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DIRECTORATE GENERAL JRC  
JOINT RESEARCH CENTRE  
Space Applications Institute  
Unit: Environment and Geo-Environment (EGEO)

*Invitation to Tender*  
*AJ/12/00*

**STUDY TO CONTRIBUTE TO THE EUROPEAN FOREST INFORMATION AND  
COMMUNICATION SYSTEM (EFICS)**

**July 2000**

TECHNICAL SPECIFICATIONS  
GENERAL TERMS AND CONDITIONS  
DRAFT CONTRACT

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## **1. ORIENTATION AND BACKGROUND FOR THIS WORK**

### **1.1 Nature of the work**

The R&D study requested by this Invitation To Tender (ITT) work will provide direct support to the EFICS (European Forest Information and Communication System), by contributing to the compilation, functioning and accessibility of a European forest information system.

The aim of the study is to develop an operational and prototypical Information System that includes cost effective and innovative tools to query, combine and process forestry data from different sources like statistical data and geo-referenced forest information from different test sites and from various data providers throughout Europe. The system must be able to process different data formats, scales and geographic projections to monitor and model forests and other wooded land (OWL) in the pan-European area.

Networking facilities including concepts of distributed database management and generic web mapping tools should be established so that links to other key organisations such as, EUROSTAT, (Statistical Office of the European Communities), the EFI (European Forest Institute) and the FAO (Food and Agriculture Organisation) can be made in order to access and integrate existing spatial and thematic forest information into the system. The system should use common metadata sets to describe the content of all used resources in order to improve the user's ability to operate with multiple datasets.

The project will contribute to long-term Commission forestry strategies, and assist in the introduction of new technologies into the EFICS Programme. As a result the outputs from this project will serve to support European Commission Services in DGVI (Agriculture). In addition, the work should take into consideration the developments that are taking place on the international scene to improve the access to information on forests. This should include, for example, the work being undertaken within IUFRO (International Union of Forest Research Organisations), on the compilation of global information system on forests.

The project will closely co-operate with relevant research activities at the JRC, e.g. SAI's (Space Applications Institute) GI & GIS project (<http://gi-gis.aris.sai.jrc.it>) and will preferably use in-house developed IT products like GIST (Generic Information Server Toolkit, <http://www.gist.jrc.it/default>) or HGS (HTTP based Geo-Temporal Searching, <http://hgss.jrc.it/>).

SAI's prototypical Information Systems like I-TFIS (Prototype of Internet Tropical Forest Information System, <http://www.trees.gvm.sai.jrc.it/i-tfis-new/init.asp>), FISE (Prototype of Forest Information Search Engine, <http://www.trees.gvm.sai.jrc.it/fise/examples/Example3.asp>) and GFIS (Prototype of Global Forest Information System, <http://www.gfis.gvm.sai.jrc.it:1080/default/>) are to be taken into consideration for any further development of the European Forest Information System.

The development of the Forest Information System will follow international standards for metadata, for transfer and access protocols and for spatial data formats.

The work requested by this ITT will be undertaken by a study contract with a total duration of fourteen months. Sending an IT expert for a certain time period to the JRC to test and further develop the above-mentioned IT components is advisable.

## 1.2 Background

### 1.2.1 Regulation

The EFICS Regulation (established in 1989 by Council Regulation EEC No.1615/89), was amended on 25<sup>th</sup> May 1998 (EEC No. 1100/98) thus allowing continuation of the regulation for a further four years, to 2002. The establishment of EFICS was a response to attempt to fulfil the increasing need to co-ordinate forest information among the Member States of the EU. Hence, the objective of the EFICS is to *'collect, co-ordinate, standardize, process and disseminate information concerning the forestry sector and its development'*.

Studies carried out in 1995/96 within the framework of EFICS revealed the large disparity in the quality and utility of forest information pertaining to the European continent. Thus, despite the fact that the EFICS regulation stated that the system should make use of existing data at national, Community and international levels, it was evident that in order to do so, more information was required on the various systems used throughout Europe for the collection and processing of forestry data and the differences between them. It was for this reason that at the beginning of 1996, the Commission launched a study with the aim of producing firstly, a comparative analysis of forestry inventory procedures in European countries, and secondly, proposals to improve the reliability of forestry statistics at the European level. The study was completed in January 1997. The study proposed a set of approaches, which could be followed according to the required needs and funds. Four alternative approaches were put forward. These were:

1. To rely on national forest inventories.
2. To introduce a set of harmonized attributes in national forest inventories.
3. To utilize data from national assessments plus harmonized assessments on the national level.
4. To conduct an independent EFICS survey.

It was proposed that within options 3 and 4, remote sensing could be used as a primary data source, and could in fact, be the central part of the EFICS survey and provide harmonized and reliable information at the European level. A full report detailing the findings can be found in, European Commission, (1997).

A set of priority activities in support to EFICS within the field of developing remote sensing based methods for European forest applications were defined by DGVI FII.2 and the FIRS Project<sup>1</sup> for the V<sup>th</sup> Frame Work Programme (FWP) of the JRC. These new activities closely follow the needs of the new Community policy on rural development in Europe. The main areas are:

1. Development of earth observation based methods for the assessment of biomass and wood volume.
2. Follow up to the EFICS and FIRS Project's studies on nomenclature and information needs assessments in order to assess the potential use of earth observation data and GIS (Geographical Information Systems) to facilitate comparability and use of key forest variables.
3. Development of an operational, cost-effective control system partly based on earth observation data, to evaluate and control requests for funding in the frame of the Regulation EEC No.2080/92 (Financial aid scheme for afforestation of former agricultural land).
4. Scientific support in the implementation of Council Regulation EEC No. 3528/86 on Monitoring Forest Condition in Europe.
5. Feasibility study on the application of ENVISAT MERIS<sup>2</sup> data for the assessment of European forest Condition.

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<sup>1</sup> FIRS (Forest Information from Remote Sensing) Project carried out at the Space Applications Institute, of the JRC, Ispra.

<sup>2</sup> ENVISAT MERIS – Medium Resolution Imaging Spectrometer (on-board ESA's ENVISAT platform, to be launched in 2000).

## 1.2.2 The Euro-Landscape Project

The study carried out in response to this ITT will contribute to the objectives of the Euro-Landscape Project which is one of SAI's (Space Applications Institute) eleven projects, defined to run for the four-year duration of the V<sup>th</sup> FrameWork Programme.

The objective of the Euro-Landscape Project ([http://www.sai.jrc.it/euro\\_landscape.htm](http://www.sai.jrc.it/euro_landscape.htm)) is to utilize Earth observation data and GIS in the development of methods and models to analyse the different components of the European landscape and the complex interactions found both within and between these components. The project is divided into three sub-projects: MOLAND (Spatial Development: monitoring land use/cover dynamics), which deals with built-up areas, and areas affected by transport and other regional development measures. ENVIP (Protecting the landscape: ENVIronmental indicators for environmental Protection), which focuses on the mitigation of land degradation, desertification and on environmental protection, and RDE (Monitoring Rural Development and the Environment), which deals with monitoring the European rural environment.

Within the sub-project RDE, emphasis is placed on the sustainable management of natural and semi-natural resources (forests, grasslands, changes in land cover), the characterization and modelling of European river basins, and on the long term monitoring of the impact of EU policies related to the rural environment. Key themes are:

- Mapping of forest and grassland resources in the pan-European area.
- Classification of river basins and modelling of run-off and sediment dynamics in relation to changes in land cover to evaluate soil erosion risks and the needs for environmental protection.
- Development of models integrating bio-physical, social and economic factors to assess the environmental impact of EU policies related to the rural environment.

The work undertaken in response to this ITT will contribute to the objectives of the component of the RDE sub-project dealing with the mapping and monitoring of forest resources in the pan-European area. The work is a continuation of the studies previously undertaken within the framework of the FIRS Project (<http://www.jrc.sai.egeo/forecast>).

## 2 PROGRAMME OF WORK

### 2.1 OBJECTIVE OF THIS ITT

#### 2.1.1 General objective and context

The pilot project described in detail below, has been defined specifically to build on the experiences and outputs of on-going activities. The work undertaken for this study will constitute a major step forward towards cost-effective means of deriving and disseminating information on the forests and other wooded lands of the European continent. The results from on-going activities are strongly linked to user's needs. This trend will be continued following, in particular, the requirements from the Commission's Services and national entities, in accordance with the recommendations from the Standing Forestry Committee and the Working Party on Forestry Statistics.

This pilot project *"The development of Pan-European mapped forest information system to expand EFICS into both a production-related tool and an environmental monitoring and modelling tool"* will be the main bridge linking previous, on-going and future studies in this field. This project takes the first step in linking existing statistical forest data with satellite derived geo-information to fulfil a variety of user requirements at a variety of different scales. In addition, the study will aim at developing new methodological and technological ways to access databases with forest information of other organisations. At the same time the development and use of adequate metadata sets to describe the information resources are crucial to improve the comparability and integration of data from different

sources and of different formats. The latter will be achieved in this pilot study by introducing both geo-referenced and statistical data into the system, with the recognition that considerable effort must be given to the complex issues of quality checking and access protocols.

It is foreseen that the benefits of the developed system should include the following characteristics:

1. The system is capable of retrieving, querying and if necessary holding data from different sources (i.e. access to existing forest information networks), of different formats (e.g. different cartographic projections, statistical, satellite imagery, derived products *etc.*), of different scales (e.g. European, national, regional), of different dates and with different nomenclatures.
2. Enquiries can be made to output information for any desired scale and geographical area. All enquiry paths will be maintained, so that the output combinations are known and documented. The outputs can be reported and presented at different levels, including regions, bio-climatological zones and the entire Pan-European area.
3. The system is platform-independent and is built using an open programming code so that it can be up-dated and continuously improved.
4. It eases the access to as many user types as possible (e.g. for scientists and the general public).
5. The system considers common standards of (a) spatial data formats (e.g. OGD, OGC), (b) data documentation (e.g. Dublin Core, FDGC), (c) data transfer and access protocols (e.g. OGC Web Map Protocol, Z39.50), (d) generic Web tools (e.g., CGI, JDBC, XML, GML).
6. The system addresses data quality and control by using internationally accepted standards. Missing data attributes (like sampling errors of forest inventory, accuracy of cartographic data, date and data source *etc.*) to describe the retrieved information have to be added if necessary.
7. The system is cost effective.

The preparation and inclusion of spatial data and geo-information into the EFICS frame work, will provide the necessary link permitting the continuation on the one hand, and innovative research on the other, to ensure the best possible operational platform for future developments in this field.

#### 2.1.2 Scope of the ITT and approach

Forest statistical data have, until now, fulfilled the majority of information needs on the forested areas of Europe. However, today there exists a growing need for forest information in a mapped format (*i.e.*, so-called geo-referenced data), to serve new needs of the community, at the EU, national, regional and even international levels. Many of these needs stem from the requirements of international agreements where there is greater impetus being placed on environmental planning, environmental protection and measures for sustainable development. Earth Observation (EO) data provides us with the only feasible and practical tool for mapping and frequently monitoring land cover over large regions.

As a result, it is necessary to develop cost effective tools for combining the already existing statistical data (collected by national authorities), with geo-referenced data which will be produced for large regions and continents in the coming years. This proposal describes a pilot project for the development of techniques constituting a 'toolbox' for combining earth observation data and conventional statistics. The requirement for such capabilities in a European Forestry Information System stems largely from the fact that although there is an indisputable need for standardized forest information at the European level, the implementation of unified forest resource assessment methods remains more of an intangible dream than a reality.

As a result, it is being proposed here, to first develop a prototype system and demonstrate its operability both in terms of its' strengths and weaknesses in meeting user requirements. This study will aim at defining and testing the architectural design and core modules of the system which will form part of the EFICS facilities. Data and information layers will be entered into the system and innovative ways of combining and processing different data types and different data layers will be developed. The structure of the system will also be designed for easy access and dissemination of both original and processed information. Links to forestry information provided by international key organisations

like EUROSTAT GISCO or EFI (European Forest Institute), and by national forestry services should be established so that additional information can be accessed and processed in the system. The issue of access is very important, as some data presumably should not be publicly available while others could be freely distributed.

## **2.2 WORK TO BE ACCOMPLISHED**

### 2.2.1 Design and development of a European Forest Information System

In order to provide the best possible guidance for the proposal, a minimum set of Work Modules has been defined. The proposal should follow these guidelines, but augment and elaborate the work with innovative ideas based on the bidder's experience in this field. The bidder has the responsibility of clearly and precisely defining the tasks, inputs and outputs and the Work Modules themselves.

#### **Work Module 1: Selection of the best technical option and architectural design**

**Objectives:** To determine the best technical option for the information system

**Inputs:** Inputs from DGVI, results from the EFICS study on information needs assessment (see Section 2.8), reporting and testing of JRC's IT components (e.g. GIST, HGS) and SAI's prototypical information systems I-TFIS, FISE, GFIS; review of existing investigations into selection of appropriate media for other initiatives dealing with forest information and its distribution.

**Tasks:**

- To review the advantages and disadvantages of various technical options for storing, exchanging, processing and disseminating forestry information.
- To select the best media to fulfil all the desired functions and characteristics of the information system (Section 2.1.1).
- To address the issue of open standards for metadata, spatial data, system programming, transfer/access protocols and network security.
- Design the structure of the system to enable access, processing, extraction of information and the necessary links to other existing data sources and internet sites.

**Output:** Technical design of the information system (hardware and software requirements, open standards to be used).

### **Work Module 2: Set up of the system's infrastructure**

**Objectives:** To design the functionality and interfaces of the system.

**Inputs:** Inputs from DGVI, results from the EFICS study on information needs assessment (EC, 1997), information user's requirements, and existing information on existing data bases (e.g., at EUROSTAT, FAO, European Environment Agency (EEA) and in the Member States themselves *etc.*, ) to which links should be made.

**Tasks:**

- To develop technical and thematic concepts for a distributed database management, e.g. technical specifications of local (central server) and remotely addressed (European nodes) database servers, use of search protocols *etc.*.
- To link remote databases of relevant international and national/regional organisations to the system e.g., EUROSTAT's statistical data base, UN/FAO-ECE TBFRA-2000 forest database, national/regional forest inventory data *etc.*. This will require the implementation of standardised access/transfer protocols on the addressed remote server. Common data standards (metadata, spatial data) and policy restrictions have to be addressed.
- To establish the methods for information access, processing, retrieval and navigation. This will include determining the principle areas (thematic / geographical) which will be used as 'keys' for access and navigation.

**Output:** Design of the system's key elements and functions

### **Work Module 3: Data Input (geo-referenced and statistical data)**

**Objectives:** To insert pilot data sets into the information system.

**Inputs:** Outputs from FMERS I and II; the FIRS Project's products; Forestry Information from linked databases (Work Module 2) like e.g., EEA, UN/FAO-ECE TBFRA, EFI, GISCO, national/regional forestry services.

**Tasks:**

- Compile a pilot database utilizing existing data. This should include geo-referenced data sets prepared for JRC projects (e.g., FIRS Project, FMERS) and statistical data from EUROSTAT *etc.* Data formats will range from satellite imagery, mapped products and statistical information.
- Query and retrieve data from existing databases using the system's infrastructure developed within Work Module 2.
- To allow innovative techniques to combine geo-referenced and statistical data for processing and presentation of the products (Work Module 4).
- Address the issue of data quality control

**Output:** Compilation of pilot data layers in the information system.



#### **Work Module 4: Data Integration and processing**

**Objectives:** Query mapped and statistical data from different sources with the option to process the information and produce new mapped or statistical products.

**Inputs:** Outputs from Work Module 3.

**Tasks:**

- Create links and methods to combine mapped and statistical data taking into account the different sources of information, data quality, different nomenclatures *etc.*,
- Develop methods for integrating and processing the data for the production of new value-added information layers.
- To ensure that the original data sources can be traced to maintain maximum transparency in data quality control.
- To develop routines which keep a record of the operations carried out to process the data in order to allow a true comparative analysis of the data outputs.

**Output:** Innovative methods for combining different data types and extracting both statistical and geo-referenced information for any reference unit such as, administrative or natural regions.

#### **Work Module 5: Data extraction and presentation**

**Objectives:** Develop tools to present new mapped or statistical or combined (mapped and statistical) products.

**Inputs:** Outputs from Work Module 3 and Work Module 4.

**Tasks:**

- To develop tools for presenting mapped and statistical products.
- To interact with DGVI and the user community to ensure flexibility in the presentation of products reflecting the needs of the user community.
- To develop platform independent web mapping tools to query, display and print tabular, raster and vector data from different internet servers. The consideration of Java based web mapping tools developed at the JRC is required.

**Output:** Value-added data layers, sample maps, combined statistical and mapped products, statements of data quality, generic web mapping tools

#### **Work Module 6: Evaluation**

**Objectives:** To assess the capabilities of the information system and its networking and other functionalities.

**Inputs:** Work Modules 1 – 5.

**Tasks:**

- Test and evaluate the system's infrastructure and capabilities using demonstration case studies.

**Output:** Case study examples.

**Work Module 7: Future perspectives****Objectives:** To make recommendations for future work with the cost of operations.**Inputs:** Work Modules 1 – 6.**Tasks:**

- Recommendations for maintaining the system.
- Recommendations for up-dating the system.
- Recommendations for improving the functionality of the system.

**Output:** Recommendations for future developments.**2.3. DELIVERABLES**

The results of this work will be of two types; firstly, the products provided to the Commission, and secondly, the reports and illustration on the work conducted, also provided to the Commission. In addition, data bought for the purpose of this project will be delivered. It should be ensured that all satellite data purchased for this project should be done so with the condition that the original data can also be delivered to the Commission.

**Provision of the products**

Although the European Forest Information System System is to be developed as a prototype, the final system to be delivered has to be fully operational! Hence the contractor will provide an up and running information system with the functionalities defined above and networking capabilities. The system should be housed in DG VI, Brussels and at the SAI/JRC as part of the EFICS facilities.

<b>Product Type</b>	<b>Format</b>	<b>Planned Delivery</b>
Information System for European forestry with experimental networking capabilities	TBD	KO + 13.5 months
Digital data layers (mapped and statistical) for forest and forest-related information for the pan-European area	TBD	KO + 13.5 months
Sample products from innovative ways of combining and processing forest variables for selected sites (Geo-referenced data + statistics)	TBD	KO + 13.5 months
Demonstration case studies		KO + 13.5 months

**Reports for the Commission**

In addition to the two types of reports required (see below), it is encouraged that the contractor keeps in regular email / telephone contact with the technical responsible in SAI. This is to ensure that important issues are regularly discussed, and any problems connected with the work are brought to the attention of SAI.

**1. Interim report**

This report (5 copies) shall describe the work conducted in the first 6.5 months of the project. This report will be the main focus for discussion at the interim meeting.

## 2. Final report

This report (10 copies) shall describe all the work conducted on the contract and should include:

- A description of the technical options available and their advantages and disadvantages with respect to the system requirements.
- A description of the architectural design of the system.
- A description of the system's functionality and infrastructure.
- A listing of linked databases (Work Module 2) and a listing of the data types (statistical and geo-referenced) accessible by the system .
- A description of the networking capabilities and the restrictions of access protocols.
- Details of how data quality, formats, availability *etc.*, have been dealt with and how the system could be improved.
- A description and evaluation of the system's functionalities using specific case studies
- A detailed list of recommendations for up-dating and maintaining the system.
- A statement on the cost of improving the system and how this could be achieved.

The final report shall also contain an executive summary of no more than 10 pages. This shall be included at the beginning of the report as a separate section, which can be copied as a stand-alone document. This summary should be easily understandable and suitable for presentation to non-specialists. A Table of Contents will be supplied with the proposal.

### Illustrations

A set of view-graphs suitable for both general and technical presentations is mandatory.

Payments for the contract shall be linked to the acceptance of the interim report (5 copies) and the final report (10 copies). The reports shall be in English. All written products including first drafts and reports will be printed. We shall not accept or review hand-written drafts of any reports.

The text of all written products shall also be provided in electronic form (on PC-compatible 3.50-inch floppy discs/CD-ROMS) in Word for Windows file format. The cover of each report should show the contract number and the date of the report.

The final report bearing the words "Commercial in Confidence" or including any text of similar meaning will not be accepted. For information concerning ownership of the results of the study, please see Annex 2 and Annex 3.

## **2.4 STUDY DURATION**

The study will be carried out over a period of 14 months.

## **2.5 MEETINGS**

The contract shall be monitored by a supervisory group to be made up of experts selected by the Services of the Commission. The supervisory group will be invited to attend each of the contractual meetings.

### 2.5.1 Meeting schedule

Meetings between the contractor and the SAI will normally take place in Ispra, except the interim meeting which take place either in DGVI, Brussels or at the contractor's premises. The contractor's

project manager shall attend all contractual meetings, and shall be accompanied by at least one other member of the contractor's team.

#### 2.5.2 Minutes

The contractor shall be responsible for taking minutes of the proceedings of each meeting and for providing the SAI Units with a draft copy of the minutes not more than 1 week after the meeting.

#### 2.5.3 Meeting to discuss the interim report

The Contractor shall provide a presentation of the results of the first half of the study. At least 1 week prior to this meeting, the Interim report shall be delivered (in 5 copies) to the Services of the Commission. The contractor shall establish a meeting agenda in consultation with the Services of the Commission that identifies significant issues that should be discussed. Preparation of all materials and minutes will be the responsibility of the Contractor. Following discussion with the Services of the Commission the agreed further work for the Contractor's team in the remainder of the study shall be included in the minutes of the meeting.

#### 2.5.4 Presentation of draft final report

The contractor shall present to the SAI project team at a restricted meeting, the results contained in the draft final report. The contractor shall present the main results orally. All principal members of the contractor's team should be present to answer detailed queries on the work they have undertaken. At least 1 week before this meeting, the draft of the final report shall be delivered (in 5 copies) to the Services of the Commission. Discussion of these documents, section by section, will be the main purpose of the meeting, which will normally last a whole day.

Following this meeting, the contractor will undertake the actions that were agreed, and produce the revised version of the final report, to be delivered in 10 copies.

### **2.6 SCHEDULE AND DELIVERABLES**

The suggested time schedule and deliverables for the reporting of this contract are as follows:

<b>Event</b>	<b>Planned Delivery</b>	<b>Deliverables to JRC</b>
1. Kick-off (KO) meeting	KO + 0 months	Minutes; 5 copies
2. Interim Report	KO + 6.5 months	5 copies of interim report
3. Meeting to discuss interim report	KO + 7 months	Minutes; 5 copies
4. Draft final report	KO + 13 months	5 copies of draft final report and products
5. Meeting to discuss draft final report	KO + 13.5 months	Minutes
6. Final Report	KO + 14 months	10 copies of final report and products

### **2.7 COST AND TYPE OF PROVIDER**

The contractor is expected to provide a detailed breakdown of all costs involved in carrying out this study (see Annex 5 for guidelines).

Anyone is eligible to make a proposal, including commercial suppliers, government organisations, research institutes, professional groups and universities who have experience with European forestry, Remote Sensing, GIS and networking.

## **2.8 REFERENCES**

European Commission. 1997. *Study on European Forestry Information and Communications System*; Vol. 1 and Vol. 2. European Communities, 1997.

## ANNEX 11: Acronyms

ASP	Active Server Pages
CGI	Common Gateway Interface
CORBA	Common Object Request Broker Architecture ( <a href="http://www.corba.org">www.corba.org</a> )
Dublin Core	Metadata description set, ( <a href="http://purl.org/dc">http://purl.org/dc</a> )
FISE	Prototype of Forest Information Search Engine, <a href="http://www.trees.gvm.sai.jrc.it/fise/examples/Example3.asp">http://www.trees.gvm.sai.jrc.it/fise/examples/Example3.asp</a>
FGDC	Federal Geographic Data Committee
GFIS	Prototype of Global Forest Information System, <a href="http://www.gfis.gvm.sai.jrc.it:1080/default/">http://www.gfis.gvm.sai.jrc.it:1080/default/</a>
GML	Geospatial Makro Language
GIST	Generic Information Server Toolkit, ( <a href="http://www.gist.jrc.it/default">http://www.gist.jrc.it/default</a> )
HGS	HTTP based Geo-Temporal Searching, ( <a href="http://hgss.jrc.it/">http://hgss.jrc.it/</a> )
I-TFIS	Prototype of Internet Tropical Forest Information System, <a href="http://www.trees.gvm.sai.jrc.it/i-tfis-new/init.asp">http://www.trees.gvm.sai.jrc.it/i-tfis-new/init.asp</a>
ISO TC 211	Metadata Standard ( <a href="http://www.statkart.no/isotc211/welcome.html">http://www.statkart.no/isotc211/welcome.html</a> )
JDBC	Java Database Connectivity
OGDI	Open Geospatial Datastore Interface
OGC	Open GIS Consortium
XML	Extensible Markup Language
Z39.50	A client/server-based protocol specified by the International Standard Maintenance Agency