

FIG

FIG WORKING WEEK 2017

Helsinki Finland

29 May - 2 June 2017

*Presented at the FIG Working Week 2017,  
May 29 - June 2, 2017 in Helsinki, Finland*

# The New Israeli Survey Regulations

## Vadim Fishbein - Survey of Israel

Yaron Felus  
Shimon Barazani  
Ronen Regev

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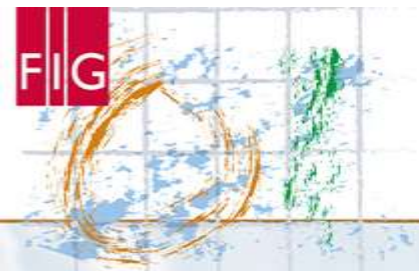
## In this presentation

- ❖ Chronology of regulation in Israel
- ❖ Main innovation in current regulation
- ❖ Main principals in Geodesy
- ❖ Main principals in Cadastre
- ❖ Main principals in Mapping and Geo-Information



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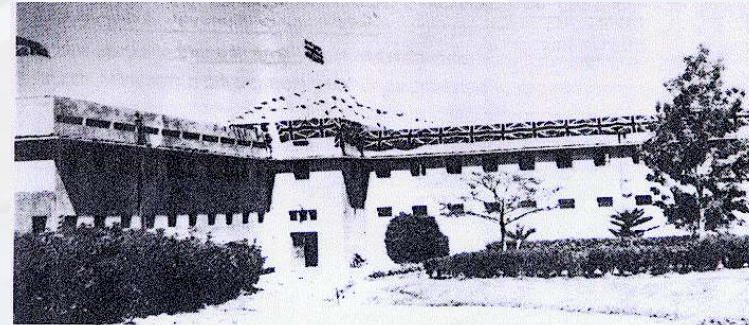
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## Chronology of regulation and legislation

- ❖ **Survey Of Israel (SOI)** - National agency for Geodesy, Cadastre & Mapping
- ❖ Established in 1920
- ❖ Survey Ordinance of 1929
- ❖ The Survey Regulations - 2016
- ❖ Update every two decades
- ❖ Director General instructions

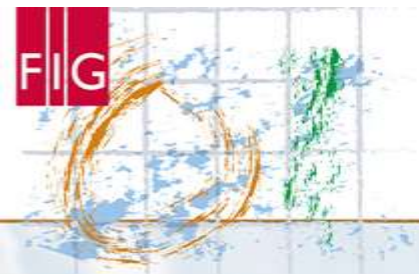


משכן הקבע של מחלקת המדידות בשרונה, תל-אביב.



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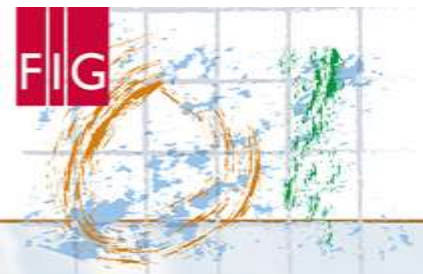
## Main innovation in current regulation

- ❖ Continuously Operating GNSS Reference Stations (CORS)
- ❖ Setting the principles of Coordinate Based Cadastre (CBC)
- ❖ Quality ranking system for parcel coordinates
- ❖ National Cadastral Databases
- ❖ From a paper based map to a digital map
- ❖ Internet technologies and automated quality control
- ❖ Using Advanced technologies for mapping



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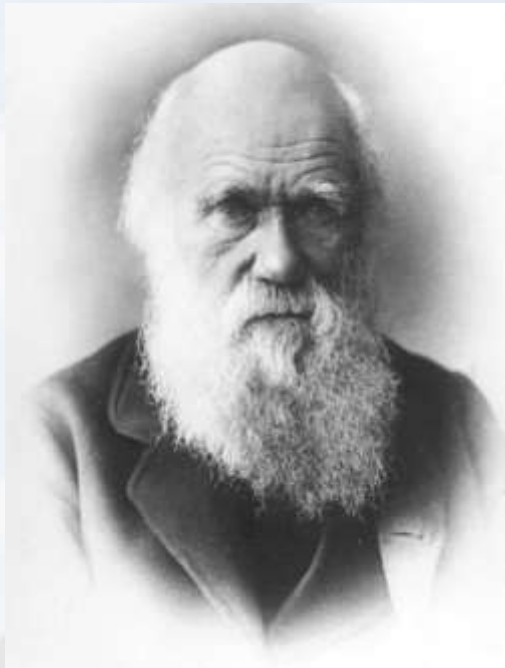
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## Main innovation in current regulation

Evolution



Charles Darwin



Revolution

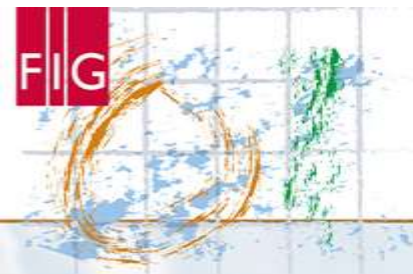


Che Guevara



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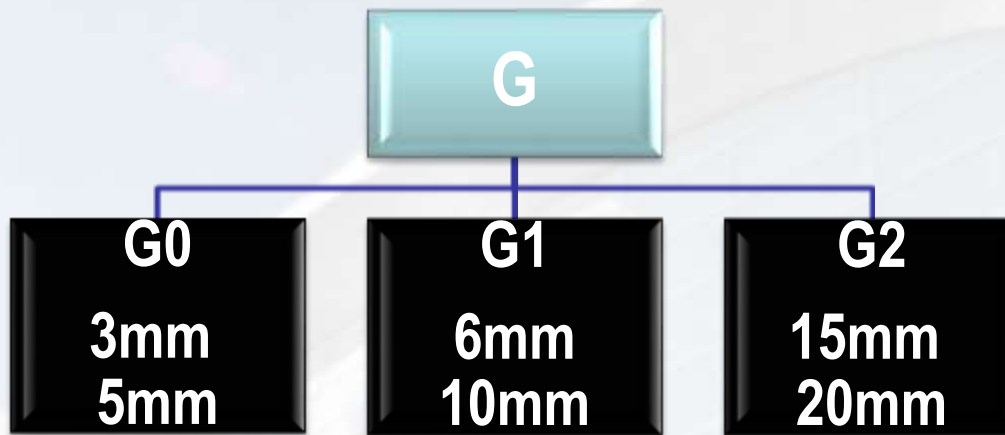
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## Primary Control Network

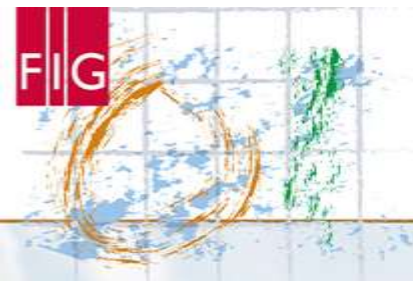


H accuracy:  
V accuracy:



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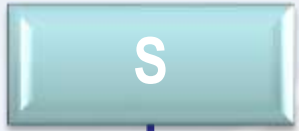
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## Secondary Control Network

### Horizontal Control



Horizontal Accuracy

### Vertical Control

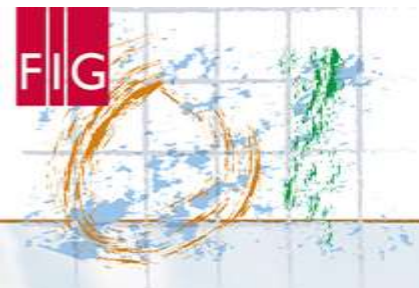


Vertical Accuracy



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## Main principals in Cadastre

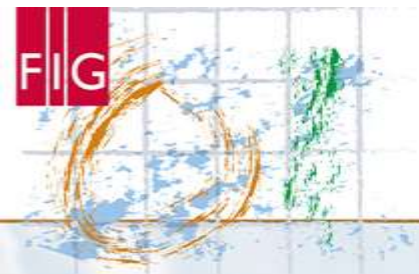
- ❖ From paper based maps to a digital workflow
- ❖ Country wide surveying procedures
- ❖ Boundary Documentation Map (BDM)
- ❖ Defining the National Cadastral Database (NCDB)
- ❖ Setting the principles of Coordinate Based Cadastre (CBC)



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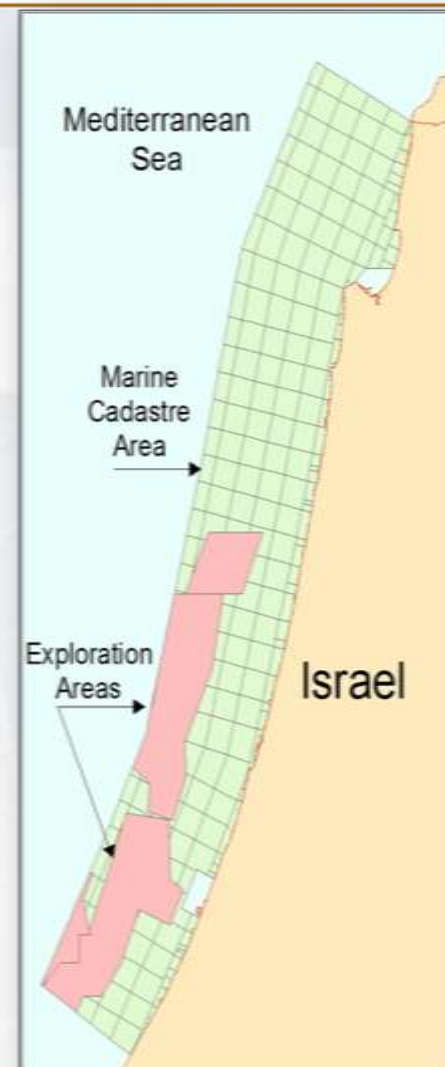
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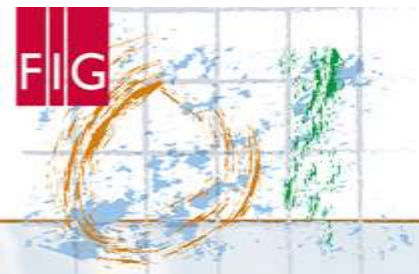
## Coordinate Based Cadastre

- ❖ Foundations of a Modern Cadastre
- ❖ National Database for property location
- ❖ Determine property Coordinates by CORS
- ❖ No need to search for original marks
- ❖ Maritime Cadastre
- ❖ 3-D Cadastre



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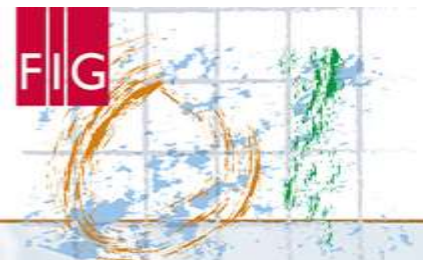
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## Main principals in Mapping and Geo-Information

- ❖ Constant flow of new technologies and concepts
- ❖ Definitions & quality requirements - keep it simple
- ❖ Underlines Three important concepts :
  1. Digital environment & Metadata
  2. Solid quality control procedures- ISO19157
  3. Enabling emerging technologies and advanced mapping products



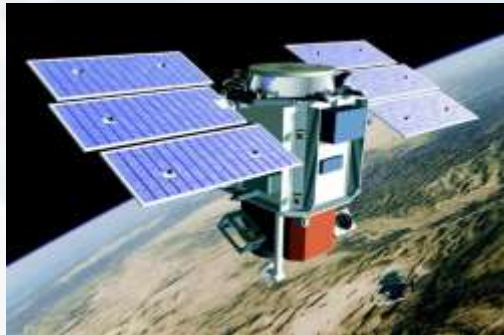
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## Survey Regulation support new mapping technologies and standards



Satellite sensors



UAV mapping



Mobile mapping



Advanced GNSS



Digital geodetic leveling

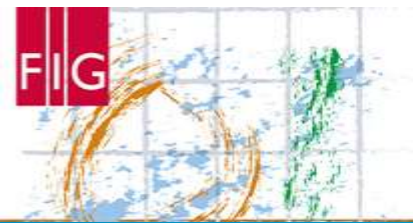


Laser scanning



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