

Through Spatial Data Infrastructure in TURKEY

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Land has an important role for societies every era.

Land related information has a great importance in human life,
especially while it's known that land is a scarce source.

INTRODUCTION

- ❖ Maps and information about maps have very important roles in daily and business life.
- ❖ Spatial data have taken much more valuable part in social and economic life.
- ❖ Turkey has taken the important steps through National *Spatial Data Infrastructure (NSDI)*.

THE PROJECTS

THROUGH SPATIAL DATA INFRASTRUCTURE

- 1- TURKISH NATIONAL SPATIAL DATA INFRASTRUCTURE PROJECT
- 2- METADATA PORTAL PROJECT
- 3- CORS-TR PROJECT
(CONTINUOUSLY OPERATING REFERENCE SYSTEM)

TURKISH NSDI PROJECT



INSPIRE

**DIRECTIVE OF THE EUROPEAN
PARLIAMENT AND THE COUNCIL
ESTABLISHING AN
INFRASTRUCTURE FOR SPATIAL
INFORMATION IN THE EUROPEAN
COMMUNITY**

TURKISH NSDI PROJECT

TNSDI Project started with e-Transformation Project and went on with Action Plans (Action47, Action36, Action75) and Application Plans.



In the concept of The Prime Minister's Office Notice dated as 04.12.2003 and numbered as 2003/48, e-government Transformation Turkey Project Short Term Action Plan had come into force.

TURKISH NSDI PROJECT

The first step towards establishing NSDI in Turkey was Action47 in the scope of e-transformation Turkey -Short Term Action Plan

Action47

Action47 as "Initial Study for Turkish National Geographic Information System (TNGIS)" had been executed by GDLRC with participation of the different institutions, organizations, universities, private sector, municipalities and presented to T.R. Prime Ministry State Planning Organization after application term.

TURKISH NSDI PROJECT

Action36 is second study that is emphasized on core data, technical standards, metadata services, institutional and legal framework.

TURKISH NSDI PROJECT

Action75:

Modernization in Public Management (MPM)

"Modernization in Public Management" aims to develop cooperation and interoperability among public institutions, to decrease resource waste, to increase productivity during work processes, to develop policy and decision processes based on information and communication technology.

Action75 has projected "Establishing Geographic Information Infrastructure". In the scope of the action, it is aimed to determine the concept of the geographic data and the standards of data exchange and to create portal that provides sharing the geographic information

TURKISH NSDI PROJECT

Until today with TNGIS Project

The studies under Action47 and Action36 went through Action75.

Contact units in each institution, execution committee, technical committee and project execution office have been constituted related to Action75 that is under responsibility of GDLRC.

22 meetings were realized by Technical Committee.

The consulting bid is realized and the consulting act is signed for 18 months by TURKSAT which is the only satellite public company and executes e-government applications.

METADATA PORTAL

www.tkqm.gov.tr



<http://hbb.tkqm.gov.tr/metadata/>

METADATA PORTAL



❖ This is the **first** application in Turkey.

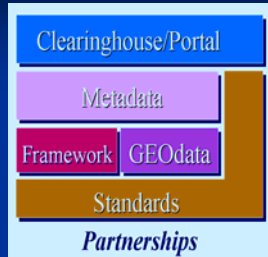
❖ It is in coordination of **GDLRC**

NSDI

A NSDI has six basic blocks:

metadata, clearinghouse/portal, standards, framework, geospatial data, and partnerships.

Each of these components serves as a cornerstone in establishing consistency and structure when it comes to documenting spatial data for everyday applications, as well as in building a distributed network of producers and users that facilitate data.



METADATA PORTAL

Legal infrastructure is prepared in 2005 (Large Scale Maps and Map Information Production Regulation).

Software is completed.

Web interface is designed accordance to the ISO 19115/TC 211 Digital Geographic Information System Standards.

Technically Project is embedded in Information System for Land Registry and Cadastre (TAKBIS)

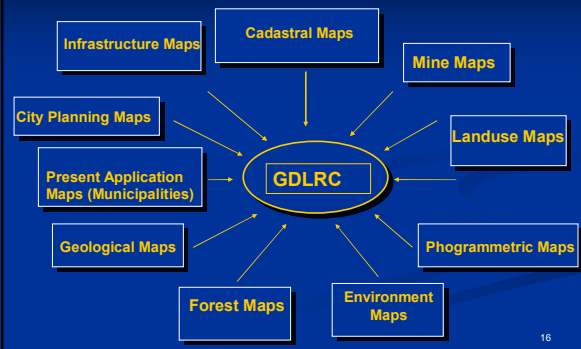
INSPIRE COMPONENTS

- **METADATA**
- INTEROPERABILITY OF SPATIAL DATA SETS AND SERVICES
- NETWORK SERVICES
- DATA SHARING (Licencing&Pricing policy)
- COORDINATION AND COMPLEMENTARY MEASURES – Monitoring & Reporting

INSPIRE is a Framework Directive

Detailed technical provisions for the issues above are laid down in Implementing Rules (IR)

AIM 1: to store all map related metadata from different organizations in **one** center. There are more than 50 different disciplines in Tukey which produce or use the map information.



METADATA PORTAL

AIM 2: To provide the standardization for production of large scale maps (scale 1/5000 and larger scale). To create the standardization for map using TC 211 ISO 19115.

AIM 3: To prevent the duplicate map production and duplicate service sector.

AIM 4: To constitute a substructure for e-government

AIM 5: To collect the large scale spatial data in the concept of Spatial Data Infrastructure (SDI).

METADATA PORTAL

AIM 6: To get **true** and **reliable** data **in time** and **fastly**.



METADATA PORTAL

AIM 7: To follow the production in one center. To avoid waste of time to search any data in huge amount of metadata



AIM 8: To provide needed data to the Services of Decision Support Systems fastly and effectively.



AIM 10: To provide the cooperation among the institutions, organizations and private sector.

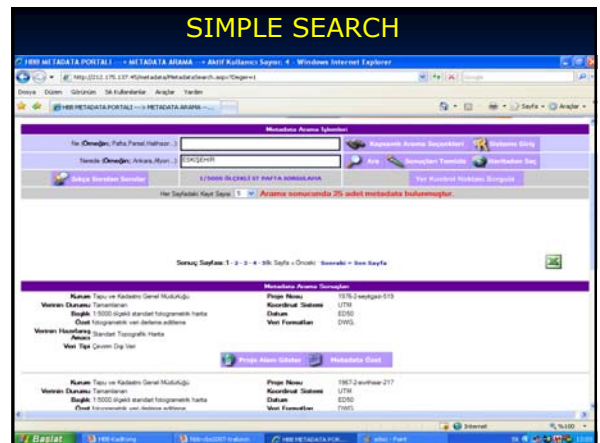
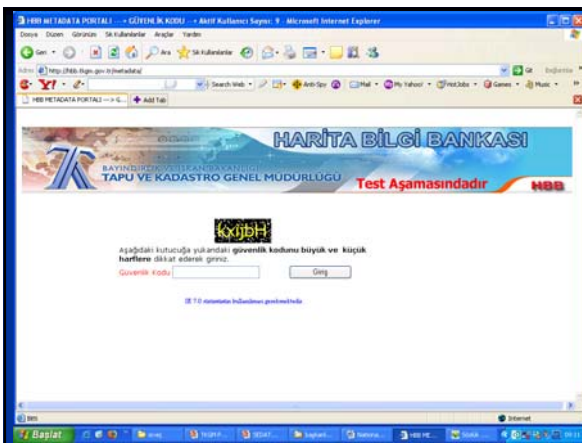


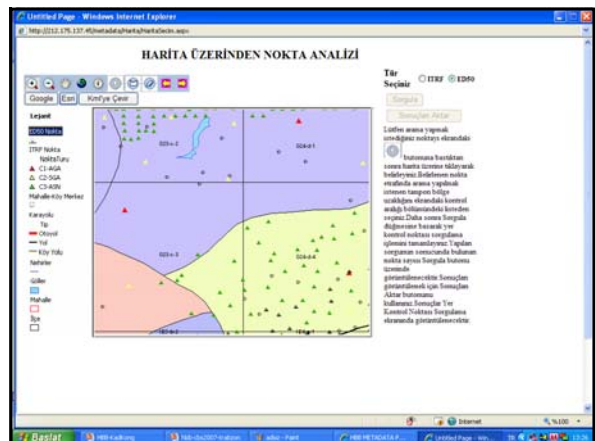
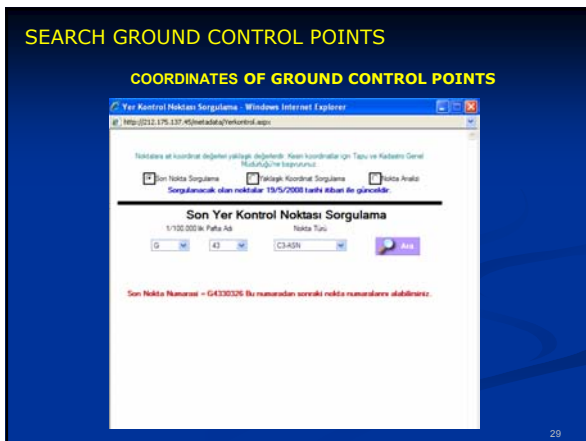
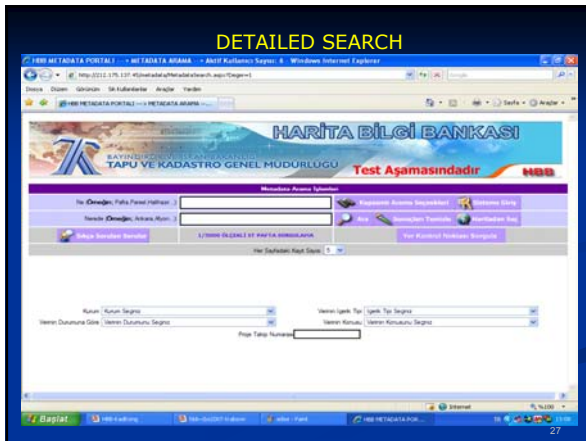
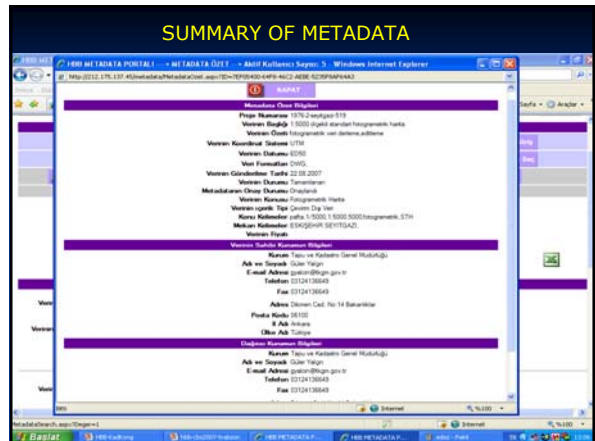
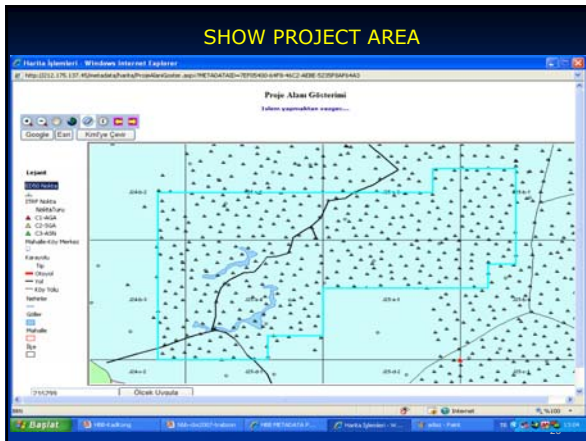
PRESENT SITUATION

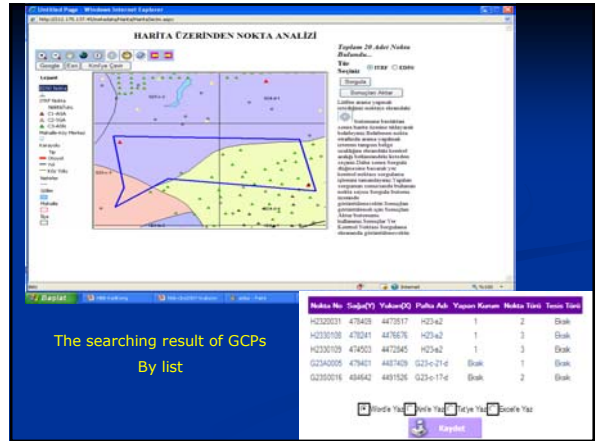
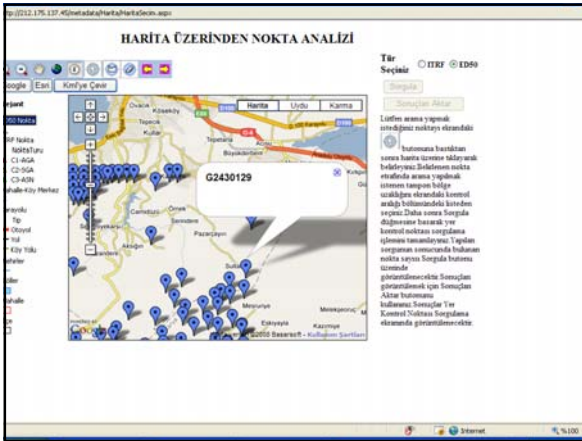
❖ PUBLISH METADATA

❖ SEARCH METADATA

- SIMPLE SEARCH
- EXPERT SEARCH
- SEARCH ON MAP
- SEARCH GROUND CONTROL POINTS
- ENTEGRATION WITH GOOGLE MAP







METADATA PORTAL

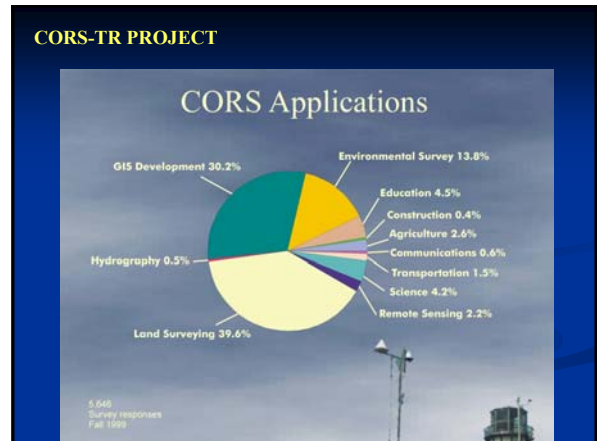
Until Today;

- The project is presented at each semposium and congress.
- The group meetings in DGLRC and the high level meetings in themselves organizations are realized to nearly 20 public institutions in order to be aware of the project and its importance.



CORS-TR PROJECT

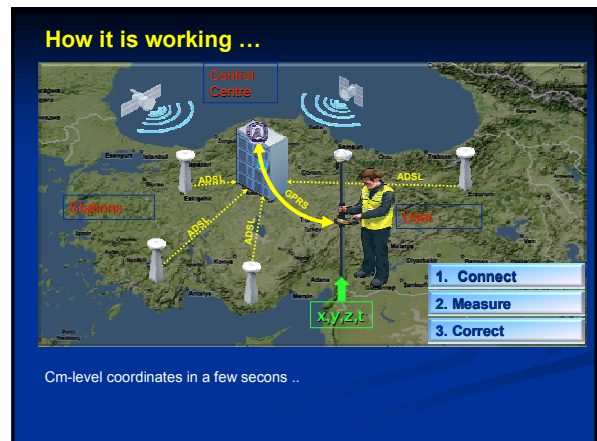
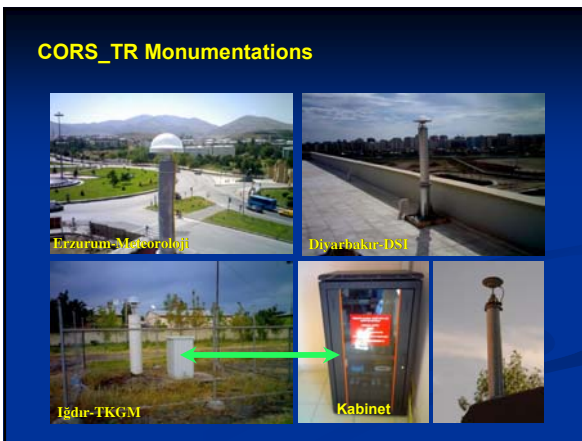
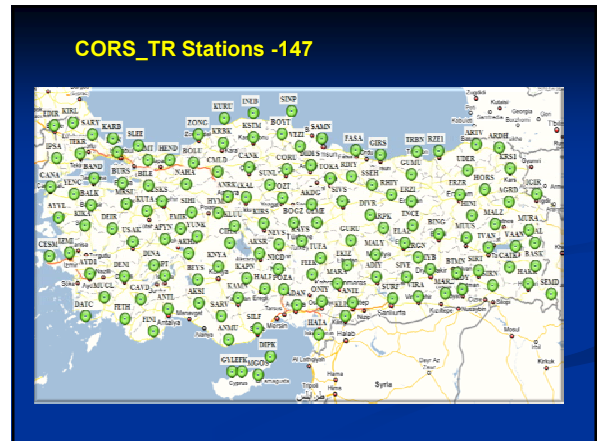
Istanbul Culture University,
jointly with General Command of Mapping and General Directorate
of Land Registry and Cadastre,
has proposed the project for Turkey to TÜB.TAK (The Scientific
and Technological Research Council of Turkey).



The Goals of CORS-TR Project

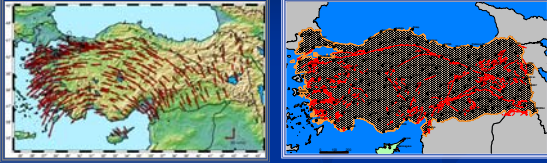
The aim is to establish one station in each province in order to provide a system that will cover the whole country, functioning 24 hours/day, and able to provide the capability of accurate position determination, cm-level accuracy in real-time.

Stationary GPS stations will be established to serve the whole country, operating with Real-Time Kinematic (RTK) functionality, based on the network concept, and the capability to transform from ED50 datum to ITRF datum will be provided.



CORS-TR Project Outputs

To monitor tectonic movements on-line
To model atmosphere (ionosphere&trophospere)

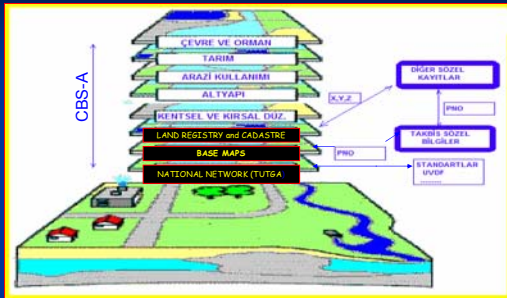


Railway
after
earthquake

CONCLUSION

•TO ESTABLISH NATIONAL NSDI
(The last task came into force by 5403 numb. law in 2005)

National NSDI



THANKS FOR YOUR PATIENCE AND ATTENTION



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Metadata is an important project for TNSDI.
Metadata entering studies are started and going on.
The base maps