**Spatial Data Interest Community Description**

http://inspire.jrc.it/sdic_call/index.html

Deadline: 29 April 2005

**SDIC Title:** **Free and Open Source Software for Spatial Data Infrastructure**

**Acronym:** **FOSSDI**

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Submitted to INSPIRE:

http://inspire.jrc.it/ir/sdic_view_step1_only.cfm?id=2163

## Mission and Objectives (3900 chars)

*[Describe the mission and objectives of the SDIC (e.g. Discuss issues of harmonization of national datasets -including data modeling, reference systems, metadata and data validation and encoding systems considering data requirements of the WFD = Water Framework Directive)]*

Spatial data are essential for mapping and geographic analysis. With the increasing availability and demand for georeferenced data in the last couple of years, and in respect to the heterogeneities within the European community, a political initiative to improve the current situation is needed.

Georeferenced data are often generated at a significant cost to taxpayers by local and national governments. In the U.S., federal, state and local government agencies provide free-of-charge access to a wide range of geospatial data driven

by a vision of universal access through the National Spatial Data Infrastructure (NSDI), Geospatial One-Stop, and USGS National Map programs. In contrast to this vision, access to GIS data in Europe is usually restricted by financial or legal barriers. Comparison of geotechnology developments in the U.S. and Europe is a strong indication that undue restrictions in the availability of georeferenced data slow down the development and limit the information available to the public and organizations about their environment.

In this spirit, we promote and support:

1. interoperability of data and software, enabling the public to access and process spatial data with no barriers;
2. availability of base cartography to the citizens with well defined free licenses (in the sense of freedom).

Interoperability is more than agreeing upon file formats. It comprises basically two dimensions:

- Longitudinal Interoperability: time
- Transversal Interoperability: sharing data between users communities

**Remarks upon Interoperability:**

Data shall be readable over time (years, decades, ...). This is of particular interest for data maintained by public administration and long-term projects.

Data shall also be readable across user communities, independent from software or operating system used (freedom of software choice). Again, this is of particular interest for data of public administration and long-term projects.

Interoperability must not be driven by certain companies but by agreed standards. The personal choice of application software/operating system should not affect the data exchange. Only documented format standards may be used as undocumented formats are error-prone and violating the transversal interoperability paradigm. Software patents and rights of third parties can become future traps if the patent holder decides to either charge for the license or close

the access entirely. A well known example is the LZW compression (former Unisys patent) which was widely used in image processing and GIS.

### Remarks upon free access to base cartography

Data released to the public by governmental institutions, being generated as research results or by private companies, need to be protected to keep the freedom of their usage. Protection does not imply the unavailability of a data set but the appropriate licensing to grant the data availability to the public and organizations.

Free access (in the sense of freedom) to base cartography can be seen in the following context:

- reasonable data licensing, free access granted without political or technical barriers;
- open formats: patent-free, well documented formats;
- availability of free software to enabling the citizen to manage such data.

Distribution of spatial data is cheap in the Internet age. Indeed maintaining and managing them costs more than the transaction itself. The governments of the Unites States, Canada and others show that granting free access to base cartography is feasible.

## Mandate (3900 chars)

*[Provide a short description of the mandate of the SDIC (e.g. agreement, temporary association, members of a project, umbrella organization, not for profit, public+private consortium/association,...)]*

The FOSSDI SDIC is a community of various sectors and organization/institutions. The Free/Open Source Software for Geoinformatics (FOSS4G) products used within this community is as manifold as the general GIS community. Interestingly also

proprietary vendors of GIS related products and services start to integrate the benefits of FOSS4G products.

The FOSSDI SDIC itself, besides developing software and spatial data, is also providing services to public administration and private companies.

## Formal Mandate

*[Identify which Authority assigned a formal mandate to the SDIC (if any)]*

[ ] International/European Conventions
[ ] European Commission
[ ] National Government
[ ] Regional Government
[x] None

## Main Activities (You may enter up to 3900 characters. )

*[Describe activities (e.g. workshops, working groups, technical specifications development, projects...)]*

- capacity building;
- development innovative concepts for spatial data management in public administration;
- Free software development;
- interoperability with OGC and industrial standards;
- providing base cartography to users under free license;
- formal training to public sector and companies;
- university courses;
- organization of conferences;
- writing and dissemination of training material, and books.

## SDIC URL

*[Please provide the URL of the SDIC web site in case the SDIC is actively communicating with the public] [1 url]*

http://grass.itc.it

## *Membership (3900 chars)*

*[It is important to know the members of the SDIC. The list should not be exhaustive but should help in clarifying SDIC composition (e.g. 1) all National Mapping Agencies and Traffic Authorities, Ministries of Environment, Environment Protection Agencies, Research Institutes of various European Countries, Geological Institutes and Water Authorities, ...]*

- National Mapping Agencies and Traffic Authorities;
- Ministries of Environment;
- Environment Protection Agencies;
- Universities and research institutes;
- Geological Institutes and Water Authorities;
- Companies;
- Worldwide community.

### *Excerpt of the GRASS GIS user list (Europe):*

Austrian Institute for Avalanche and Torrent Research, Brenner Railway Austria, BR-NetProduction (Bavarian Television) Germany, CEA Monte Bondone, CERN Switzerland, CNR Italia, Comune di Milano, Comune di Modena, Comune di Prato, Comune di Torino, Deutsche Bank Germany, DLR Germany, DuPont Spain, EDF France, Ericsson Sweden, ETH Zuerich Switzerland, FED USA, Finnish Meteorological Institute, Forschungszentrum Juelich Germany, Forschungszentrum Karlsruhe Germany, GFZ Potsdam Germany, Graz Technical University Austria, Iceland Forest Service Iceland, Inst. of Earthquake Engineering & Engineering Seismology (ITSAK) Greece, JRC Ispra, Landesmuseum Linz Austria, La Poste France, Meteo Poland, National Botanic Garden of Belgium, Onera France, Politecnico di Milano, Politecnico di Torino, Regione Toscana, Sevilla University

Spain, Teledetection France, Telefónica Spain, TU Berlin, TU Muenchen, Univ. Trento

***Excerpt of the GRASS GIS user list (Rest of the world):***

Ames Research Center USA, AMTI/NASA, Australian Army, Bank of America, Bombardier Aerospace Canada, Canadian Forest Service, Census USA, CICESE Mexico, Colorado State Univ., Cornell Univ. USA, CSIRO Australia, Czech Army, Dubai Municipality, Global Environmental Technology Nigeria Limited, Harvard Univ., Hokkaido University, HPCC NECTEC Bangkok Thailand, JPL NASA, JSC NASA, Lawrence Laboratories USA, Lockheed Martin Space USA, Los Alamos National Laboratory, MIT Lincoln Laboratory, Nanjing University, National Museum Japan, National Radio Astronomy Observatory USA, National Research Center of Soils USA, NCSA Illinois USA, NCSU USA, NGA USA, NOAA USA, NRSA USA, Osaka City University, Princeton Univ., Procergs Brasilia, Purdue Univ. USA, Qualcomm USA, Rutgers University, South African Weather Bureau (METSYS), Stockholm Environment Institute-Boston, UC Davis, UFRGSD Brasilia, University of Costa Rica, University of Sydney, University of Toronto Canada, US Army, US Bureau of Reclamation, US Dep. of Agriculture, VA Linux Systems USA

## Typology

*[The concept of SDICs can be presented in a three-dimensional space of communities developing applications for a particular Sector in society, a given Thematic issue or within a specific Region.]*

[x] Regional
[x] Thematic
[x] Sectorial

## Comments (3900 chars)

The technologies and interest of this SDIC are transversal to a wide range of public bodies, research agencies, and private companies. The example of the

partial GRASS user list in the "Membership" section demonstrates a mature dissemination and acceptance of the principals of interoperability in the use of public data.

The compiler of this form is the coordinator of the GRASS development team and responsible for GIS technologies at ITC-irst (Center for scientific research and Technology, Autonomous Province of Trento, Italy). ITC-irst is formally supporting the "e-Society special action for innovation" of the Autonomous Province of Trento.

## PROPOSED ROLE IN INSPIRE DEVELOPMENT

Which role(s) do you foresee for the SDIC in INSPIRE development

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[ ] allocate experts to Drafting Teams
[x] submit reference material as input to the Drafting Teams
[ ] register a project to test/revise/develop the draft
      Implementing Rules
[ ] collect and describe user requirements related to
      Environmental policies,
[ ] participate in the review process
[x] implement pilot projects to test/revise/develop the draft
      Implementing Rules
[ ] contribute to cost/benefit analysis of the draft
      Implementing Rules
[x] contribute to awareness raising and training
[ ] be kept informed
```