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# **Experimental platform for public and private decision making. Project outline.**

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**This platform will be based on the two experimental laboratories that exist in Brittany (one in Rennes located in the University of Rennes 1, the other one located in the ENST Bretagne in Brest).**

**This project's purpose is to ensure the connection and synchronization of these two facilities (on the technical sense), to propose a program of experiments aiming to study the individual and collective behaviours and uses in network environment such as Internet, and to develop tools and methodologies in order to analyse the data collected during these experiments.**

## Project Objectives.

Currently, the two laboratories are run separately. However; their connection and synchronization would lay several advantages:

- possibility of studying behaviours at distance or in networks, by realising experiments that will connect relate individuals from the laboratory in Rennes and the one in Brest;
- possibility of increasing the number of subjects and hence, of collecting more data for the statistical analysis;
- possibility of sharing resources and competencies (human and technical ones).

The project comprises three stages:

- the first part aims to ensure the connection and synchronization of the two laboratories on the practical aspect;
- the second part consists of a program of applied experiments which will be carried out jointly in the two laboratories. This program would enable to validate the effectiveness of the regional platform and to improve its operations (technical and methodological ones). The experiments will deal with a transverse theme in Social Sciences: the logics of collective and cooperative actions which will be dealt under the view of networks in this research. How can a cooperative partner emerge and last efficiently in a networking environment (such as Internet, Intranet, or Extranet)? What are the factors that facilitate or fragilize network coordination? This question is of interest, in the first place, for companies which have to coordinate more and more their activities with electronic networks (internally with suppliers and customers), but also for regional authorities which are able to stimulate the network coordination of private actors (through the support they provide to the development of network infrastructures or events to educate and sensibilize to ICT uses) and consequently to reinforce the attractiveness of the region.

The experiments carried out on the experimental platform will tackle more precisely the questions of information, opportunism, reputation and incentives in the framework of recurrent network relationships (online communities, e-commerce, Intranet and Extranet). They aim to identify and define the technical, behavioural, psychological and institutional factors that could encourage or destabilize collective action in network.

- The last part of the project will deal with the development of tools and methodologies to support the analysis of the data collected during the experiments.

## Significance for research.

This project will imply three main outcomes.

On the one hand, it aims to make the experimental platform a reference in France, technically and operationally speaking (most of the laboratories operate independently one from another and very few have yet developed network experiments). Therefore, the project presents innovating characteristics by the connection and synchronization of laboratories for various applications in Social Sciences. The technical protocols developed will be used to extend the platform to other Breton sites such as Vannes (UBS, University of South Brittany) or Lannion, and to facilitate the interconnection with other French and international laboratories, especially in the framework of NETEX, a technological network supported by the CNRS for experiments in Social Sciences (French NETwork in EXperimental economics). NETEX comprises 5 French research laboratories recognised by the CNRS (the CREM, the GATE, the GREMAQ, the LAMETA and the TEAM).

On the other hand, the programmed experiments in experimental economics and experimental psychology within the context of this project should trigger communications in scientific colloquiums and academic papers (such as in the Journal of Economic Behavior and Organization, the Journal of Economic Psychology and the magazine Experimental Economics); indeed, the application of experimental economics and psychology to behaviours in networks such as Internet is a promising theme. Besides, this project will benefit from a first-rate visibility thanks to the organization of the Experimental Economics Days at Rennes site in June 2005, an event that brings together the best specialists in experimental economics from France and abroad. These days will constitute a unique opportunity to present our experimental platform and display the first outcomes of this project.

Finally, the project would enable the creation of a library of computer-based protocols and scripts for each experiment carried out (these scripts will be available online and serve as shared resources for Breton researchers interested in the experimental process), and a library of tools for statistical measures of experimental behaviours.

In summary, this project of an experimental platform constitutes a valuable advantage for the group M@rsouin and the associated research laboratories in order to increase the understanding of uses and practices within electronic networks. This platform has an objective both for research and public and private decision making. In the end, the idea is to increase the value of this platform for companies or public authorities by offering services of expertise, based on experimental methodologies (for instance, by proposing to companies or public organisms testing the individual and collective reactions to new service offers, new rates, new Website ergonomics, implementations of electronic market...) This aspect of support to decision making will be initiated in 2005, but will be completely operational only in 2006. That is why we are keen to plan this project on a two-year period at least (2005-2006): the three stages described earlier constitute, subsequently, the first step of an ambitious project which will be extended by more operational parts in 2006.

## Project organisation.

**Project 1:** study of the process of connection and synchronization of the laboratories of experimental economics in Rennes and Brest - R. WALDECK (LUSSI), F. BRUCKER (LUSSI), D. MASCLÉ (CREM).

**Project 2:** experiments in economics and psychology on the logics of collective actions and network cooperation - L. DENANT-BOËMONT (CREM), D. MASCLÉ (CREM), T. PENARD (CREM), E. MALIN (CREM), N. COLOMBIER (CREM), L. MARTIN (CREM), M. FARAJALLAH (CREM), M. Dufourcq-Branca (GRESICO), J. Fischer-Lokou (GRESICO), N. GUEGUEN (GRESICO), R. WALDECK (LUSSI).

**Project 3:** collection quantitative analysis - F. BRUCKER (LUSSI), G. COPPIN (LUSSI), D. MASCLET (CREM).

## **Bibliography, state of the art.**

A large amount of experimental research has been carried out about network interactions, coordination and cooperation (see Handbook of experimental Economics, published by Kagel, Roth (1995)). Dynamics of cooperation within social groups have been deeply covered by Fehr, Gächter's research, especially Fehr, Gächter (2000), American Economic Review. More globally, disciplines used comprise economics, in particular game theory, and psychology (aversion to unfairness, regrets, aversion to losses) following Kahneman and Tversky's works.