throughout the whole duration of the project:

1. Identification of opportunities and target groups for dissemination and liaison activities
2. Definition of instruments & media to be exploited for these activities
3. Establishment of rules that will assure the quality and legal-ethical conformity of the activities
4. Production of the material to be used for these activities
5. Management of activities
6. Monitoring of activities organized or performed by externally task forces, in conjunction with progress of work, state-of-the-art-and-beyond trends
7. Adaptation to the "evolving environment" by exploiting new opportunities and, if appropriate, refining the objectives
8. Evaluation of the progress of dissemination activities.

The first version of this plan has been thoroughly presented in **D4.2.1** and **we redirect the reader to the specific document for further reading**. However, all of these initial guidelines and rules are subject to continuous revisions and refinements. Additionally, there are many classes of activities or opportunities that will be handled on a per-case basis, by the appropriate instruments of the project (committees, teams, etc.)

## 2.3 Management Tools and Committees

The nature of dissemination activities is such that each and every partner that participates in the project contributes to the objectives of dissemination group of activities. Additionally, a smaller group of partners support the activities by:

- Producing material to be consumed by other partners.
- Supporting activities by managing and maintaining relevant electronic tools.
- Coordinating and managing the relevant activities.
- Managing internal dissemination issues.
- Organizing events.

The electronic tools to assist these activities are mostly the following ones:

- Project's web site, which is hosted around a Content Managing Portal Engine.
- Shared workspace, build on the BSCW system which apart from allowing users to share digital material, provides a set of tools for collaboration.

- A training digital library linked to the web site for public access to content related to DILIGENT and its addressed scientific areas (Distributed Information Retrieval, Digital Libraries, Distributed Computing, Grid Computing, etc).
- Mailing lists, which alert partners about upcoming events, dissemination activities and deadlines.
- Shared Calendar, which keeps track of activities performed and upcoming events.
- Bi-monthly reports, which enumerate a complete list of dissemination activities performed by all partners in a formal manner.

The WP4.2 partners form the committee that plans ahead and takes decisions for the majority of the dissemination events performed by the project. In addition to that, the Communication and Aggregation team, as defined in the D4.2.2 Dissemination Activities Plan, is a small committee that coordinates the Dissemination and Exploitation activities, which, as already mentioned, overlap to a certain degree.

## 3 PROGRESS OF WORK

In the following section the progress of the Dissemination and Liaison activities during the second year of the project is presented in chronological order, grouped into 3 sections:

- The actual activities undertaken during the period
- A brief list enumerating the achievements that form the outcome of these activities.
- A list of the events in which project members actively participated to, in order to promote DILIGENT's dissemination and liaison.

Before these, a brief description of the overall objectives is given, along with any sub-objectives that might have been raised at various stages of the period.

### 3.1 Objectives

The main objectives of this period were:

- To maintain the project's web site operational and update its content and structure as to follow the needs of the project and its addressed communities.
- To plan, support and perform dissemination and liaison activities in order to make DILIGENT as widely known as possible, and deliver its findings to interested parties.
- Plan, establish and manage links to other projects, taskforces and initiatives, in order to perform collaborative activities to the benefit of all involved parties.

Besides these, an additional objective focused on the improvement of the communication approach and the dissemination material was introduced in the period May to June 2006.

Finally the overall obligation of the Workpackage to follow the project's workplan and deliver the second year periodic Dissemination Activities Report (i.e. D4.2.3 version 2), led to the initiation of required preparatory actions during the period July to August 2006.

### 3.2 Activities

#### 3.2.1 The web site

At the beginning of the reported yearly period, the project's web site was already up and running for almost one year. At the beginning of the period it was found to be quite well-formed, offering enough means to introduce the project to the public and support the dissemination activities. It offers a quite rich set of tools and a layout that allow publishing of project related content<sup>2</sup>. Based on internal (i.e. DILIGENT) feedback, it was initially decided that no further effort would be placed for some time on its visual and structural improvement. Nevertheless content and news were periodically added as they became available.

Regular maintenance, of the site, such as performing minor platform updates, applying patches, backing up its content etc, have been all performed throughout the period of interest. Its contact points, which are accessible through hosted forms or direct emailing, have been constantly monitored. Unfortunately, recovery from a malicious attack has been required during this period since the site's front page has been compromised, an even which subsequently led to a raising of the security level of the site.

Apart from these, during the period September – October 2006, the Showcase section of the site was extended to include the newly produced, publicly accessible, experimentation

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<sup>2</sup> More information on Web Site tools, content and structure at they were available at the beginning of this period, can be found on D4.2.3 v1.

demos. At that point, apart from handling the functional aspects of this extension, effort was also placed on ensuring that the outcome of these demos would be visually aligned to DILIGENT web site (colour, graphics, layout and feel). Considering these demos to be important dissemination tools, had as a natural consequence the slightly revision of the site's structure so that they are promoted to attract the attention of the visitor.

However the major addition to the web site during this period was the achievement of its integration with the Training Library. This added facility is about the provision of a search functionality, right on the public section of the web site, that redirects its requests to the OpenDLib system that hosts the DILIGENT Training Library. The results are subsequently collected and presented within the web site, preserving the look and feel of the later one.

During the sub-period of April-May 2006, the activity towards redesigning site's visual and structural elements was initiated. The decision to start this activity was taken after careful examination of the feedback and the experience obtained during the first 18 months of site's lifetime, but also after a study performed on it. More particularly, in order to improve the project's communication style, ENG started both a benchmarking of web site and a work on the improvement of the graphical aspects of project's material (site, brochure etc). In addition to that, the benchmarking performed on both related projects' web sites (EGEE, ETICS, GGF, etc) and community-based web sites, revealed some weaknesses of the project's web site which could be improved.

Based on a WP4.2 request placed in March 2006, ENG provided a coherent and exciting proposal for improving the communication approach. This proposal, was based on the observation that a simplification of the communication language was definitely required for DILIGENT to reach non-DL and Grid expert communities.

Following that, an ENG communication expert team identified graphics and a motto to express all the power of DILIGENT perspective in simple terms. This simplification of the Web site is expected to eventually lead into promoting it as the primary point of reference for the User Communities. Guided by the results of the benchmarking, several axes for action were identified:

- Towards a new stylistic approach (graphics and arrangement).
- Towards a combination of restructuring the site and reforming its content.
- Towards updating the site platform to a new one.

Since these activities were foreseen to last for quite a while, especially since this started during the summer time, minor updates to the existing project's web site content and structure were immediately performed, in order to fix some of the issues. These fixes (such as revising the navigation and some of the content pages) required minimal effort and did not actually reflect a significant portion of the suggestions of the benchmarking.

Currently it is foreseen that apart from moving to an updated version of the Content Management System used for serving the site, the template proposed by the benchmarking process will be soon applied and the content will be updated to be in line with the latest communication strategy policies adopted by the project, esp. regarding the end user communities.

### **3.2.2 Dissemination**

Several dissemination activities were undertaken during this period, producing significant results in all the fields of activation:

- Participation to events.
- Introduction of DILIGENT to other projects, scientific or user communities, working groups or taskforces, standardization committees, institutes or even actors of the industrial / commercial scene.

- Production of dissemination material.
- Planning and management of the dissemination activity.

Below these are all presented in a chronological order.

At the beginning of the reporting period, the project achieved a strong presence to two quite significant events in the Digital Library and Grid computing areas: the ECDL 2005 and the 4<sup>th</sup> EGEE conference. The respective proposals and preparation of these events have been performed during the previous yearly period. Yet, the first official dissemination event of the period, was a paper presentation at the EnviroInfo 2005 event.

Right after these events, an attempt to enrich project's dissemination material was taken. Presentations on the structure of the consortium that forms DILIGENT, as well as others that present in detail the status of the project's technical activity, were delivered. These presentations were accompanied by several posters (designed and printed) describing the architecture and the technical developments of the project.

At the beginning of the period the allocation of an extra budget for dissemination which was earlier proposed has been approved. The allocation of this budget was required in order to cover the high costs of specific activities, such as the production of printed material, participation to overseas events etc. Furthermore, an increased interest of the public for DILIGENT was identified, a case which is now easily proven by the number and the significance of events that the project has eventually participated during this period. This interest is expected to rise even more in the near future due to the upcoming release of the DILIGENT platform software, and has already put pressure (and will even further do so) on the financials of dissemination. As a consequence WP management had to review the adopted dissemination and liaison activities and related instruments on the base of the newly allocated budget. However, nowadays it is still under consideration if new means of dissemination such as clips or TV spots will be produced with the assistance of consortium members that possess competences in these areas. Up to now, this extra budget has been mainly used to support the refurbishing of the visuals of the dissemination material and tools (web site, posters, brochures etc), retargeting their content to selected communities, as well as materializing (e.g. printing) the electronic material. Yet the support of more ambitious activities out of this budget, such as the organization of public events to raise user communities, are considered in collaboration with exploitation activities, for the last year of the project.

At the beginning of this reporting period, the WP management decided to temporary postponing the public Newsletter production, which was subsequently totally transformed into an internal tool for disseminating information on the status of work among technical partners. The reconsideration of this decision will be done during the next period of the project in relation to the impact that will have to the public the release of its software.

After the first review of the project, DILIGENT participated the eInfrastructures Concertation meeting which gave a great chance to obtain knowledge of other projects activating under the same principles and share the issues they have to face and the opportunities they meet in this focus area.

The participations to the EGEE NA4 generic application meeting" (9-11 January 2006) and the 8th Bielefeld Conference (6-8 February 2006) where performed in a period where the project focus was on preparing very significant dissemination steps:

- FhG-IPSI's proposal (<http://www.ipsi.fraunhofer.de/ECDL2006-WS/>) for an ECDL 2006 (Sept 2006, Alicante Spain) workshop on "Digital Library Goes e-Science: Perspectives and Challenges" (DLSci06). The workshop was organized by Claudia Niederee, Thomas Risse and Rachel Heery, and several DILIGENT partners serving as members of the workshop's Program Committee.

- University of Athens' contacts for inclusion of DILIGENT at the HellasGrid / EGEE Integration meeting, at the Third Party Projects section.
- USG's submission of a scientific paper on Content Source Selection and Description to the ECDL '06, (deadline 3<sup>rd</sup> of March '06).

Meanwhile FhG-IPSI prepared dissemination material (handouts, slides, etc.) about watermarking technologies used in DILIGENT, while preparing for the CEBIT 2006, in Hannover.

The aforementioned preparatory activities led to a successful participation and demonstration at CEBIT 2006 as well as to the introduction of the DILIGENT project to a highly stimulated audience at the HellasGrid / EGEE concertation meeting.

During the period of March – April 2006, a series of proposals for participating some of the most important events were placed:

- A proposal for leading a session at the next GGF event (GGF 17, Tokyo, May 10-12) submitted by CERN, entitled "DILIGENT - Bridging WSRF services and the EGEE middleware".
- A proposal for a tutorial at the ECDL with contributions by members from DILIGENT and BRICKS: ECDL 2006 tutorial (<http://www.ecdl2006.org/tutorials.jsp>) "Bringing Digital Libraries to Distributed Infrastructures: Challenges, Solutions, and Lessons Learned" Organizers: Thomas Risse and Claudia Niederée (FhG-IPSI) Date and venue: 17th of September, Alicante, Spain.

All these proposals were welcomed by the organizers of the events and were handled as great opportunities by the project's consortium. Especially the GGF17 related proposal, was considered as a perfect vehicle to disseminate DILIGENT vision and technical solutions to a worldwide scope. In order to exploit the event to its maximum, a structured process for preparing the content to be presented was adopted. An outline of the presentations was prepared and agreed upon with the project technical coordination, dissemination and exploitation leaders. Subsequently the whole consortium was mobilized to assist the main actor of the presentations, namely Pedro Adrade from CERN towards producing the final presentations.

During approximately the same period an invited talk at the SGC 2006, Taipei (Taiwan), (<http://www2.twgrid.org/event/isgc2006/>) was scheduled, with the title "DILIGENT: Digital Libraries Powered by the Grid". Presenter was Bhaskar Mehta (FhG-IPSI).

The delivery of the GGF 17 presentation, took place at the very period when the project entered its integration phase, which was shortly followed by the summer time, a period not quite appropriate for dissemination activities. As a consequence, the dissemination focused on preparing future events and planning the reaction of DILIGENT to the expected increase of interest after the first platform release:

- DILIGENT (CNR) submitted the proposal for the upcoming IST networking event. The title is "Future knowledge infrastructures: we are not starting from scratch" has been submitted. The aim of this session is to bring together a number of projects funded under different Framework Programme areas and explore how their outcomes might be profitably exploited as building blocks of the future Knowledge Infrastructures.
- The foundations of attending the EGEE conference (Sep '06) with a strong DILIGENT presence consisting of presentations, demos and material, were settled during the period's Technical Committee meeting of Jun '06.

During the same period the aforementioned benchmarking of the web site was performed which raised several discussions on the need for revisions and re-alignment of the DILIGENT dissemination material to various external communities. An intermediate decision

taken was to act on a per-case policy until the interest on the platform dictates the final direction on where to focus project's dissemination effort and the extra-allocated budget for events and material.

During the last month of this reporting period, the upcoming ECDL 2006 and 6<sup>th</sup> EGEE conference kept the dissemination teams quite busy, while the technical teams were preparing the alpha release of the software of the platform.

Especially the EGEE conference is considered to be one of the major dissemination events for DILIGENT. Since it is a great opportunity to demonstrate the project's work, a series of demonstrations of the platform have been planned and material has been created in order to be delivered to the conference participants. In particular, it is planned that three demonstrations will be given, one for each user scenario and one for selected platform features apart. Regarding the material, a new 2-fold technical brochure has been designed to be visually aligned with the upcoming web-site appearance and has been populated with up-to-date technical content describing the DILIGENT platform. The content of the brochure produced by UoA was based on the ENG web-site templates and has been thoroughly reviewed by several partners such as USG, CNR and CERN in order to achieve maximum acceptance by the consortium. The budget for printing the material will be deducted from the dissemination extra allocated yearly amount (10K€/year)

In the meanwhile, two papers that were authored in the previous periods were accepted for publication:

- "On-Demand Service Deployment and Process Support in e-Science DLs: the Diligent Experience" jointly authored by Leonardo Candela, Donatella Castelli, Christoph Langguth, Pasquale Pagano, Heiko Schuldt, Manuele Simi, and Laura Voicu has been accepted for publication and presentation at the ECDL 2006 workshop "Digital Library Goes e-Science: Perspectives and Challenges".
- "An Application Framework for Distributed Information Retrieval" authored by Fabio Simeoni, Leif Azzopardi and Fabio Crestani has been accepted at the International Conference in Asian Digital Libraries (ICADL 2006).

Finally, the production of the second year Dissemination Activities Report started at the end of this bimonthly period. A template was delivered to all partners but since the dissemination activities can only be tracked after the end of the period, the collection of contributions was planned to start after the whole period is over. Thus, the production of the deliverable and its related review procedure were naturally not expected to be as of the rest of the project deliverables.

### 3.2.3 Liaison

With regards to liaison activities and the establishment of new links to external projects, a series of new contacts have been performed during this period.

These began with contacting ArchaeoGRID and BELIEF projects:

- DILIGNET had a meeting with Prof Giovanni Pelfer (Dept. Physics and INFN, Florence) of ArchaeoGRID, to discuss the potential use of DILIGENT as an infrastructure serving the ArchaeoGRID community requirements (ArchaeoGRID is one of the EGEE generic applications).
- Strong link was established with BELIEF project taking into full advantage the thematic relation and the common participants. This led to planning of a common event, i.e. a joint presentation on the HellasGrid/EGEE Integration Meeting third party projects' session, and the making special references to DILIGENT and its exploitation in the BELIEF working groups and meetings.

A strong contact to CASPAR, a potential user community for DILIGENT has been also established, as DILIGENT was presented to the Coordinator and other members of the CASPAR project in a sequence of meetings.

Among the most fruitful collaborations of the reporting period has proven to be the one with the ETCIS project. The DILIGENT is currently using the platform produced by ETICS to support its software build/release procedure through the facilities offered by the system. This should allow saving of resources for DILIGENT, while it provides a user community for ETICS, strengthening its sustainability and promoting its quality, since valuable feedback is provided by the DILIGENT development team.

Driven from achievements in WP1.6 on the portal engines adopted by the project, as initially planned, DILIGENT significantly strengthened its relation to the GridSphere platform developers team. As an outcome, DILIGENT development team was invited to present its work in Portals and Portlets 2006 event (<http://www.nesc.ac.uk/esi/events/686/>). Unfortunately, due to the short notice and the nature of the specific period of time it was impossible to include this event in the dissemination activities.

The about to start FP6-IST project call DRIVER is expected to be one of the first beneficiaries out of DILIGENT developments as strong links already exist and a series of internal meetings have been performed in order to figure out the details of reuse and flow of knowledge between the two projects.

Several dissemination events and activities, which have already been referenced, were either products of (or means towards strengthening the) relations among communities / projects (ArchaeoGRID, HellasGrid, BELIEF, BRICKS and of course DELOS are a few of them). Throughout the period, collaboration among DILIGENT, DELOS and BRICKS projects was continuous and apart from the joint activities, it led to a bidirectional flow of information on several issues on conceptual or applied topics (e.g. the document model) and best practices in the areas of Digital Libraries and Distributed Information Retrieval.

Several other parties were contacted in order to identify the potential for collaboration. Among these we stress on the following ones:

- The LEDA (FP5 IST project) contact person (Emile Bijk) was contacted for discovering a ground of common interest since DILIGENT is spreading to the e-Learning sector.
- The Nice EnginFrame portal creators were contacted for identifying opportunities of reuse or linking of technologies.
- The GeoNetwork has been contacted for identification of potential collaborations, in the form of building a new user community for DILIGENT.

However, the outcome of these initial contacts is expected to be evaluated and materialized during the next periods of the project, since it requires involvement of technical teams, which was not possible up to now due to the heavy load of work raised by the alpha release candidate production.

### 3.3 Achievements

The main achievements of this period we:

- Maintained the functional status and performed minor updates of website hosting portal engine.
- Applied several updates of website structure and content throughout the year.
- Integrated Training Library to the public website (Sep-Oct 2005).
- Performed a preliminary benchmarking of project's web site (Mar-Apr 2006).
- Produced of a ready to implement plan for improving DILIGENT communication elements (May-Jun 2006).

- Produced of a series of posters and improved existing ones (Sep-Oct 2005, Aug-Jul 2006).
- Produced of new brochure based on the new visual approach of DILIGENT (Jul-Aug 2006).
- Planned and prepared several events.
- Active involvement and participation into a series of events.
- Performed contacts with other projects and established new links with interested taskforces.
- Strengthened the relations between DILIGENT and previously contacted interested parties.
- Planned joint events with collaborating projects.
- Submitted a number of papers, which have been accepted for publication at various events.
- Produced a new template for D4.2.3 Dissemination Activities Report, in order to ease out the comprehension of the status in this field (Jul-Aug 2006).
- Initiated authoring of D4.2.3 (Jul-Aug 2006).

### 3.4 Events

Project's partners had the opportunity to participate in very important events during this period.

Table 1: Performed Dissemination Events

DATE	EVENT	LOCATION	PRESENTER	AUDIENCE INFO	DESCRIPTION
7-9 Sep 2005	EnviroInfo 2005	Brno, Czech Republic	ESA	~400 Earth observation researchers. Raising of potential user communities EU Scope.	Paper presentation to EnviroInfo 2005, Informatics for Environmental Protection Networking Environmental Information: "Access to Distributed Earth Science Data Supported by Emerging Technologies"
15 Sep 2005	"From digital library management systems to digital library infrastructures" JOINT DELOS / THE EUROPEAN LIBRARY Workshop	London, United Kingdom	Donatella Castelli / CNR	~25 Chief librarians / Library managers. EU Scope.	The European Library (TEL) <a href="http://www.theeuropeanlibrary.org/">http://www.theeuropeanlibrary.org/</a> is a portal designed to offer access to the combined resources (books, magazines, journals.... - both digital and non-digital) of the 45 national libraries of Europe (presently, the collections of 20 national libraries are included. The collections of the other European national libraries will be included at a later stage). The objective of this meeting, which involved both DELOS and TEL representatives, was to explore whether some of the technologies developed by selected DELOS partners could be of some benefit for the future enhancement of the TEL DL. During this joint DELOS-TEL meeting an overview of DILIGENT was given focusing in particular on its architecture.

DATE	EVENT	LOCATION	PRESENTER	AUDIENCE INFO	DESCRIPTION
18-23 Sep 2005	ECDL 2005	Vienna, Austria	FhG-IPSI, UoA, CNR	~40 IR researchers. EU Scope.	Panel: "Digital Libraries over the Grid: Heaven or Hell"
24-28 Oct 2005	4 <sup>th</sup> EGEE Conference	Pisa, Italy	Donatella Castelli/CNR	Parallel Session ~40 Grid computing researchers. EU Scope.	Panel: "Grid and EGEE: The Digital Library perspective"
24-28 Oct 2005	4 <sup>th</sup> EGEE Conference	Pisa, Italy	Donatella Castelli / CNR	~400 Grid computing researchers. EU Scope.	Presentation: "DILIGENT: Objectives & Current Status"
24-28 Oct 2005	4 <sup>th</sup> EGEE Conference	Pisa, Italy	Pasquale Pagano / CNR & Pedro Andrade / CERN	Parallel Session ~40 Grid computing researchers. EU Scope.	Presentation: "DILIGENT Technical overview"
14 Dec 2005	2 <sup>nd</sup> eInfrastructures Consertation Workshop	Bordaux, France	Donatella Castelli / CNR	~100 from industrial and various research areas. EU Scope	2 <sup>nd</sup> eInfrastructures Consertation Workshop
9-11 Jan 2006	EGEE Meeting	Catania, Italy	Andrea Manzi / CNR	Parallel Session ~40 IR researchers. EU Scope.	Presentation of the DILIGENT project at the "EGEE NA4 generic application meeting"
6-8 Feb 2006.	8th Bielefeld	Bielefeld,	D. Castelli /	EU Scope	"Digital Library of the Future and the Role of

DATE	EVENT	LOCATION	PRESENTER	AUDIENCE INFO	DESCRIPTION
	Conference	Germany	CNR		Libraries", presentation given by at the 8th Bielefeld Conference.
16 Feb 2006	Meeting	Pisa, Italy	Donatella Castelli & Pasquale Pagano / CNR	<15 persons. Potential DILIGENT User Community	Meeting with Prof Giovanni Pelfer (Dept. Physics and INFN, Florence) to discuss about the use of DILIGENT as an infrastructure serving the ArchaeoGRID community requirements (ArchaeoGRID is one of the EGEE generic applications).
9-15 Mar 2006	CEBIT	Germany	FhG-IPSI	~250.000 Industrial / consumer.	Participation to CEBIT 2006, through Fraunhofer stand.
14 Mar 2006	EGEE event	Athens, Hellas	Vangelis Floros / UoA	~100 attendants from academic environment from local (GR) organizations. Potential collaborations.	DILIGENT presentation to the HellasGrid / EGEE integration event
22-24 Mar 2006	ArchaeoGRID, Meeting	Florence, Italy	Andrea Manzi / CNR	<15 persons. Potential DILIGENT User Community	DILIGENT Project presentation to "ArchaeoGRID"
5-7 Apr 2006	CASPAR Meeting	Oxford, United Kingdom	Luigi Fusco / ESA	<15 persons. Potential DILIGENT User Community	Demonstration of DILIGENT results and potential use in the CASPAR project
1-5 May 2006	SGC 2006	Taipei, Taiwan	Bhaskar Mehta / FhG-	~300 attendants, mainly	Invited talk at the SGC 2006 "DILIGENT: Digital "Libraries Powered by the Grid"

DATE	EVENT	LOCATION	PRESENTER	AUDIENCE INFO	DESCRIPTION
			IPSI	researchers. Potential synergies. Worldwide / Asian scope.	
8-9 May 2006	CEOSS-WGISS 21	Budapest, Hungary	Luigi Fusco/ ESA	Potential DILIGENT User Community	Demonstration of DILIGENT results to the Earth Science Community worldwide, to promote collaboration in the development of systems and services that manage and supply Earth Observation data to the users.
10-12 May 2006	GGF 17	Tokyo, Japan	Pedro Andrade / CERN	~400 attendants from Grid computing area	DILIGENT presentation at GGF 17: "Bridging WSRF services and the EGEE middleware" and participation to panel discussion
16 Jun 2006	Meeting	Rome, Italy	Andrea Manzi / CNR	<15 persons. Potential DILIGENT User Community	DILIGENT presentation to the Coordinator of the CASPAR project
Aug 2006	SIGIR 2006 (Poster Paper)	Seattle, US	USG	~700 Information Researchers. Worldwide event. Raising potential contributions and collaborations.	A short poster paper about work on distributed information retrieval with respect to resource description and selection, presented at the International Conference in Information Retrieval (SIGIR2006) held in August 2006, in Seattle. Paper attracted much attention from colleagues working in Distributed Information Retrieval, in particular, researchers from the open source IR community who expressed interest in accessing the DILIGENT code when it was available for release. The potential impact of this is more developers and

DATE	EVENT	LOCATION	PRESENTER	AUDIENCE INFO	DESCRIPTION
					researchers extending the platform beyond the reference implementations to be provided.

### 3.5 Short-termed planned Activities

As already mentioned long term activities are defined and managed by the overall dissemination plan, as defined in D4.2.2, and are intentionally not repeated here. With regards to short termed planned activities, the following is a list of events that the project will participate during the following months:

Table 2: Short Term Planned Events

DATE	ACTIVITY	LOCATION / EVENT
20-22 Sep 2006	Workshop on "Digital Library Goes e-Science: Perspectives and Challenges" at the ECDL 2006.	ALICANTE, SPAIN
20-22 Sep 2006	ECDL 2006 tutorial "Bringing Digital Libraries to Distributed Infrastructures: Challenges, Solutions, and Lessons Learned"	ALICANTE, SPAIN
25-28 Sep	EGEE Conference Presentation & Demo	GENEVA, SWITZERLAND
28 Sep 2006	Swiss Grid Day	GENEVA, SWITZERLAND
24 Oct 2006	Basler Technologie Apéro (Basel Technology Lectures)	BASEL, SWITZERLAND
22-24 Nov 2006	IST Conference (Helsinki) titled "Future knowledge infrastructures: we are not starting from scratch" has been submitted. The aim of this session is to bring together a number of projects funded under different Framework Programme areas and explore how their outcomes might be profitably exploited as building blocks of the future Knowledge Infrastructures. <b>(not confirmed)</b>	HELSINI, FINLAND
Sep 2006	Paper presentation: "On-Demand Service Deployment and Process Support in e-Science DLs: the Diligent Experience" jointly authored by Leonardo Candela, Donatella Castelli, Christoph Langguth, Pasquale Pagano, Heiko Schuldt, Manuele Simi, and Laura Voicu has been accepted for publication and presentation at the ECDL 2006 workshop "Digital Library Goes e-Science: Perspectives and Challenges".	ECDL 2006
Sep 2006	Paper publication: "An Application Framework for Distributed Information Retrieval" authored by Fabio Simeoni, Leif Azzopardi and Fabio Crestani has been accepted at the International Conference in Asian Digital Libraries (ICADL 2006).	ICADL 2006
Early 2007	Paper publication: "DILIGENT: Integrating Digital Library and Grid	DLESE, IJDL Special Issue

DATE	ACTIVITY	LOCATION / EVENT
	<p>Technologies for a new Earth Observation Research Infrastructure” by Leonardo Candela, Fuat Akal, Henri Avancini, Donatella Castelli, Luigi Fusco, Veronica Guidetti, Christoph Langguth, Andrea Manzi, Pasquale Pagano, Heiko Schuldt, Manuele Simi, Michael Springmann, Laura Voicu.</p> <p>This paper has been accepted for publication on the International Journal on Digital Libraries, Special Issue on Digital Libraries and eScience.</p>	

In addition to participating the above-mentioned events, a new series of posters will be produced during the months to come, presenting the technical findings of the project, so as to promote the DILIGENT products to the interested parties.

Finally the reconstruction of the site is underway and the new visual style and content, targeting various user-communities apart from the scientific one, will be delivered before the project’s review.

## 4 DISSEMINATION PRODUCTS

### 4.1 Material

During the referenced period, a significant volume of material, both in digital and printed forms, has been produced by the WP members with the contribution of all partners.

Reusable presentations, brochures and posters were produced during this period for use in a number of events. In addition to that, significant improvements to material produced during the first year, of the project has been achieved, based on feedback from partners, while in some cases changes were required due to external reasons. Examples of such improvements and revisions are the poster describing the architecture of the system initially developed for the Athens EGEE Conference, some baseline presentations whose content had to be updated due to project structure changes (i.e. partner changes), the previous brochure which contained minor errors etc.

New versions of the initial dissemination products have been produced which are fully compatible with EU directives and partners' expectations.

As a result, the various types of material currently provided by the dissemination activities support are the following ones:

- **Technical Brochure:** a typical presentation of the project on a two-sided A4 form, which can be easily included in partners' presentations and documents. It contains updated technical outcome stemming from WP 1.1 to 1.6.
- **Posters:** a series of large free-forms posters for different target groups (technical, managerial, etc) for use in presentations and events (typically to be printed on 70X100cm board).
- **Baseline Presentations:** a series of presentations with minimal or full descriptive content on the project and its consortium.
- **Graphic Elements:** collection of logos and other graphic elements for use in DILIGENT presentations and other types of dissemination material.

The above-mentioned products are freely provided in printed version to project partners upon request. This greatly enhances the ability to keep of the above products homogeneous and up to date.

#### 4.1.1 DILIGENT Technical Brochure

A preview of the new DILIGENT technical brochure is presented below. It is a 4 page, 2 sheet A4 brochure.



### 4.1.2 DILIGENT Posters

Apart from the brochure a number of posters have been produced in order to be presented at various events. Samples are shown below.

**Experimentation: Indexing & Searching in glite**

*A hands on, step by step experimentation on the standards, technologies and best practices for providing advanced search facilities, through a web-based interface on top of a Grid / glite-enabled infrastructure.*

**A Digital Library Infrastructure on Grid Enabled Technology**

**Overview**

Index and Search experimentation covers a wide spectrum of aspects of DILIGENT and glite. It captures the development of both a user interface (front end) and a searching entity (back end) that provide different forms of search over various repositories of metadata.

**Operation**

The search workflow is hosted in the Portal engine and is responsible for the interaction with the user agent.

- accepts queries and submits them to the back-end search engine
- indicates the results from the search and results from DILIGENT
- analyzes, normalizes and indexes results for further
- selects the appropriate rules and their own which to operate the solvers and submits the corresponding set of the query to the associated rule set
- merges / joins the results collected by solvers and returns the unified result on the table

The search contents process the part of the query that has been returned to form, modify, structure the results to fit into a fixed structure.

**Key-features/realization**

- Build prototype 3M-based search facility consisting of a user interface and a back-end server on a legacy platform, employing hybridized protocols.
- Build and customize hybridized indices for possible full-text search capability.
- Formulate search engine to multi-source distributed search.
- Identify and allocate large, real-life collections of metadata capable of bringing out performance and quality issues.
- Build and compare indices to enhance indexed search; backup performance and then evaluate system performance enhancement.
- Add advanced multi-repository search, supporting services:
  - Custom Source Description and Selection
  - Data Fusion
- Index on file resource repository and monitoring infrastructure to register and discover processing and storage resources.
- Integrate metadata storage from legacy CG to the system to the GLUE middleware storage mechanism.
- Provide integrated search by involving selected legacy feature selection components and algorithms.
- Penetrate visualization of information.
- Capitalize explore modes of the services with DILIGENT server innovation: Metadata, Storage, Information Server, etc.

**Technology Review**

The index & search experimentation builds on top of existing open source components. Among others, these include:

- advanced: Intranets, Intranet and engines closer to 3M, Solr, etc. and other services (authentication/authorization)
- native: performance, 37M search and XML Transformations on XPL documents.
- Legacy: builds the searched indices out of text data and executes full-text search queries over the indices.
- Underlying & virtual: frameworks for producing web services, compatible with most major standards.

Experimentation

**Diligent**

**DL Creation & Management**

- The **Information Service** implements mechanisms for discovering and "real-time" monitoring the whole set of resources available via DILIGENT. By providing the functionality, simple services and digital Libraries are enabled for splitting resource usage and workload balancing to maximize the use of resources.
- The **Request Service** acts as the "interceptor" of the DL services, it is the source in charge of bringing together the set of services belonging to a Digital Library (DL) ensuring the Quality of Service (QoS) characteristics required by the DL definition criteria. This will be achieved by monitoring both the status of the services and resources for the whole DL lifetime and by dynamically re-design of runtime DL topology.
- The **Broker & MatchMaker Service** promotes efficient usage of the Grid infrastructure through an optimal distribution of services and resources across Grid nodes. The algorithmic possibly explores the underlying Grid middleware negotiating and controlling it to match the DILIGENT needs.
- The **Virtual Organization Support Service** provides the necessary functionalities for managing the concept of virtual organizations. A Virtual Organization (VO) is a dynamic pool of distributed resources shared by dynamic set of users from one or more organizations in a limited way. The DILIGENT DLs will make use of this mechanism to glue together users and resources in the DL-limited environment.
- The **Virtual Digital Library (VDL) Generator Service** enables users/communities to create their own DLs. It permits users to specify a set of criteria expressing the expected characteristics of the open DL and then it identifies the services and information sources required to provide the requested features and content.

**Process Management**

- The **Process Design & Verification Service** provides the user with graphical tools for the design and manipulation of process definitions; furthermore, before a compiled service may be deployed, the provided validation functionality verifies that it obeys certain rules, so that the process can be considered safe for execution.
- The **Process Execution & Resiliability Service** is responsible for all actions pertaining to the actual execution of compiled services, i.e. for finding and allocating resources, starting, monitoring or stopping processes and handling process execution failures in accordance with transactional policies/spans.
- Within the **Process Optimization Service**, user and system parameters are being optimized prior to their execution by the actual services and components, under a risk, flexible and evaluation policy which takes into consideration a multitude of parameters and values. This attempt to address the challenge of resource mis-utilization, a phenomenon inherent in resource usage over a complex, dynamic environment such as the Grid.

**Digital Library Layer**

The Digital Library Layer (DLL) defines, implements and maintains a set of metadata and descriptive information (DILIGENT metadata) in the metadata repository. It is responsible for the metadata management and provides the metadata management services to the user. It also provides the metadata management services to the user. It also provides the metadata management services to the user. It also provides the metadata management services to the user.

Architecture Poster (Page 1)

**Diligent**

**Content & Metadata Management**

- The **Content Management Service** supports transparent access to the DILIGENT content storage nodes as well as to external content providers and facilitates the update and the creation of user objects via various techniques such as polling and notifications, while providing support for IEEE maintenance, replication and partitioning.
- The **Metadata Management Service** manages metadata for the description and enrichment of digital objects handled by the content management service.
- The **Metadata Broker** provides the broker for achieving metadata interoperability.
- The **Content Security** components face the challenges of security content storage and dissemination, safeguarding both Intellectual Property Rights (IPR) and content integrity via applied techniques such as signing, watermarking, etc.
- The **Annotation Management Service** offers integrated management of annotations for digital objects available on the DILIGENT platform, primarily multimedia content objects. Its main goal is to support international collaboration activities between distributed users of a DILIGENT Digital Library.

**Indexing & Search**

- Feature Extraction** offers the functionality for the analysis of media objects of various types; in particular it is capable generating metadata pertaining to image, video, audio, and text content. This generated metadata can be used to search for objects by its content and/or similar objects.
- The **Index Service** enables the search service by enabling efficient content-based retrieval. It will leverage state of the art search engines (i.e. Full-Text Libraries Search engines) for advanced text searching, and extend search functionality to other media objects by employing engine from feature extraction as well as other engines.
- The **Annotation Management Service** offers integrated management of annotations for digital objects available on the DILIGENT platform, primarily multimedia content objects. Its main goal is to support international collaboration activities between distributed users of a DILIGENT Digital Library.
- Content Source Description and Selection Service** registers, the distribution of content-based queries across search engines available on the DILIGENT platform, using statistics about the engines and their per-query outputs, the service normalizes and merges autonomously produced search results.
- Search Service** is the top level service of the Digital Library Management System, i.e. the one that is being composed in order to explore the major functionality of the entire engine. It is a complex engine which orchestrates the execution of the various underlying Diligent services under the user's request for information retrieval. Sources user structured, semi-structured and unstructured data, have to be sent out to the infrastructure for optimal execution, and return back to the requester the bunch of data he/she has been expecting for, potentially undergo complex processing or transformations.
- Through the **Personalization Service**, search queries are being pre-processed and new personalization information injected along with the user query data, leaving a direct result of adapting the returned information in specific user's needs and expectations, by means of user, accuracy, content sources, formatting, etc.

**Digital Libraries Powered by the Grid**

Architecture Poster (Page 2)

Figure 2: DILIGENT Posters

## 5 CONCLUSIONS

DILIGENT Dissemination Activities are considered as a very successful contribution to the accomplishment of the project's objectives because not only they have provided a rich set of dissemination material and support tools to partners but also because they have achieved to make the project widely known and quite respectful to the scientific world, specific user communities and in some occasions even to the general public.

Among the overall achievements of this period we include:

- ✓ Active participation to very important events delivering presentations on the project's progresses and findings, such as the GGF Conference, the ECDL, the EGEE conference and CEBIT.
- ✓ Acceptance of the first technical oriented scientific publications.
- ✓ Stimulation of new or existing collaborations through announcing or even demonstrating the DILIGENT infrastructure to interested communities, parties or institutions such as the Earth Science community etc.
- ✓ Production of valuable dissemination material.
- ✓ Maintenance of the project communication tools in a functional state.

In the following table we present a summary of the Dissemination activities performed in this year. A short description of the content of the table follows:

- "Type" refers to some categorization of activities and instruments beyond the basic "liaison" / "dissemination" ones, which would be quite poor.
- "Achieved" refers to the new events/material that have been performed/produced in the year, which this report refers to.
- "Planned" refers to activities that have been already fixed.
- "Foreseen" refers to events that are speculated for the next period and most probably will be surpassed by the number that will finally be achieved.

*Table 3: Summarisation of Activities*

TYPE	ACHIEVED	PLANNED	FORESEEN
Press Releases	-	-	1
Newsletter (editions)	-	-	1-3
Paper Publications / Presentations	2	3	>10
Conference Panels / Workshops	3	2	>4
Lectures / Tutorials	-	2	6
Project Presentations in conferences / meetings / other events	14	2	>10
Liases for collaborations (established)	3	-	5
User communities (contacts)	3	1	6
Material (Posters / Brochures / Base Presentations)	7	5	10
Tools (web-site)	3	-	2

The DILIGENT dissemination plan, as introduced in the DoW and refined in D4.2.2, is quite aggressive and goes beyond the typical publication and website-based dissemination activities. This has a direct effect on the cost of these activities, which is one of the factors to guide the extent of the Dissemination and Liaison actions to be taken by DILIGENT. Strengthening these activities with an extra budget allowed the project to revise previous considerations, and foresee even more ambitious targets for its final period.

Future Dissemination Activities have already been outlined in the D.4.2.2. No long-term detailed plan can be presented due to the nature of some of the activities (such as publications and collaborations) and the fact that they clearly depend on the progress of the technical work. These issues leave the place open for speculation as to the particular events that will be performed in the upcoming period. Fortunately, although DILIGENT's technical progress of work presents some delays with regards to the delivery of alpha release, it has already reached an exploitable level. As a result the first pure technical dissemination achievements have appeared and they are expected to grow rapidly in the year to come. Early evaluation of the results raises expectancies for the impact of the project to the Digital Libraries, Distributed Information Retrieval and the Grid communities, as well as the responsibilities for further dissemination and exploitation.



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