

ETIS-Agent
GROWTH/Accompanying Measures
GMA2-2001-52035



Deliverable D9.4.2
Final Project Management Report

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IntraInt	L	Software Development	Software Development
Liaison	EL	Statistical Database Design	System Analysis and Design
NTUA	EL	Research Organisation	Transport Domain Expert
NEA	NL	Transport Research and Training	Transport Domain Expert
MKmetrik	D	Transport Consultancy	Transport Domain Expert
Axmann	A	Geoinformation Consultancy	GIS Domain Expert

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Abstract:	This document presents the consortium's activities performed during the last one and a half year of the project's duration, i.e. from 4th of February 2004 until the end of July 2005, the meetings participated in, the work performed in this period as well as liaison and dissemination activities, consortium's human resource allocation, any deviations from the work plan and corrective actions taken, etc.
Keyword List:	Web services, Data Warehouse, OLAP, Geographical data, indicators, method variables, methods.

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1. INTRODUCTION

The purpose of this document is to briefly describe the work performed by the consortium within the scope of ETIS AGENT project during the last eighteen months. This report is better understood when read in conjunction with the ETIS AGENT Inception Report a document that was published early in 2004 and changed the focus of the project.

During the 1st year of research, we focused on the integration of remote data sources into the ETIS system. Integration of data sources implied that the remote systems would directly be accessed by the ETIS system. Unfortunately, the majority of the data sources' owners were not willing to allow direct access to their systems from ETIS. Therefore, more flexible architecture of the ETIS system than the one implied in the original ETIS-Agent proposal was adopted. In this extended architecture, in addition to direct access to remote data source systems, data can be integrated into ETIS system through the use of a web-based loading interface. Moreover, as a result of the 1st year of our research, we identified that, in order to produce an ETIS system that will actually benefit policy makers, analysts and modelers in their daily work, considerable emphasis needed to be put on the analysis and elaboration as well as the visualization of the collected data. For this, we extended the scope of work described in the original ETIS-Agent proposal and during the second and part of the third year of the project we developed and integrated state-of-the-art analysis and elaboration technology (OLAP), as well as visualization tools that will provide tabular, graphical and GIS views of the data.

The ETIS AGENT project resulted in a Pilot System that provides:

- Information to support the analysis of policy issues – Complete, consistent and harmonized data, including all relevant sources, and covering important transport policy issues. Indicators for monitoring developments in the transport sector, and the performance of transport policy.
- An analytic environment for accessing, analyzing, and visualizing the information in ETIS based on policy needs.
- Meta-data: Descriptions of the data sources, variables, and methods used to collect, validate, harmonize, and aggregate data from different sources, fill in missing data, and construct the indicators. This meta-data will help to improve the credibility of the information by documenting all the steps involved in producing this information, and making it available to users.

2. PROJECT RATIONALE AND ACHIEVEMENTS

ETIS is a system supporting the decision-making process related to implementation of transport policies. Policy makers, analysts and modellers need information that will support their decisions regarding the potentiality of the implementation of a particular policy. This information is coming in the form of *performance* and *supporting* indicators. These indicators are typically computed from the processing of *data variables* residing on dispersed, heterogeneous repositories. Processing may involve collection, validation, harmonisation and/or generation of data variables through application of models in cases where the data is missing. Processing of data variables as well as production of indicators from data variables is a labour-intensive process requiring experts' involvement due to the fact that the processing is unique for each data variable and each indicator involved.

Until previously there was no systematic way of associating data variables and indicators to a particular policy. Furthermore, there was no descriptive information (metadata) on how the data variables were obtained or generated, and on how indicators were computed. Additionally, there was no Information Technology (IT) based support for accessing data variables, as well as storing, querying, computing and analysing data variables and indicators. Also, the policy maker did not have any facilities to analyse computed indicators from different policy related perspectives. Finally, policy makers, analysts and modellers did not have integrated facilities to visualise data variables and computed indicators in various views.

ETIS is an integrated solution to the above problems that policy makers, analysts and modellers have in their daily work. In ETIS, each policy is associated with a number of policy questions. Subsequently, each policy question is associated with particular performance indicators. These performance indicators are defined as a computation on a number of supporting indicators. Finally, supporting indicators are defined as computations of data variables, which are either found in remote data sources or generated by applying models. Data Variables constitute the lowest level object of the system. All this information is stored inside a consolidated repository, which is kept up to date through well-defined procedures under the control of experts.

In this way, ETIS allows the policy maker and analyst to evaluate the computation methodology that was followed for the production of the indicator definitions and values. By the same token, the policy maker, analyst and modeler will be able to formulate and execute queries on policy-specific performance and supporting indicators and view those computed indicators from different policy related perspectives. Additionally, the modeller will be able to retrieve data variables related to policies in order to feed models for the generation of other data variables and indicators. Finally, the policy maker, analyst and modeller will be able to visualise the retrieved information.

3. ADHERENCE TO WORKPLAN

The project duration was extended from 24 to 31 months. During the last seven months considerable effort was put to the ETIS data validation and loading along with improvements of the Pilot functionality and usability. There have been many instances of working meetings where the system and content were demonstrated to the ETIS AGENT consortium and/or to the ETIS Steering Committee. These demonstrations resulted in further improvements of both the content quality and the system design and functionality. These repetitive cycles of content loading, system development and evaluation extended the project duration and increased the overall programming effort. However they proved to be invaluable due to the high acceptability that the ETIS Pilot enjoyed during the final ETIS Conference and the ETIS Training Workshop.

Work within the scope of all Workpackages has finished.

4. STATEMENT OF TECHNICAL PROGRESS

The ETIS Pilot meets the requirements mentioned in Deliverable “D3.1 ETIS User’s Requirements Specification”. The technical work conducted has been based on standards such as J2EE and Web Services which are currently at the fore front of technology. ETIS Pilot is completely Web based. Offering the functionality of a query, analysis and data visualisation environment solely over the internet has not been done before. ETIS’s unique and open architecture enables the exploration of many ways of the system exploitation by the Commission and the Member States.

The ETIS Pilot has been deployed at a professional ISP’s site for five months. ETIS AGENT has prepared adequate technical documentation which will enable the easy take up of all ETIS technical management by the Commission.

5. STATEMENT OF RESOURCE USAGE

The following table lists the effort put in the project by each partner. The effort is expressed in man hours.

Reporting period	Intrasoft International	NTUA	Agilis	MKMetric	NEA	Axmann
First (01.03.2003-31.01.2004)	2321	2519	1984.5	1165	913	0
Second (01.02.2004–31.01.2005)	5398	2017	1697.85	270.31	635.25	479
Third (01.02.2005-31.07.2005)	1825	2218	0	253.5	115.5	192
Sum	9544	6754	3682.35	1688.81	1663.75	671

6. DELIVERABLE UPDATE

ETIS AGENT was contractually obliged to submit the following deliverables. All these deliverables have now been submitted.

Deliverable No ¹	Submission date ²	Dissemination level ³	Title and nature of the Deliverable
D1.1.1	05/05/04 31/08/04	RE	Problem Domain Survey (Report)
D1.1.2	13/10/04	RE	Pilot Definition (Report)
D1.2	05/05/04 31/08/05	RE	Metadata Collection Specifications (Report)
D1.3	06/10/05	RE	Source Metadata Report (Report)
D2.1	05/05/04	RE	Transport Metamodel (Report)
D2.2a	13/10/04	RE	Repository (Software & Report) for ETIS Prototype
D2.2b	27/10/05	RE	Repository and Maintenance Application (Software & Report) for ETIS Pilot <i>Submitted as part of D7.2</i>
D2.3a	13/10/04	RE	Populated Metadata Repository (Software) for ETIS Prototype
D2.3b	27/10/05	RE	Populated Metadata Repository (Software) for ETIS Pilot <i>Submitted as part of D7.2</i>
D3.1	05/08/04	RE	ETIS Pilot Use Cases (Report)
D3.2a	05/05/04	RE	ETIS Pilot Overall Architecture Version 1 (Report)
D3.2b	13/10/04	RE	ETIS Pilot Overall Architecture Update (Report)
D3.3a	13/07/05	RE	Detailed Design Specifications (Report)
D3.3b	06/10/05	RE	Detailed Design Specifications - Revised (Report)
D3.4	13/07/05	RE	Design Validation Report (Report) <i>Submitted as part of deliverable D3.3a</i>
D4.1	27/10/05	RE	Loader Detailed Design and Implementation (Software and Preliminary User Manual) <i>Submitted as part of D7.2</i>
D4.2	27/10/05	RE	ETIS Pilot Data Storage Detailed Design and Implementation (Software and Preliminary User Manual) <i>Submitted as part of D7.2</i>

¹ Deliverable numbers in work package order

² The date in which the deliverables will be available.

³ Please indicate the dissemination level using one of the following codes:

PU = Public

PP = Restricted to other programme participants (including the Commission Services).

RE = Restricted to a group specified by the consortium (including the Commission Services).

CO = Confidential, only for members of the consortium (including the Commission Services).

Deliverable No¹	Submission date²	Dissemination level³	Title and nature of the Deliverable
D4.3	27/10/05	RE	Test Plan for integrated WP4 modules (Report) <i>Submitted as part of D6.2a</i>
D5.1	07/03/05	RE	Front-End Environment (Software and Preliminary User Manual) <i>Submitted as part of D7.2</i>
D5.2	31/05/05	RE	ETIS Pilot Data Storage Interfaces, Query and Analysis Interface and Visualisation Tools - Detailed Design and Implementation (Software and Preliminary User Manual) <i>Submitted as part of D7.2</i>
D5.3	27/10/05	RE	Test Plan for WP5 modules <i>Submitted as part of D6.2a</i>
D6.1	13/10/04	RE	ETIS Prototype (Software)
D6.2		RE	Testing Report and Technical Documentation (Training procedure, methodological guidelines, User Manual) (Report) THIS DELIVERABLE HAS NOW BEEN BROKEN INTO THREE SEPARATE DELIVERABLES i.e. D6.2a, D6.2b, D6.2c
D6.2a	27/10/05	RE	ETIS Pilot Test Plan and Report
D6.2b	06/10/05	RE	ETIS Training Manual
D6.2c	07/10/05	RE	ETIS Pilot User's Guide
D7.1	07/10/05	RE	Validation Plan (Mid Term Report)
D7.2	27/10/05	RE	ETIS Pilot and Deployment Guide (SW and Report)
D7.3	07/10/05	RE	Pilot Validation and Assessment Report (Final Report)
D8.1	07/10/05	RE	Exploitation Plan (Report)
D8.2	27/10/05	PU	Mid-term Dissemination Strategy and Activities Report (Report)
D8.3	07/10/05	PU	Final Dissemination Strategy and Activities Report (Report)
D9.1	27/10/05	RE	Quality Assurance Plan (Report)
D9.2	M16	RE	Mid – Term Assessment Report THERE HAS BEEN NO MID TERM ASSESSMENT
D9.3.1 D9.3.2 D9.3.3	05/08/04 18/04/05, 06/10/2005	RE	Short Project Management Reports (x=1-3) (Report)
D9.4.1 D9.4.2	05/05/2004, 27/10./2005	RE	Project Progress Reports (x=1,2) (Report)

7. CO-OPERATION IN PROJECT

This section lists the meetings conducted within the scope of the ETIS AGENT project after the change to the scope and focus of the project brought in by the ETIS AGENT Inception Report.

SECOND REPORTING PERIOD

Meeting Id	Reason for the meeting	Meeting Dates & location	Participants
1	ETIS-AGENT Project meeting	5-6/02.2004, Athens	Jaco van Meijeren Ming Chen Spyros Liapis George Koumanakos Sakis Ballis Ilias Koukoutsis Antonis Ramfos Chrisanthos Kafkalas AUGUSTIN Helmut
2	ETIS Steering Committee	05/04/2004, Brussels	Sakis Ballis Ruffert N. Giannios Antonis Ramfos
4	Second Open Conference of ETIS	14/05/2004, Brussels	Sakis Ballis Eduard Ruffert AXMANN Axel

5	ETIS-AGENT Project meeting	24/06/2004, Brussels	Jaco van Meijeren Ming Chen Sakis Ballis Eduard Ruffert AXMANN Axel Anna Hondroudakis Antonis Ramfos
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Meeting Id	Reason for the meeting	Meeting Dates & Location	Participants
1	Visit at DG-TREN premises for the purposes of ETIS-Agent. Participation in the presentation of the Geographical System used by DG-TREN.	15/09/2004 DG TREN, Brussels	Anna Panagopoulou (DG TREN), Jorma Hatinkka (DG TREN), Anna Hondroudaki, (IISA), Axel Axmann, (Axmann Geoinformation), Ming Chen (NEA), Elias Koukoutsis (NTUA), David Schmedding (IWW)
2	Co-ordination with ETIS-LINK and ETIS-BASE	15/09/2004 Brussels	Chen Ming, Phillipe Tardieau (NEA), Anna Hondroudakis (ISSA)
3	Co-ordination with ETIS-LINK and ETIS-AGENT	28/09/2004 Brussels	Chen Ming (NEA), Anna Hondroudakis (IISA)
4	Co-ordination with ETIS-LINK and ETIS-AGENT	14/10/2004 Rome	Chen Ming (NEA), Anna Hondroudakis (IISA)
5	Participation in the ETIS-Base	15/10/2004	Ballis Athanasios

Meeting Id	Reason for the meeting	Meeting Dates & Location	Participants
	meeting	Rome	(NTUA), Anna Hondroudakis (IISA)
6	Presentation of the ETIS pilot to the Steering group Committee of the ETIS	03/12/2004 Brussels	Koukoutsis Elias (NTUA), Koutoumanos Anastasios (NTUA),
7	Transport metadata and user interface design and functionalities issues.	21/12/2004 Athens	Spyros Liapis (AGILIS) Sakis Ballis (NTUA) and Anna Hondroudakis (IISA)
8	Participation to the German ministry of Transport for promoting ETIS	24/01/2005 Berlin	Ballis Athanasios (NTUA)
9	Presentation of the ETIS pilot to the Steering group Committee of ETIS-Link	28/01/2005 Brussels	Ballis Athanasios (NTUA), Koukoutsis Elias (NTUA),

THIRD REPORTING PERIOD

Meeting Id	Reason for the meeting	Meeting Dates & Location	Participants
1	ETIS Steering group meeting	04/02/05, Brussels, Belgium	A. Ballis E. Koukoutsis Ramfos
2	ETIS-Agent meeting	14/-15/02/05, Athens, Greece	A. Ballis E. Koukoutsis
3	ETIS Steering group meeting	18/03/05, Brussels,	A. Ballis

Meeting Id	Reason for the meeting	Meeting Dates & Location	Participants
		Belgium	E. Koukoutsis A. Ramfos S. Liapis
4	ETIS-Agent meeting	11-12/04/05, Athens, Greece	A. Ballis E. Koukoutsis
5	Meeting with the German Ministry of Transport	28/04/05, Berlin, Germany	A. Ballis
6	ETIS coordination meeting	18/05/05, Brussels, Belgium	A. Ballis A.Ramfos A. Ruffert
7	ETIS-Agent meeting	10/06/05, Athens, Greece	A. Ballis
8	ETIS Steering group	13/06/05, Brussels, Belgium	E. Koukoutsis A. Ramfos
9	7 th Thematic Workshop: ETIS Training meeting	25-26/07/05, Athens, Greece	A. Ballis E. Koukoutsis A. Ramfos