



The Future of the Survey of Israel On-line Services

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**The importance of National Geospatial
Organizations is increasing both for land
management and for support of
Location Based Services (LBS)
including Communication.**

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The success of NGO's depends on reliability and availability of data to the professional community as well as to the general public.

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The Survey of Israel adopts this view and takes the necessary measures both with reference to external customers as well as with regard to the internal organization.

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The main components of the future model of the Survey of Israel depend on: on-line geodetic services including Active Permanent Stations, on a Geospatial Portal, on a public on-line access to the National Archive of Maps and Photographs and on a future Coordinate Based Cadastre (CBC).

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The traditional activities of the Survey of Israel depended on the following:

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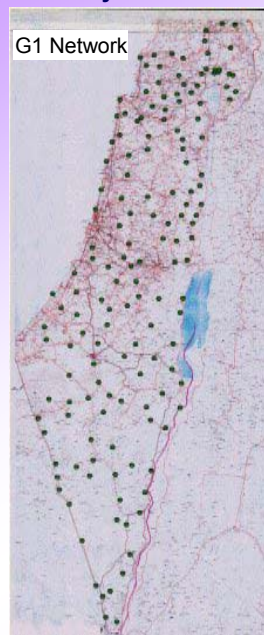


Geodesy:

**A network of hundreds of thousands of triangulation points measured since 1920 by the surveyors of the Survey.
From the beginning of the nineteen nineties the surveys depended on satellites and a Geodynamic Network (G1) was established and measured.**

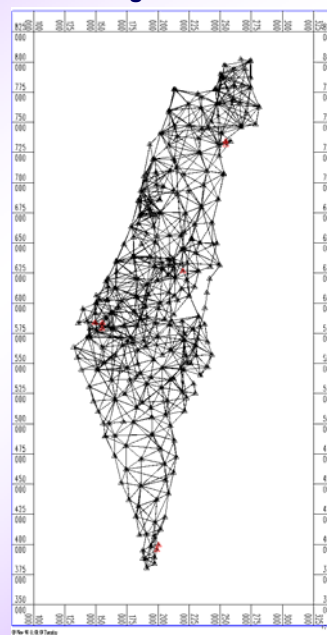
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The Geodynamic Network



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The Triangulation Network





Cadastral:

Since 1928 the cadastre was based on Torrens principles and the survey was based on the triangulation network, suffering from limited accuracy, including the use of chains and steel bands, sometimes with no required corrections.

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The survey used to be done by government surveyors, but since more than 20 years it is done by private surveyors while the employees of the Survey of Israel are responsible for supervision, checking and approval for registration.

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Mapping and Geoinformation:

Topographic maps were produced since the nineteen twenties from field surveys usually at a scale of 1:20,000.

Since the 1950's, after the Israeli Independence, the topographic maps were produced, using photogrammetric methods, usually at a scale of 1:50,000.

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Since the beginning of the 1990's a national GIS has been built using aerial photography.

From the end of the 1990's a digital orthophoto augments the GIS.

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The current status of activities:

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Geodesy:

- **An Active Permanent Network (APN) referred as G0 operates on line (RTK) 24 hours a day, consisted of 18 stations incorporating GPS and GLONASS satellites. An additional station will be installed this year.**
- **VRS and DGPS services are supplied in addition to RTK.**

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- **Israel Grid 2005 (IG05) consists of the active permanent stations (G0), the geodynamic network (G1) which hold around 150 points and additional 1300 points (G2) measured by the Survey with reference to the permanent stations.**

In Addition, points measured by private surveyors and certified by the Survey augment the IG05 grid.

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The Active Permanent Stations



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Cadastral:

- **96% of the state already went through land settlement.**
- **A cadastral data is available to customers partially on-line from a comprehensive cadastral GIS and database.**
- **Private supervising surveyors assist the employees of the Survey to check mutation plans, producing one third of the output.**

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- **An economical feasibility project and pilot projects pave the way for a transition to a Coordinate Based Cadastre (CBC).**
- **A Command and Control System is being implemented.**

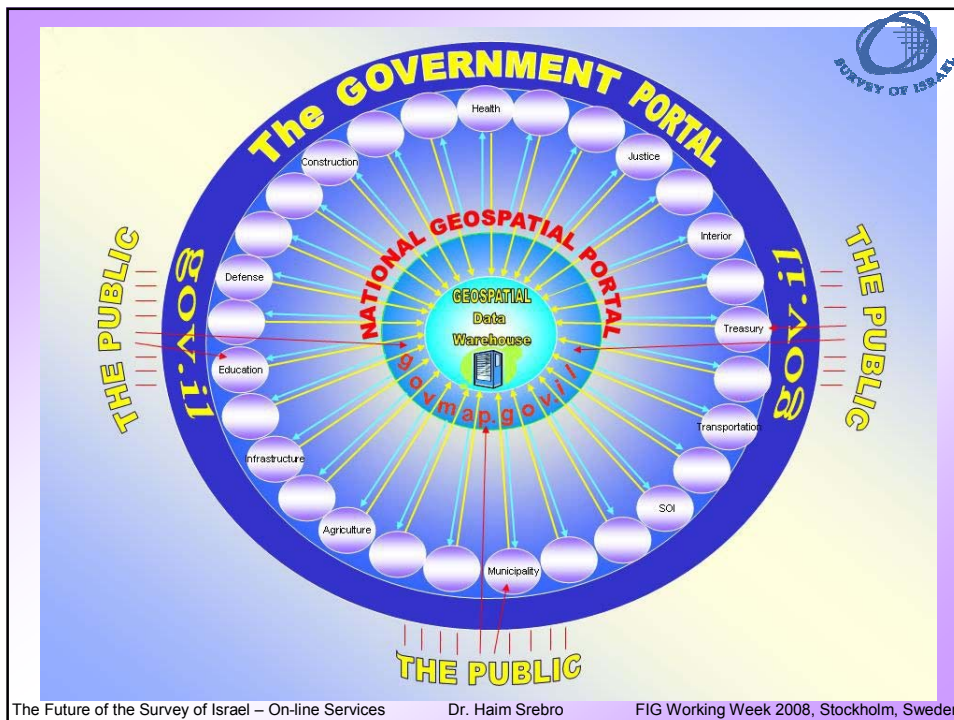
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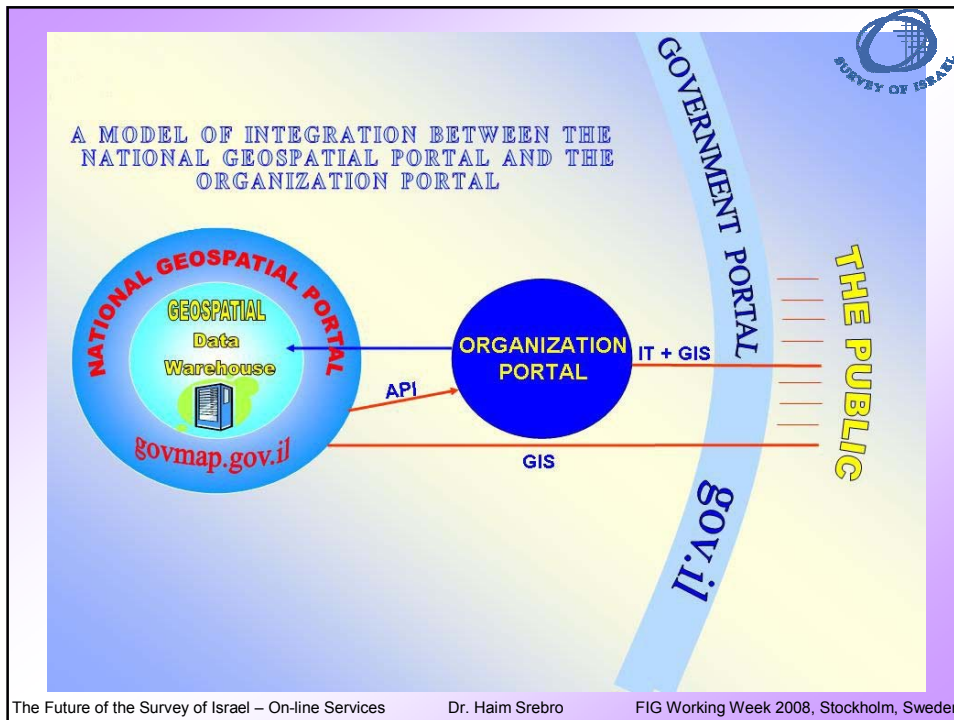


Mapping and Geoinformation:

- A geospatial portal is open to the public in cooperation with the interagency for GIS, including 120 GIS layers, 30 of which are of the Survey, including topographic GIS, Orthophoto, Cadastral GIS and addresses. The portal holds meta-data about 400 layers of data.
- The development of a cartographic DB is in an advanced stage as well as a process of production of topographic maps from the GIS.

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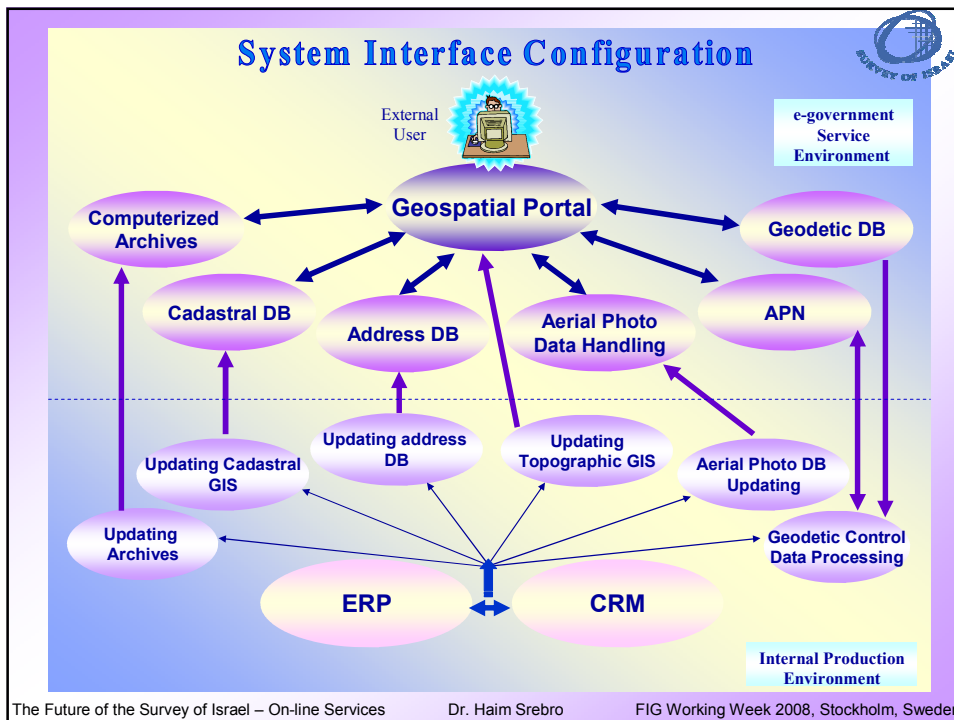
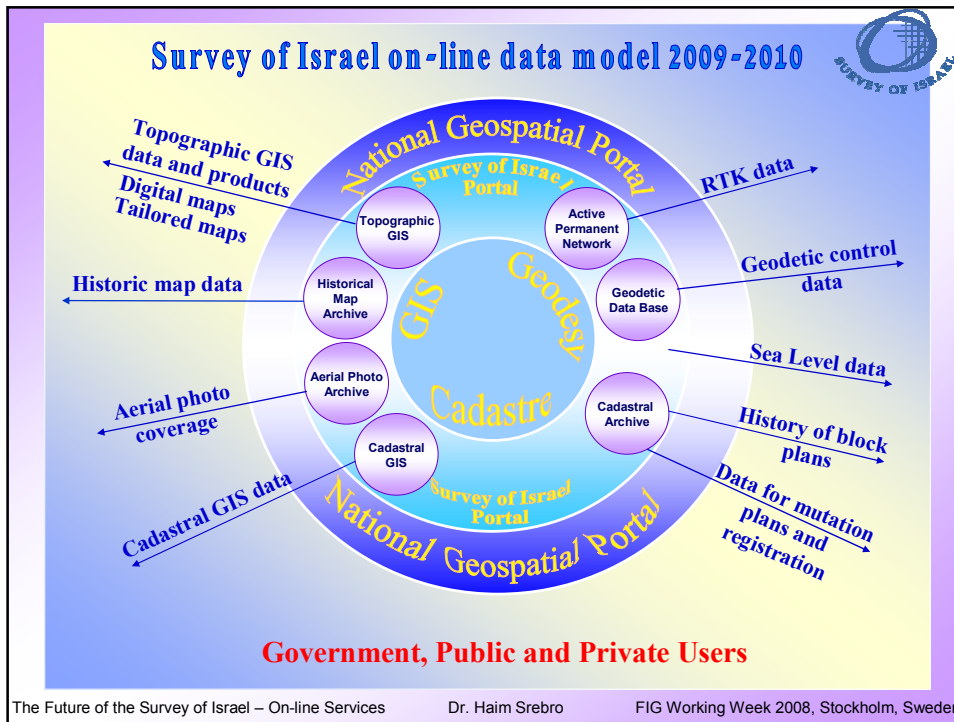


A future activity model should be based on on-line reliable services.

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Main Projects on the Agenda:

- Upgrade of the historical archive and archive of photographs.
- Upgrade of the Geospatial Portal and integration of web sites.
- Upgrade of the APN – Additional stations, GLONASS.
- Additional CBC projects.
- New regulations with regards to Geodesy, Cadastre and Topography.

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- New standards in cooperation with the Interagency Committee for GIS.
- Implementation of new models of service and distribution of geospatial data.
- Opening of National Geodetic DB to the web.
- Main project for intensive future promotion - CBC.

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Elements of Activity:



- Encouraging initiatives, inventiveness and professional leadership.
- Cooperation between the Survey of Israel and the private market for production, R&D and maintenance.
- Cooperation between the Survey of Israel, governmental and public organizations and the public itself.
- Continuous improvement of external and internal services on the basis of service level agreements.

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Summary



- ❑ The existence of SOI depends on its ability to give reliable, efficient and available services to customers, basing the service on internal confident infrastructure.
- ❑ The activity should be based on cooperation with governmental and public organizations as well as on cooperation with the private market and the public, including the surveyors as suppliers and customers.
- ❑ The future services should be on-line and the Survey of Israel is adjusting itself to achieve on-line services in most of the areas in the coming years.

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THANK YOU FOR YOUR ATTENTION

and...

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Association of Licensed Surveyors in Israel SURVEY OF ISRAEL

**Looking
forward to see
you next year**

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