



MAX-PLANCK-GESELLSCHAFT



## An Innovation Center of the Max Planck Society for Information Management

This proposal is the result of discussion of the Steering Group of the Project Electronic Information Provision of the Max Planck Society:

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The technological revolution in the field of information processing and communication can only be compared to the introduction of writing and to the invention of book-printing. It confronts science with two of it. In particular, disciplines dealing with the structures of social and cognitive systems are challenged not only to reflect the restructuring processes of science accompanying the information revolution, but also shape it.

To date the humanities, but also the behavioral and social sciences have not been able to make use of the rapid dynamics of information technologies to a similar extent as is the case in the sciences. As the humanities compete with junk information, the electronic representation of the cultural knowledge media language corpora, or electronic translation interfaces – to name just few examples – are developed and used occasionally, but they are far from forming an integrative part of the research routine in the humanities.

Even in the sciences the new possibilities of knowledge representation offered by the electronic media are up to now used only within the framework of a traditional research infrastructure. In some areas there are isolated innovations based on the new information technology, but its potential is not yet generally used for advancing the structure of the scientific working process. In the life-sciences, in physics, in the geological sciences, and in astronomy large data-bases of research results are available world-wide for a global communication on their interpretation. Learned societies like the Deutsche Physikalische Gesellschaft begin to publish research reports in electronic form only. But since an infrastructure that allows to generalize this developmental dynamics is still missing, it often looks as if the “Wheel is re-invented”.

Although the technical conditions for access to scientific information, its processing within the scientific research processes, and its dissemination have changed radically, generally established solutions are still missing for such basic problems as the standardized structuring of electronically represented scientific information, the development of instruments for their processing according to the needs of researchers, establishing long-term solutions for archiving electronically stored information, determining suitable dissemination strategies for research results, and finally the optimal provision of scientific institutions.

In view of this transitional situation, research organizations like the Max Planck Society have not only to re-define their information provision policy, but they have to make an important contribution to shaping the future infrastructure of science. They have to raise their voice in order to represent the specific needs of science in a process of transformation which is determined by a manifold of interests not necessarily congruent with those of science. The wide scope of the disciplines represented within the Max Planck Society and the resulting variety of challenges in the use of electronically represented scientific information stand for a unique innovation potential which should be used for the achievement of this task. By coordinating and concentrating the expertise in the area of information management, the Max Planck Society can enhance its possibilities to successfully defend its interests with regard to external providers of scientific information such as commercial publishers (collective bargaining) and at the same time make optimal use of its internal resources.

An Innovation Center of the Max Planck Society for Information Management should consist of a component for developing long-term models for central services (e.g.

the provision of the Society with electronic journals and data-bases), and a flexible task-force, supporting Max Planck Institutes in their local information management tasks and transforming these local experiences into the basis for the development of generalized solutions. The combination of these two components should guarantee that in a rapidly changing environment services are always up-to-date and that innovative solutions created by the task-force can be broadly implemented. Through a special funding within the framework of the Research Initiative program of the Max Planck Society, institutes can – together with the Innovation Center – realize projects requiring advanced instruments for information management

In close cooperation with research projects of Max Planck Institutes, the Development Component of the Innovation Center aims at

- enlarging the access to research resources
- implementing existing international standards
- developing software-instruments for the management of research information (project-server, digital archives, data-mining tools)
- making available solutions for standard problems and advising the institutes concerning their implementation
- participating in the development of standards for structuring complex research data
- developing novel dissemination and evaluation models for research results

- finding solutions for the long-term availability of electronically represented scientific information

In close cooperation with the existing information management facilities of the Max Planck Society, the Service Component of the Innovation Center aims at

- maintenance, testing and adaptation of existing software tools that facilitate the application of new information technologies by scientists of the Max Planck Society. The Service Component could provide the necessary technical support as well as identify and evaluate new ones as they become available.

The Innovation Center should be founded for a limited time-period of five years, and should be advised by a board of representatives of all three sections of the Max Planck Society. Its core group should have roughly the size of a “Nachwuchsgruppe”. Its foundation should go along with further support for and possibly a reorganization and enhancement of the present information management services of the Society, distributed over several locations. While the Development Components should closely interact with cutting-edge information management projects of the Institutes, the Service Component should integrate the should be administratively integrated and be customer-driven. Failure to serve the information needs of MPG scientists should result in the rapid termination of the Center.