# NETWORK COLLABORATION TO IMPROVE SCIENTIFIC INTELLIGENCE

By

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#### Abstract

Cemagref is a French institute in agricultural and environmental engineering. Cemagref reports to both the Department of Education and Research and the Department of Agriculture and Fisheries. It employs about six hundred researchers.

Research work is conducted within four scientific divisions:

- Freshwater systems management
- Water and environmental engineering
- Land management
- Agricultural and food engineering

Cemagref has ten regional centres scattered throughout France. In Lyon, researchers work on freshwater systems management and particularly hydrobiology, ecotoxicology, hydrology, hydraulics and water quality.

On each site, librarians work in collaboration with scientists, their main role being to satisfy researcher's information needs.

This paper addresses the new aspects of the librarian's role in Cemagref institute.

#### Webmaster

In Lyon, the librarian has responsibility for the website.<sup>(1)</sup> We have to liaise with computer specialists, public relation officers and scientists, design the Web site architecture and a common structure for the research team's web pages. We have to define information that can be circulated on the Intranet and Internet sites. Afterwards we will have to register our website with different engines and promote it.

The development of new information and communication technologies is changing the traditional model of scientific communication, offering various information storage and exchange possibilities to researchers. For example, it was proposed that the last theses that were produced in Cemagref are made available in portable document format (PDF) on Cemagref Web site.

We need to inform researchers about these new possibilities, so that we become an essential link between new information media and the scientific staff.<sup>(2)</sup>

#### Network Collaboration

An Intranet web section providing scientific and technical information to researchers and other users has been developed by the Cemagref librarians.<sup>(3)</sup>

The objectives of this section are:

- To help researchers to find a document in Cemagref.
- To guide researchers as they search for information on the Internet (we have selected relevant web sites on fresh water, environmental and all Cemagref

topics. For each site an explanation is given. Chosen links must be the best for each topic. Current Awareness services have been developed

- To provide some tools:
  - To conduct bibliography searches with Current Contents
  - To help scientists to create their own bibliographic databases.
  - To prepare bibliographies for scientist's reports.
  - To select free databanks for bibliography or fact searches using databases such as UNCOVER, Article@inist, ASFA, Eaudoc
  - To give the means to identify forthcoming conferences.
  - To give access to electronic journals (contents pages and full text)
  - To promote use of contents alert
  - To provide access to the Cemagref photographic library

The files are updated on a regular basis and the information professionals are organised within a network structure. For each topic, there is a leader, whose main purpose is to identify the relevant Internet sites, in order to test them with scientists, and then, to promote this selection and later to update these data.

Library staff collaborate in choosing common software and compiling a Cemagref thesaurus has made the organisation of this Intranet Web section easier.

# Training

We regularly organise training sessions entitled 'searching on the Internet' for users, in order to make access to information easier. During these sessions, we promote the use of the Intranet Web section.<sup>(4)</sup>

## Scientific Current Awareness

Scientific Current Awareness was conducted for the ecotoxicology research team.

This was carried out in four stages:

 Collecting information sources in the field. These sources included paper documents, CD ROM, serials, Internet sites, databases and factual databanks such as HSDB, ECDIN and AQUIRE. We helped scientists to create their profiles on Current Contents (Agriculture Dialected and the science of the second sec

Biology and Environmental Sciences) and on Aqualine on CD ROM. All these tools were then displayed on an Intranet page.

- 2. Working regularly with each scientist of the team to fill out a questionnaire, in order to determine:
  - How often they use these tools
  - How many relevant references they found with each tool that we chose together<sup>(6)</sup>

We also looked for overlap between these tools (Current Contents, serials, Aqualine, ASFA).

We encouraged scientists to update their bibliographies regularly. We optimised the use of these tools and validated the different information sources.

- 3. We defined a survey organisation chart which showed the frequency of tool use and the search methods used.
- 4. We used a statistical programme to determine:
  - When and how a subject is developed
  - What were the current subjects of interest
  - Which authors work on these subjects

#### Conclusion

Cemagref's Intranet success is due to a good collaboration and complementarity between computer specialists, librarians and scientists.<sup>(5)</sup>

A real dialogue took place between all these people who shared skills.

Information professionals have had to improve their competences on these new information media, they must now have a good command of electronic publishing. My colleague, Sebastien Saunier, will present our work on electronic publishing.

Far from depriving professionals of their work, these new information media allow them to enhance their ability to process and circulate information.

We must adapt to researchers needs and expectations. Some of these users are already very aware of these new media so we must satisfy them. For the others, we need to help them to discover the advantages of such tools.

## References

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