

EC Research Project Proposals

GO-EUROPE

LITHO-JT

Prof. Dr.-Ing. Dietmar P. F. Möller

EC Research Project Proposal

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We took part at the **1st announcement of the European Commission** identifying research actions for the specific programme topics in relation to Section 2.1. and 7.2 of Annex 1 of the **6th Framework programme**, and submit a full **Network of Excellence** proposal for the topic **“GO-EUROPE – e-GOvernment for the Sustainable Development of Underground Infrastructure in Central and Eastern EUROPE”**.

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The submitted topic is a broad one, that requires interdisciplinary research at a European level in order to achieve significant advances for many of its numerous applications.

We kept the NoE as open as possible to partners interested, or who are experts, in the several disciplines building up an **e-Government system environment** and its representation.

It was our intention to compose a NoE including excellent academic research centres, and SMEs as well as National European Societies in this field.

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Research Context

One of the main tasks of local governments is to provide their citizens with a sustainable and good working infrastructure of which a considerable part lies under the ground. This **underground infrastructure** consists of wide range of utility and communication networks, utility corridors, public urban transport and street tunnels.

In the past, local **underground infrastructure** has often been neglected in CEE leaving it in a deteriorated state. In the context of enlargement there is a clear need to develop a sustainable underground infrastructure. This is one of the ways in which local governments can prepare their municipalities for a successful accession to the EU.

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Research focussed on:

- relationships between integration,
- enlargement and institutional change within the context of their
- historical evolution and with a comparative perspective;
- implications of a changing global context and the role of Europe
- consequences of an enlarged European Union for the well-being of its citizen, which needs a harmonization of a sustainable local underground infrastructure, which can be realized by the e-Government NoE project.

This will help to share experiences between local Governments and to evaluate local underground infrastructure policies on an EU-wide level with regard to other relevant Community policies.

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Research Context:

- Identification and articulation of private and public interest
- Inclusion of representative institutions and civil society organisations
- Democratic governance
- Transparent and accountable decision-taking
- Identification of future infrastructure needs with regard to long-term economic and political developments
- Technical requirements for a sustainable underground infrastructure
- Social requirements for a sustainable underground infrastructure
- National and legal requirements and implications
- Cross-connections to other relevant EU-policies (environment policy, cohesion, water framework directive, enlargement, training and job creation)
- Services to enhance innovation capacities due to the national needs in the context of an European wide harmonization based on key figures
- Organisational knowledge management based on economical and ecological figures
- Computer Supported Collaborative and Cooperative Work Space

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Partners in the NoE

Academic Institutes and Research Centres

Ruhr-Universität Bochum, D

Slovenska Technická Univerzita Bratislava, SK

Brno University of Technology, CZ

Budapest University of Technology and Economics, H

Cracow University of Technology, PL

Technische Hochschule Győr, H

Technische Universität Graz, A

University of Hamburg, D

Universität Hannover, D

University of Newcastle, UK

Hochschule Nordostniedersachsen, Suderburg, D

Ecole de Polytechnique Ponts et Chaussées Paris, F

University of Patras, GR

Politechnika Warszawa, PL

Technische Universität Wien, A

Universität Witten/Herdecke, D

Eidgenössische Technische Hochschule (ETH) Zürich, CH

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Partners in the NoE

SME's

Aquatis (Design and consulting office) Brno, Mr. P. Kutálek, SZ

BORAG, Steinakirchen, Mr. W. Bogdanov,

Abonex underground construction, Budapest, Mr. L. Pollok, H

ENERGOPOL, Poznan, Mr. M. Surmacewicz, PL

IKT (Institut für Unterirdische Infrastruktur) Gelsenkirchen, Mr. R. W. Waniek, D

Water Research Center (WRC) Swendon, Mr. Ian Naismith, UK

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Partners in the NoE

National European societies

Austrian Association for Trenchless Technology (AATT), Mr. M. Eisenhut, A
Czech Society for Trenchless Technology (CzSTT), Mr. J. Kubálek, CZ
French Society for Trenchless Technology (FSTT), Mrs. M. Lac, F
German Society for Trenchless Technology (GSTT), Mr. M. Rieger, D
Hungarian Society for Trenchless Technology (HSTT), Dr. G. Fábry, H
Netherlands Society for Trenchless Technology (NSTT), Mrs. M. Wetsteyn, NL
Polish Foundation for Trenchless Technology (PFTT), Dr. B. Jasinski, PL
Slovak Society for Trenchless Technology (SVKSTT), Mr. M. Krčík, SK
Swiss Society for Trenchless Technology (CHSTT), Mr. O. Tappy, CH
United Kingdom Society for Trenchless Technology (UKSTT), Mr. I. Vickridge, UK

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Partners in the NoE

EFUC (European Forum on Underground Construction)

Mr. Michel Mermet, F

WSDTI (Wissenschaftsstiftung Deutsch-Tschechisches Institut)

Mr. Rolf Bielecki, D



WP 1

Guide for stock-taking of the actual underground infrastructure

WP 2

Analysis and evaluation of the underground infrastructure described in WP 1 for case study examples of selected European Cities

WP 3

Assessment of the requirement for a sustainable infrastructure according to the aspect of European standardisation and harmonisation according to key data

WP 4

Future developments and their influences on the underground infrastructure

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WP 5

Determining of priorities reflecting technological, ecological and economical aspects

WP 6

Quality Data-Management System.....

WP 7

e-Government solution for the underground infrastructure

WP 8

Dissemination & Exploitation of the e-government system for underground infrastructure

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EUROPEAN COMMISSION

Information Society Directorate-General

**Components and subsystems Applications
eGovernment**

Brussels, 26th May 03
DG INFSO-C6-AM/dms/D/560328(03)
Prof. Dietmar P.F. MOELLER

Faculty for Computer Science

Department Computer Engineering
University of Hamburg
Vogt-Koelln-Str.30
22527 Hamburg

GERMANY

**Subject : Invitation to attend an evaluation hearing relating to the following
proposal submitted to Call FP6-2002-IST-1**

Proposal Number: 507356

Proposal Acronym: GO-EUROPE

**Proposal Title: GO-EUROPE – e-Government for the Sustainable
Development of Underground Infrastructure in Central and Eastern
EUROPE**

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Dear Prof. MOELLER,

As part of the FP6 evaluation process, described in the “*Guidelines on proposal evaluation and selection procedures*”, representatives of the proposers in all those proposals for Integrated Projects and Networks of Excellence having passed the required thresholds at the first stage of the evaluation are invited to attend hearings with the independent experts assisting the European Commission.

Following the outcome of the first stage of the evaluation, I would like to invite you and up to 3 additional representatives of your consortium to attend a hearing on the above proposal, which was submitted by yourself. The scheduling of your hearing is as follows:

Date and time of hearing : 10th June 2003 at 11:30 hrs (Brussels time)

Place of hearing : Square Frère Orban, 7-9, 1040 Brussels, Belgium.

The aim of the hearing is to clarify specific aspects of your proposal that the experts identified in the first stage of the evaluation. Annex I provides a list of the questions/ issues identified in relation to your proposal. In addition, Annex II gives some guidelines on your participation in such a hearing.

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During the hearing, the evaluators would like you to clarify the following questions]/ issues in relation to the above proposal:

1. What support will you receive from existing organisations which administer substantial underground infrastructure, what level of commitment and involvement in the project can you obtain from these?
2. Can you explain how the management plan addresses the complexity of managing such a large network?
3. Please explain the plan for the specification of the software systems, platform, etc. and their outsourcing.
4. Please explain the strategy for achieving the harmonisation of approaches in the different countries.
5. Please explain the long-term perspective on standards in this work area.
6. What is the rationale for addressing Central and Eastern Europe only, and why is there no plan for dissemination and involvement of partners in Western Europe?
7. Can you further explain the content of the intended GIS systems?

Please note that not necessarily all the questions will be asked at the hearing due to the time constraints but be prepared to be able to answer all of them .

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Final outcome

Due to budget restrictions, we finally had been disregarded for funding

EC Research Project Proposal

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We take part at the

Euratom Research and Training Programme on Nuclear Energy
 (2002-2006)

EURATOM Call 2005-06 Fixed Deadline

and submit a full proposal for the topic

Feasibility Study on the Potential of Technology-
 Enhanced Strategies for Geological Disposal of
 Nuclear Waste based on the **LITHO-JET** Principle

As this is a broad topic, it requires interdisciplinary research at
 an European level in order to achieve significant advances for
 many of its numerous applications.

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We keep the Coordinated Action (CA) as open as possible to partners interested, or who are experts, in the several disciplines necessary to undertake a feasibility study in the field of geological nuclear waste disposal

It is our intention to compose a CA consortia including excellent academic research centres, and SMEs as well as National European Societies in this field.

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The **strategic objectives** addressed in the LITHO-JET CA focus on the improved usability of technology-enhanced strategies for geological disposal of nuclear waste, which involve multidisciplinary research fields combining

- rock mechanics,
 - underground reservoir engineering,
 - mechanical engineering,
 - control theory,
 - prototypic instrumentation,
 - underground hydrogeology,
 - economics,
 - environmental science,
 - information and communication technology,
- with other research and technology domains.

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The fundamental purpose of the proposed CA research is activity to merge the many different provisory concepts of management and disposal of radioactive waste, that are at least low depth galleries around 300 meters, which can contaminate in a med term scenario the ground water, into one unified new pioneering approach in very deep depth, that can be the foundation for a harmonized European wide technology-enhanced strategy for geological disposal of nuclear waste, expanding the existing different nuclear waste management and disposal scenarios.

The proposed feasibility study solution will show the potential for widespread adoption in the European nuclear waste disposal regime, which can become a high potential to take action for the European Commission.

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- B.1 Scientific and technological objectives of the project and state of the art
- B.2 Relevance to the objectives of the EURATOM Programme
- B.3 Potential impact
 - B.3.1 Contributions to standards
- B.4 The consortium and project resources
- B.5 Project Management
- B.6 **Workplan**
- B.7 Other issues
 - B.7.1 Gender issues
 - B.7.2 Other EC-policy related issues
 - B.7.3 Policy issues



WP 1

Critical Assessment of existing technologies

WP 2

Physical and geotechnical conception of LITHO-JET and its evaluation

WP 3

Evaluation of mineralogical, petrological and geotechnological parameters

WP 4

Mechanical and electrotechnical design of the Litho-Jet system and evaluation

WP 9

Anthropogenic impact

WP 5

Economic analysis of the LITHO-JET concept

WP 10

Project Management

WP 6

Modelling of radionuclide transport from the geosphere to the biosphere

WP 7

IT Framework for LITHO-JET system

WP 8

Dissemination and exploitation of the LITHO-JET system

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Academic Partners of the CA

University of Hamburg, Germany

Prof. Dr. Dietmar P. F. Möller

Prof. Dr. Claus-Dieter Reuther

Technical University of Košice, Slovakia

Prof. Dr.-Ing. Felix Sekula

Prof. Ing. Pavol Rybár, PhD,

Prof. Ing. Tobiáš Lazar, DrSc,

German-Czech Research Foundation (WSDTI), Germany

Dipl.-Ing. Rolf Bielecki

Prof. Dr. Dr. Franz W. Peren

Prof. Dr. Brigitte Urban

Technical University of Brno, Czech Republic

Prof. Dr.-Ing. Jiri Kazelle

Dr.-Ing. Jaroslav Raclavsky,

Dr.-Ing. Radek Knofliček

Technical University of Clausthal, Institute for Reservoir Engineering, Germany

Prof. Dr. Günter Pusch

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Actual situation

We have submitted a proposal to the Electronic Proposal Submission System. Our proposal is now stored on the EPSS system with number 036451 for subsequent evaluation by the Commission

Call title: Euratom -2005-6 Fixed deadline

Call closure: 11/10/2005 17:00 CET (Brussels Time)

Date of submission: 10/10/2005

Hour of Submission: 18:54:07 CET

Proposal title: Feasibility Study on the Potential of Technology-Enhanced Strategies for Geological Disposal of Nuclear Waste based on the LITHO-JET Principle

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Actual outcome

pending,

waiting for the scores that show whether we have passed the required thresholds at the first stage of the evaluation to be invited to attend hearings with the independent experts assisting the European Commission for CA funding