Web-based communication tools in a European research project: the example of the TRACE project

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The multi-disciplinary and international nature of large European projects requires powerful managerial and communicative tools to ensure the transmission of information to the end-users. One such project is TRACE entitled "Tracing Food Commodities in Europe". One of its objectives is to provide a communication system dedicated to be the central source of information on food authenticity and traceability in Europe. This paper explores the web tools used and communication vehicles offered to scientists involved in the TRACE project to communicate internally as well as to the public. Two main tools have been built: an Intranet and a public website. The TRACE website can be accessed at http://www.trace.eu.org. A particular emphasis was placed on the efficiency, the relevance and the accessibility of the information, the publicity of the website as well as the use of the collaborative utilities. The rationale of web space design as well as integration of proprietary software solutions are presented. Perspectives on the using of web tools in the research projects are discussed.
Keywords. Databases, Internet, project management, computer systems (applications), information systems, communication technology.

Outils web de communication à destination d'un projet de recherche européen : l'exemple du projet TRACE. Les grands projets européens pluridisciplinaires et internationaux nécessitent des outils puissants de gestion et de communication afin d'assurer la transmission des informations aux utilisateurs finaux. L'un de ces projets est TRACE, intitulé « Tracer les denrées alimentaires en Europe ». Un de ses objectifs est de fournir un système de communication destiné à être la source centrale d'information sur l'authentification et la traçabilité des produits alimentaires en Europe. Cet article explore les outils web utilisés et les moyens de communication proposés aux scientifiques impliqués dans le projet TRACE pour communiquer en interne mais aussi au public. Deux principaux outils ont été mis en place : un Intranet et un site web public. Le site Internet TRACE est accessible à partir de http://www.trace.eu.org. L'utilité, la pertinence et l'accessibilité à l'information, la divulgation du site web ainsi que l'usage d'utilitaires collaboratifs ont fait l'objet d'une attention particulière. La justification de la conception de l'espace web ainsi que l'intégration de logiciels commerciaux y sont présentés. Les perspectives quant à l'utilisation d'outils web dans les projets de recherche sont discutées.
Mots-clés. Base de données, Internet, gestion de projet, système informatique (applications), système d'information, technique de communication.

1. INTRODUCTION

In addition to classical ways of communicating to the public (media and press) or among scientists, through peer-reviewed publications and scientific congresses, web tools have become a major information channel (European Commission, 2004a) and offer alternative avenues of communication. An opinion poll analysed in June 2001 showed that 16.7% of European citizens judged the Internet as the most important source of scientific information (European Commission, 2001). A 2005 survey revealed that European citizens believed that computers (87%) and the Internet (78%) would have a positive effect on society in 20 years time (European Commission, 2005a). The increasing use of the Internet by society has introduced new

methods of communication and management. These new methods are ideally suited to be applied to large multi-disciplinary research projects funded by European Union Framework Programmes that aim to produce a "European Knowledge Based Bio Economy" (European Commission, 2007).

It is against this background that the TRACE project was commissioned in 2005, through the European Commission's 6th Framework Programme. TRACE is defined as an "Integrated Project", *i.e.* very large and multi-disciplinary. The coordination of a project of 19 M € in size, comprising over 52 institutes, more than 250 workers from three continents is particularly challenging and requires considerable investment in management and communication infrastructure. This paper describes the development of an ICT based management and communication system that allows some degree of freedom, through customised webspace enabling the project the benefits of functioning as a virtual institute, as well as providing managerial and team building advantages of a corporate body.

TRACE is multi-disciplinary in nature (geochemistry, chemometrics, molecular biology, social sciences, information management) and aims to develop traceability methods and systems that will provide consumers with added confidence in the authenticity of European food. **Figure 1** shows the complexity of the project through the interdependence between the 5 generic groups and the 13 work packages.

2. WORK APPROACH

This paper is dedicated to explore, on the one hand, the communication tools used between the scientists, and on another hand the tools used to communicate the science to the target public. The objective of this paper is to analyse which tools are useful nowadays to help manage a large, international scientific project and to effectively disseminate the results.

The resulting information and communication system had to address the following goals:
- To develop and exploit a communication and dissemination system that will be the focus of European information on food authenticity and traceability;
- Become the prime and secure source of internal communication and project information for the consortium;
- It must reduce the need for multi-recipient emails;
- It must negate the need to email large documents;
- It must provide improvements in the ability of the management team to effectively communicate with the consortia;
- It must be able to store several thousand of files that are generated in the project.

To achieve this aim, the next two sections will describe the tools developed, used or assessed to communicate firstly inside and secondly outside the TRACE project consortium. The two main tools which will be described are the Intranet and the public website (http://www.trace.eu.org). They have been
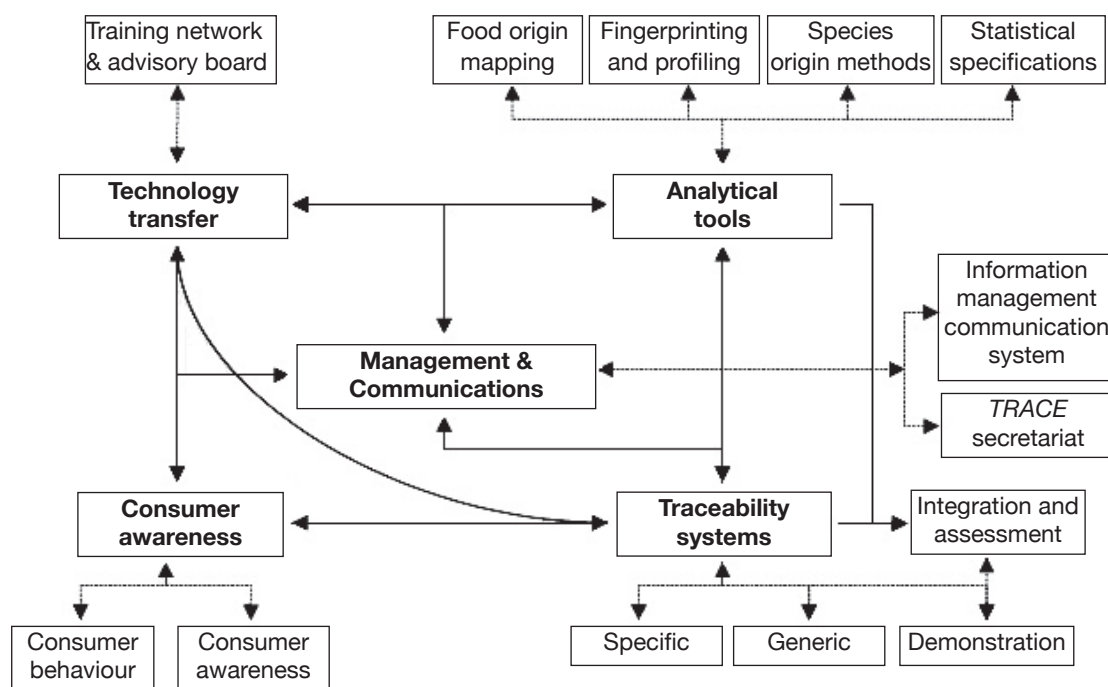

Figure 1. The TRACE project organisation — *La structure organisationnelle du projet TRACE.*

built, based on the work developed within the FP5 STRATFEED project (Vermeulen et al., 2003; 2005; Walloon Agricultural Research Centre, 2003). In this project, the used web tools are really collaborative utilities, allowing each partner to contribute directly to the Intranet and website. This is an innovative feature of the TRACE project, providing advantages by implementing lessons learned from the STRATFEED project. The challenges to be addressed included providing tools for communication, a central storage facility for common documents, restricted work areas to protect intellectual property, methods for populating the internet website, whilst promoting integration within the project. For example, one of the drivers was to find a way to allow all members of the project to add information to the website, unlike in the previous project where the webmaster was the indispensable link to publish new information. This would not only result in less reliance on one person and a more rapid update of the information but would allow everyone to contribute. In the last section, the TRACE example will be used as the base for discussion and perspectives regarding the communication systems in such European research projects.

3. COMMUNICATION TOOLS BETWEEN THE SCIENTISTS IN THE TRACE PROJECT

In an interdisciplinary project involving several hundred participants coming from different institutes through Europe, the main challenge for the coordination team was to ensure the communication between the actors (partners, work package leaders, coordinator, European Commission, advisory board) which have their own personality, culture or experience. For the communication between the partners, in addition to the conventional methods of communication (*e.g.* telephone, meetings, reports) there are now many new tools available to help the project coordinator and the researchers. In the framework of the TRACE project, the scientific committee decided to centralise the communication inside the consortium around the Intranet to facilitate the exchange of information between participants, to encourage them to collaborate and to manage the project in real time (Vermeulen et al., 2006b). To implement the Intranet, the Microsoft Windows SharePoint Services 2003® release 2.0 was selected and installed (Microsoft, 2006b). The successful experience of some partners with MS SharePoint directed the choice to this software. To ensure the confidentiality of the information and data, a website secure server certificate (SSL128) was installed and personal logins and passwords delivered to each TRACE partner giving him access rights depending on his management level in the project. To

facilitate the communication between the actors of the project, different tools and functions are available such as TRACE mailing lists, alert system and discussion boards.

The Intranet is a secure site and is accessible by the project members from the public website or directly via the web. It is managed by the webmaster in close collaboration with the coordination team and the scientific committee. **Figure 2** shows an overview of the Intranet homepage.

3.1. Internal communication

A key point for ensuring the success of an internal communication vehicle is to enforce its use. It was agreed at an early stage in planning of the project that the Intranet would be the only major internal communication route for the consortium. This strategy was enforced despite initial resistance (preference for e-mails) by reluctant users of the new system. After two years of the project, utility of the system is nearly 100% and the system has expanded in size as users have taken advantage of the system's ability to provide additional customised workspace.

The Intranet includes "announcement" and "events" items, displayed in the central frame of the homepage. They crucially inform all the partners about the project management and announce the meetings scheduled in the frame of the project. To be sure that all the partners are well informed, an automatic alert e-mail notifies each of them when an announcement is made or an event entered. Meetings held for the consortium, the work packages, the scientific committee, the project management board and meetings organised for the European consumers' organisation (BEUC), the advisory board and the European Commission as well as workshops and training sessions are displayed in an "events" section. Each event can be linked to a workspace dedicated to give information about the attendees, the agenda, the presentations, the report and any document concerning the event. Each workspace is managed by the meeting organiser and access is restricted to members of the relevant group.

The common documents produced in the frame of the TRACE project by each workgroup are stored under the topic "libraries". A short description displayed at the top of the library mentions to the user the content and the access rights. The subtopic "Consortium documents" is dedicated to documents produced by the TRACE consortium. In the general documents section, each document can be classified regarding the work package (WP1 to WP14), the deliverable, the type of document (EC document, template, reports, etc.) or the type of file (doc, pdf, jpg, etc.) in order to be able to retrieve them quickly through the predefined views. Other sections include documents regarding

Figure 2. The TRACE project Intranet homepage — *La page d'accueil de l'Intranet du projet TRACE.*

contribution to standards, dissemination activities, financial or intellectual property aspects. This library can be accessed by all members of the consortium. The other libraries "Training documents", "PMB documents", "SC documents" and "Advisory Board documents" are dedicated to documents produced by the trainers for the trainees, the project management board, the scientific committee and the advisory board and have restricted access.

The "lists" topic is dedicated to collect information about each partner and institute as well as information for the public website. To manage 250 people issue from 52 institutes involved in different workgroups, subtopics "Contacts", "Institutes" and "Pictures gallery" have been created. In the subtopic "Contacts", each partner can add and update its own information (address, function, role in the project, etc.). This information is only used for the management inside the TRACE project. Different views have been defined to retrieve easily a list of people with the same role in the project (Scientific Committee, Group1, WP13, trainees, etc.). The subtopic "Pictures gallery" displays the photos of each partner. In the subtopic "TRACE Institutes", the managers can provide and update information concerning their own institute (description, expertise in traceability, activities in TRACE project, public contact, logo). This information is also used for the public website. The subtopic "Other Institutes" is dedicated to provide information concerning institutes working in the traceability domain and involved as sub-contractor or training participant in the TRACE project. Through the subtopics "Public news", "Public events", "Public bibliography", "Public documents" or "Public glossary", each partner has the opportunity to provide input to the public site through news, events, bibliographic references, TRACE documents or abbreviations and specific terms definition regarding authenticity and traceability. All the information dedicated to the public website has to be validated by members of the scientific committee or by the web-correspondents before it is included in the relevant databases and to be disseminated on the Internet. Again this validation process is performed "on line" using the system.

3.2. Management at WP level

The system also provides "Work area". This provides secure internal partitioning of workspace and allows the partner to share drafts within his work group. Such security is valuable in addressing IP concerns and ensuring that the workspace is used. This work area is divided into 5 generic groups including 13 work packages areas matching the structure of the project. Each work package leader is free to organise the documents as he wants, through a library to upload the documents or through a sub-Intranet he can manage himself. One of those work areas is dedicated to the management of the collection of data about the samples collected during the project. The workspace contains templates and MS Excel files containing data on sampling and analysis of 2,000 food samples. MS Excel files system was selected to offer to the samples' collectors a well known, easy and flexible tool with useful functionalities to record the data. Each data provider can edit the file on line and update it. To manage the samples and files, a coding system was defined in order to have an unique code through the project and avoid any confusion. The building of one file for each person responsible for sampling allows the management and data validation. For each file, one sampling or site responsible person has the responsibility to check the data relevance and to validate them. The data manager can follow the data collection through the version history and through metadata regarding each file (modification date and status). Once the data are validated, they are imported in the central samples database.

Additional work areas have been defined for the main working committee of the project (scientific committee), for the gender issues workgroup and for the ethical, legal and social workgroup.

3.3. Management tools

The system also provides tools to manage the project and the deliverables. The section "Planned deliverables" allows everyone to follow the status and the progress of each deliverable. Each work package leader has the responsibility to update the status of their deliverables. The different views give quickly an overview of the tasks, the tasks due today, the active tasks or the tasks assigned to other partners. The section "Completed deliverables" includes the final documents regarding the official deliverables of the project. To help the coordination team in the management of the project, it was decided to use a project management software. MS Enterprise Project Management Web Access (Microsoft, 2006a) was installed and assessed. This software was selected since some WP leaders had experience with the local standard release and for the compatibility with other MS products. The advantage of the web access release is to allow to each WP leader to manage the tasks of their work package and to each participant to follow up their work through the web. Nevertheless, the researchers seem not yet ready to use such software, which is quite new in the research world and requires some skills.

According to the TRACE consortium agreement, a specific space with restricted accesses has been created to manage the "Clearance of publications". A procedure has been defined through the Intranet

site for the submission of a publication by a scientific committee member and the approval of a publication by the project management board.

All those functionalities of the system are explained through a Question/Answer topic, "FAQ" to inform the partner, regarding the Intranet use. This topic, combined with initial training activities, has reduced the need for a formal "Helpdesk". Initially the webmaster received ten enquiries a week; this has reduced to four a month after two years of the five year work programme. It also includes a discussion board open to each partner to debate about any question regarding the project.

To monitor usage of the Intranet, the number of hits by each partner is registered by the MS SharePoint analytical tool. The analysis of those numbers show that 95% of the registered partners accessed the Intranet at least one time and 50% use the Intranet regularly. Since the start of the project, an average of 4,500 hits have been registered each month with peaks of up to 10,000 hits during months where meetings of several work packages are planned. Even so, analysis of the data reveals that the managers of the project have a much higher usage than participants, suggesting that the primary function of the system is management and, to some degree, one way communication.

4. EXTERNAL COMMUNICATION: PUBLIC WEBSITE

The main objective of the TRACE website is to disseminate European information on food authenticity and traceability, as well as information regarding the project itself to several target audiences: to the scientists through the description of analytical methods, international congresses, peer reviewed publications, training sessions and workshops; to industry through standards delivery, good traceability practice guides and demonstration activities; to consumers through brochures, workshops and collaboration with BEUC; to the general public through bibliographic references database, e-newsletter as well as news and events on line (Vermeulen et al., 2006a). It also serves to promote some activities required by the EC including the gender issues or the ethical, legal and societal issues.

From the technical point of view, the versions PHP 5.0 and MySQL 4.1.7 have been selected to implement the public website. All web-related code is in compliance with all the W3C-standards, especially validated markup (XHTML 1.0) and styles through validated style sheets (CSS). To ensure the security of the system, the website is installed on a dedicated server and protected by a firewall and an antivirus software. To avoid the display, and potential spam abuse of personal e-mail addresses on the website, generic TRACE e-mails have been created.

In the communication services, brand and design are very important. To develop a project face, both to the participants and the public, a logo and layout were produced using a professional designer. The logo represents the traceability symbolised by a green ball travelling through a blue line from right to left through the project name: TRACE. Several releases (colour, black and white, full or reduced) have been created in order to be used in all the templates and documents produced during the project. The website layout was designed to be as simple as the logo, without too much embellishment in order to drive the visitor directly to the main topics and to facilitate the quick downloading of the web pages. It includes five pictures showing the commodities to be used in the demonstration activities: mineral water, cereal, honey, meat and chicken.

The website accessible at http://www.trace.eu.org is conceived on two levels: a main homepage on food authenticity and traceability information and a secondary homepage on the project itself. The main home page is divided in three frames: the main frame displaying events and news including those for the TRACE project, the left frame with general topics on traceability and authenticity and finally the top frame with links to the project homepage and to contact and sitemap web pages.

In this project, the developed web tools are really collaborative utilities, allowing to each partner to contribute directly to the Intranet and website. The events and the news displayed in the main frame can be provided by all the partners through the Intranet with approval by the web-correspondents and notified to the webmaster before it is published, as explained in the previous section. On another hand, by using login and password, the web-correspondents, representative of each workgroup and country, can put directly information on line by accessing to the news and events administration tool.

One issue in interdisciplinary projects is that each discipline requires a different approach when communicating to their target groups (scientists, industrialists, consumers). To meet those requirements, a specific space was dedicated to each group. So, in the left menu of the main homepage, the visitor can find three items on traceability and authenticity: "Food authenticity" explaining the food analytical methods, "Food traceability" showing an overview of the traceability systems in industry and "Consumer issues" giving some information available for the consumer. On another way, six bibliographic databases (events, news, useful links, press releases, documents produced in the frame of the project and external publications) published through Reference Manager Web Publisher 11.0 have been initiated (Thomson ResearchSoft, 2004). They are updated throughout the lifetime of the project to produce a comprehensive information resource on

traceability and authenticity. The visitor can find a reference by displaying the library corresponding to the type of document he is searching (events, news, links, TRACE publications, press releases) or by using the references' search tool. Below those items, several main TRACE deliverables (brochures, video, Molecular Biology Database, Food wiki) are directly accessible and a picture illustrating the current TRACE major event leads the visitor directly to the registration on line or to the proceedings. In the bottom of the left menu, a Google search tool allows the user to find easily what he/she is looking for on the TRACE website.

From the top menu, the visitor can access to the project homepage showed in **figure 3**. The main frame displays a short description of the project. In the left menu of the project homepage, the topic "Work Programme" gives the visitor an overview of the objectives to be reached by each work package. The next one, "TRACE partners" gives a general description of each partner, including his expertise in traceability and his contribution in the project. The "TRACE results" gives a direct access to the public deliverables produced by the project. The contribution of the TRACE project to the gender issues and to the ethical, legal and social issues are explained in the "Horizontal issues" topic. The role and function of the "Advisory board" are also defined in the next topic. Presentations shown during the workshop sessions and the annual meeting, are available under the topic "Events" by using the Adobe Flash Player (Adobe, 2005). The following two items lead the visitor directly to the lists of TRACE "Publications" and "Press releases" regarding the project. The last two items are reserved for partners ("Intranet") or for web-correspondents ("News admin"). The bottom of the left menu is identical to the menu of the main website.

The key issue of success for the website is the supply of relevant information. It is collected in close collaboration with the coordination team, the scientific committee, the web-correspondents and the members of the consortium through the Intranet tool where specific areas have been defined to register the information and to validate it before it is disseminated on the Internet.

To evaluate the frequency of access to the site, Advanced Web Statistics 6.4 (AWStats, 2006) was used to record the relevant statistics from January 2005 to July 2007. On average 17,800 hits a month were counted in 2005, 46,700 hits a month in 2006 and 75,000 hits a month in 2007. To analyse in more detail the visitor profile, the Google analytics tool (Google, 2006) is also used for March 2007, giving some interesting overviews in the form of graphs and maps. On average 6,700 pageviews a month were counted during 2007, 6,600 pageviews a month during 2008 and 7,000 pageviews a month during the ten first

months in 2009. It can be seen that each year peaks were achieved in March and April, linked to the annual meeting of the project planned in April. During the period from March 2007 to October 2009, 59,321 visits were registered. A large part of the visitors came from Europe but also from USA, Canada and China. Around 50% accessed to the TRACE website through a link from search engine (Google), from partner institutes (AUA, VSCHT) or from other project websites (PETER) as displayed in **figure 4**.

5. INNOVATIVE ASPECTS OF THIS COMMUNICATION SYSTEM

Having discussed both types of communication that this communication system achieves, based on the internal and external website, we will try to summarize the systems' innovative aspects in order to meet the requirements of the scientific community and serve as a facilitator for the better communication of individuals ("scientists") in different locations and of different disciplines. It must be mentioned here, that this communication system had to be developed obligatorily, as nowadays, most the European research projects include in their work program, the development of a website for the dissemination of the results and the use of an Intranet to manage the project and to communicate inside the consortium. Its innovative aspects can be separated into three levels:
– the level of the efficiency of the website;
– the level of the accessibility of information;
– the level of the publicity of the website.

According to the first level, the first criterion is to provide to the visitor/learner relevant information adapted to the different public targets according to the research topic so that he/she gets and learns easily the information provided. To become the leading provider of information on authenticity and traceability in Europe, the TRACE website offers:
– together information in quantity, covering all disciplines and all European countries, and in quality, provided by the scientific committee through a process of validation of the information;
– the news and events are published quickly on line by a network of web-correspondents, representative of each workgroup and country, using the news and events administration tool;
– the information is displayed in an attractive way, under a good looking layout, using a clear and simple text message including graphics and pictures and is updated as often as necessary;
– the lectures and posters of the TRACE annual meetings are available using a user-friendly tool: the Adobe Flash Player.

Figure 3. The TRACE project website homepage — *La page d' accueil du site web du projet TRACE*.
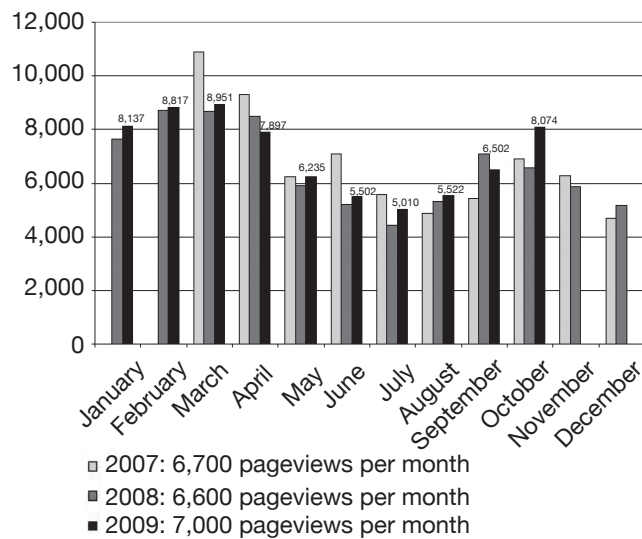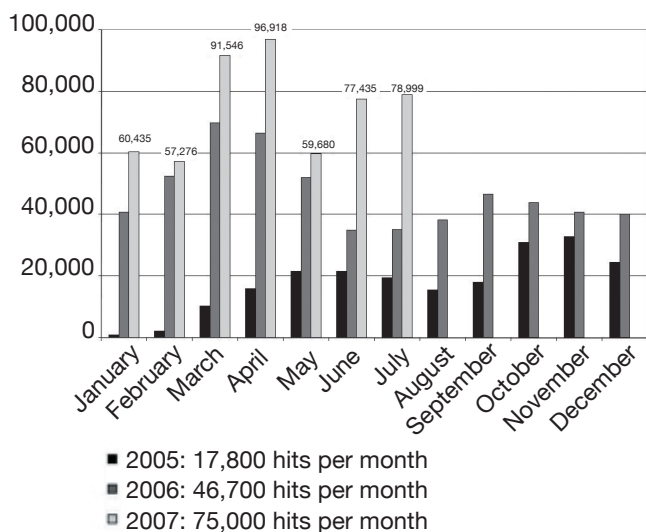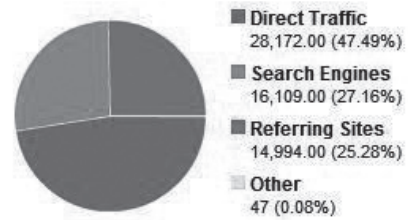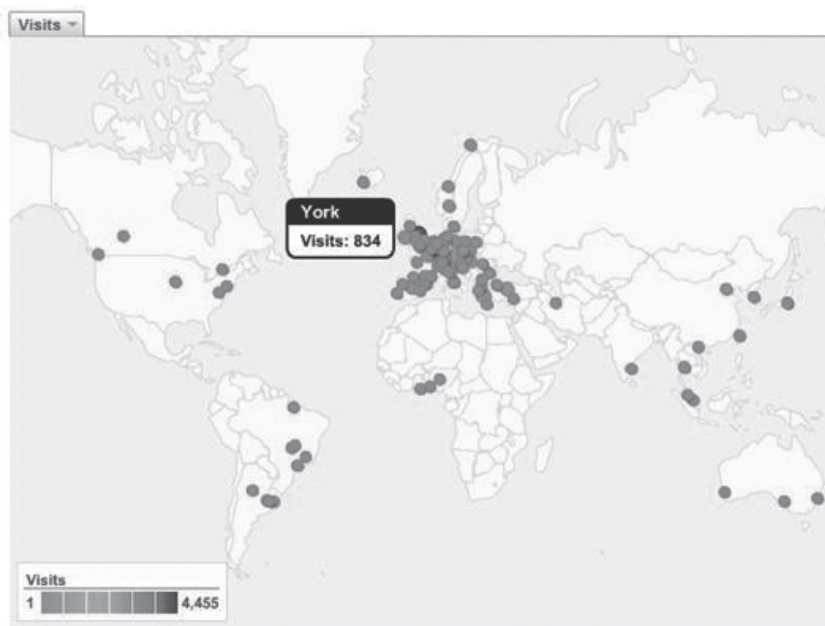
Figure 4. An overview of TRACE website statistics between January 2005 and October 2009 — *Un aperçu des statistiques du site web de TRACE entre janvier 2005 et octobre 2009.*

All the documents in relation to the traceability and the authenticity, including lectures, papers, reports, books and electronic links, press releases, news, events are stored in a bibliographic references database.

The accessibility of the information is the second essential criterion for the visitor. To improve the accessibility, the TRACE website:
– proposes forward and backward navigation ways, a rapid loading and search tools;

– the Google search tool applied to the TRACE website and the Reference Manager tool applied to the TRACE bibliography database are available.

As any media support, a website need to be known to be seen, covering the third level of its innovative aspects. This is done through:
– improving the access to the TRACE website. To achieve this, the coordination team encouraged the

use of the TRACE logo, templates and links to the website in any TRACE document;
– including several websites of other food projects;
– disseminating the information in a quick way on other websites, for example the PETER project website (http://www.eu-peter.org);
– analysing the accesses to the website by using the analytical Google tool. This allows the adjustment of the communication strategy.

Regarding the Intranet, the objective is not only to provide a restricted access space but also to provide really collaborative utilities, allowing each partner to contribute directly to the Intranet. In the TRACE project, the MS SharePoint platform, offering a large range of functionalities, was selected rather than other tools, for the wide using as Intranet tool and consequently the higher facility to use it. Most of those functionalities are explained in the section 3 of this paper.

6. DISCUSSION AND PERSPECTIVES

As showed in the previous sections, through the example of the TRACE project, interdisciplinary research projects as Integrated Projects (IP) or Networks of Excellence (NoE) share lot of information and involve collaborative work amongst institutes from many countries with different experience. Such projects require specific tools to communicate between partners inside the project and to disseminate results to and outside the scientific world.

Regarding the communication between partners, beside the conventional communication ways (*e.g.* telephone, meetings, reports) there are many software tools to help the project coordinator and the researchers, from shared workspaces to project management tools, from web meeting to web content management. All of these tools can work if all participants can use them.

Tools like the Intranet are being used more frequently to collect and share documents and data. They can be considered as the main communication tool inside a project, as long as the coordination team and the work leaders support this idea. Based on the statistics for the TRACE Intranet, it is clear that there are some differences in amount of use according to the function (leader/participant) and the purpose of the study (analytical tool, traceability system, consumer aspect, training organisation or project coordination). To improve the use of such web tools, we should think of the development and harmonisation of an universal platform to decrease the learning time for the researchers involved in a lot of projects.

Discussion forum tools do not seem to attract the participants of the project. The few general subjects posted on the forum of the Intranet did not receive a lot of exchanges from the partners. Can the research topics be debated through a virtual tool? Or are the scientists familiar with such tools?

Project management tools are rarely suitable for the research world and are not yet used in the small-size or medium-size institutes. Software that requires extensive adaptation or web skills are poorly suited to short duration EU projects where the emphasis must be on the research, not the support tools. Probably in some years when such tools will be used more largely in the research institutes and so the skills acquired, it will be easier to require the project participants to use such software.

Web meeting tools like MSN Messenger, MeetingOne or Webex, which can work in an IT environment may not lead to creative collaboration amongst researchers. On another hand, those tools could help in the coordination or the project management as long as all the work leaders can use them. Very often, the IT infrastructure in some institutes has to be improved to increase the connection speed or the security system has to be modified to allow the communication through those tools.

The goal should be a harmonisation in the support tools to optimise the time spent by the researchers on the research and not on the administrative tools. Some companies are developing tools setup for European Projects according to the requirements from the European Commission. The web-based tool ProjectCoordinator (DesignTech Innovative Project Solution, 2006) proposes to the project coordinators a package providing not only project management tools, but also a web content management and document management; perhaps a way to follow for the future.

Regarding the dissemination of the results for the public, beside the website, several ways to communicate can be used: television, radio, web or written press, press conferences, publications, conferences, network, newsletter, exhibition stands. The dissemination tools have to be selected depending on the target audience and the stakeholders involved (consumer, industry, European Commission, etc.). Whatever the dissemination tool used, scientific results should be in a form that is understandable by the target audience.

Is the research one thing and the communication of the science another one? Rarely does the scientist have both skills and the communication is very often his last priority. Even if 60% of EU citizens approve the statement that "scientists put too little effort into informing the public about their work" (European Commission, 2005b), 52% think that the best qualified to explain science and technology impacts on society are scientists working in the public sector (university, governmental institutions). Confidence in television and in the written press stands at 32% and

25% respectively (European Commission, 2005c). It is the reason why a scientist communicator should be integrated in any project as a link between the scientists and the public in the same way as an IT scientist is included in a research project as the interface between the scientists and the IT team.

To help the scientists to communicate their work, the European Commission funds several initiatives such as the conference "Communicating European Research - CER 2005" (European Commission, 2005d). Several science communication resources are available and the networking of science communicators is a well used methodology across Europe (European Commission, 2004b): one of them is the FP6CommNet (http://www.commnet.eu/) created in 2005 (Boerresen et al., 2006). This is a network of communicator scientists and communication managers involved in FP6 Food projects aiming to improve dissemination and communication of the EU food and health research. The goal of this network is to share the experiences on communication point of view in order to try to give some guidelines to manage communication and dissemination in the scientific European projects. Some Specific Support Action (SSA) projects funded by the European Commission can provide the support for the results dissemination. The SSA PETER (http://www.eu-peter.org) aims to disseminate the results of European research projects on food traceability.

Some companies (SingleImage, 2006) or some European projects as ENSCOT (Miller, 2000) organise training and workshops to advise and assist the scientists regarding communication tools for EU research projects. On another way, some companies (EurActiv, 1999) provide their services and experiences in journalism, information and communication as well as Internet technology to help project coordinators in the dissemination and the communication of the scientific results. One way for the FP7 European projects could be to involve such companies with communication skills in the partners' network.

One key goal for the communication and dissemination in an interdisciplinary project is probably to include in the project, people with a wide range of skills including an in-depth expertise of the scientific activities in the project as well as skills in the perceptions and interests of the consumer, media relations, information technology, design, communication strategy. Another key aim is to propose to the various workgroups (research, industry, consumer, authorities, media, etc.) adapted tools to communicate together and to disseminate their work. The communication and dissemination tools to be used in multi-local and interdisciplinary projects as NoE and IP, should be the same tools used in a multi-department and multidisciplinary research institute with communication, administrative, financial, legal and IT

services. The issue is to define inside a research network, the best tools easy to use and adapted to all the countries, cultures, and levels of skills and to impose them.

Acknowledgements

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