Using Geographic Information System Software
For A Digital City Map Construction

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FIG Working Week 2009
Eilat, Israel, 3-8 May 2009

Purposes

- Capabilities test of GIS software in field of a digital city map construction
- Creation of the city map
- 2D presentation
- 3D visualization
Software

- ArcGIS ArcInfo
- Extensions
  - ArcGIS Network Analyst
  - ArcGIS 3D Analyst
- Photoshop

Data

- Vector Data
  - Building contours
  - Axis of streets and rivers
  - Landuse contours
  - Set of points with address information
  - Digital Terrain Model (TiN)
- Raster Data - Topographic Map
- Reconnaissance
  - Information about buildings
  - Photos
Steps of research

- Gathering Data
- Geodatabase
  - import/export data
  - topology
  - adding attributes into objects
  - creation relationships between tables
  - geocoding
  - creating routes
- 2D and 3D presentation of the city map
Capabilities of the city map

- Zoom in/out and pan view
- Show/hide layers
- Set a layer’s visible scale range
- Identifying
  - Identify tools
  - Hyperlink
  - MapTips
- Searching
  - Find
  - Select
    - By attribute
    - By location
- Network analysis
  - Finding the best route
  - Finding the closest facility
- Print
The quickest and the shortest route between three locations

comparison
The most attractive tourist route
The shortest routes between several locations
in random order and in optimum order – comparison

The quickest route from pointed place to closest facilities
Raport

![Map Image]

### ZABIERZÓW

![Map Image]
3D visualization

3D view on Zabierzów

3D view on Zabierzów