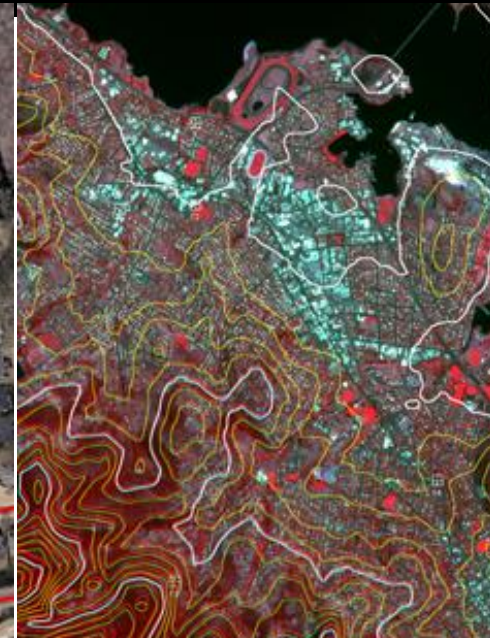
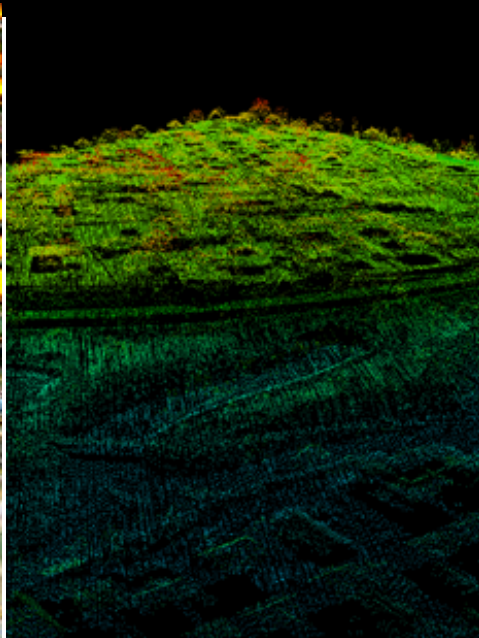


# Smart Clients – A Smarter Way To Enable Your World

Intergraph Corporation,

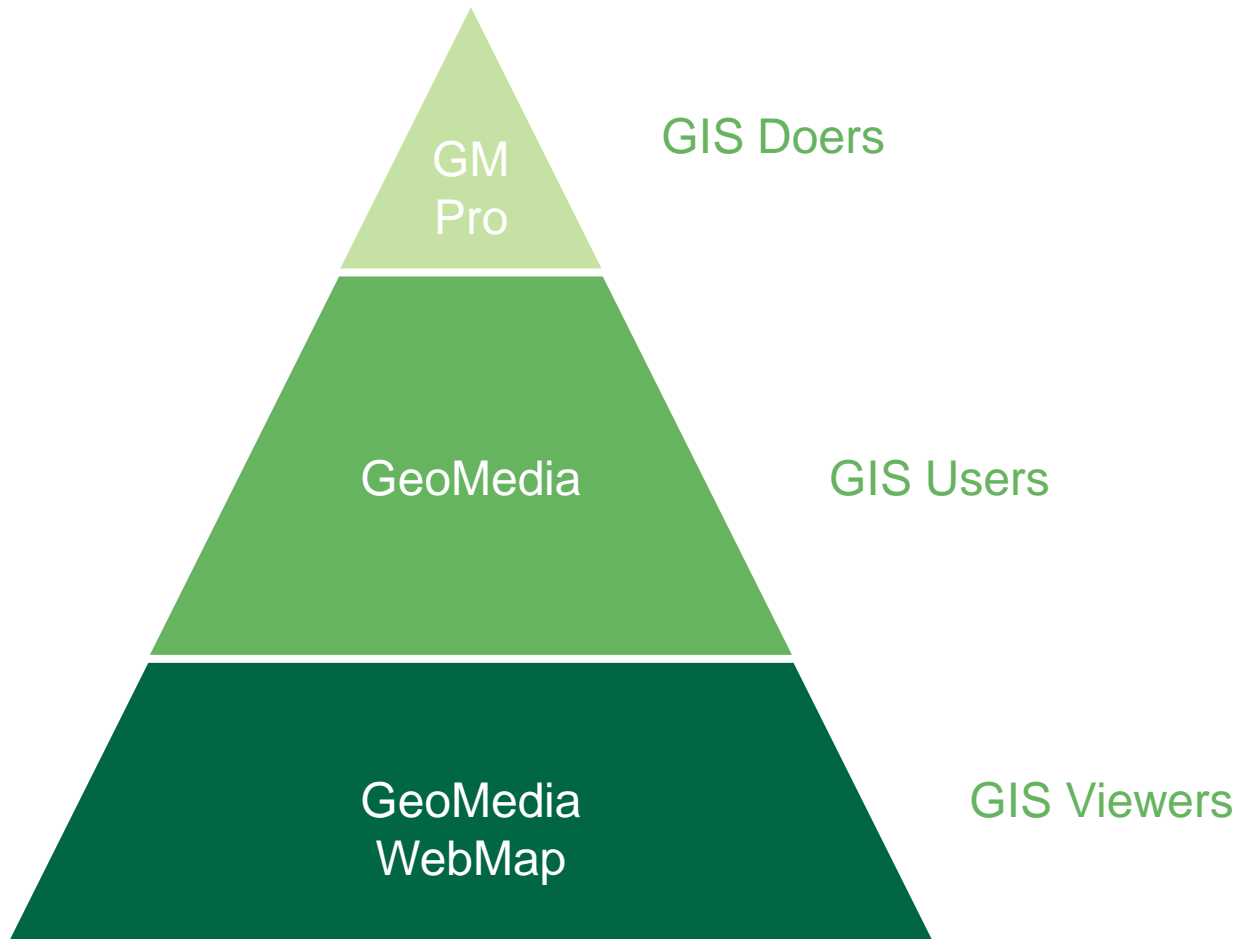
Security, Government & Infrastructure Division (SG&I)

Ashish Arora  
June 15, 2012



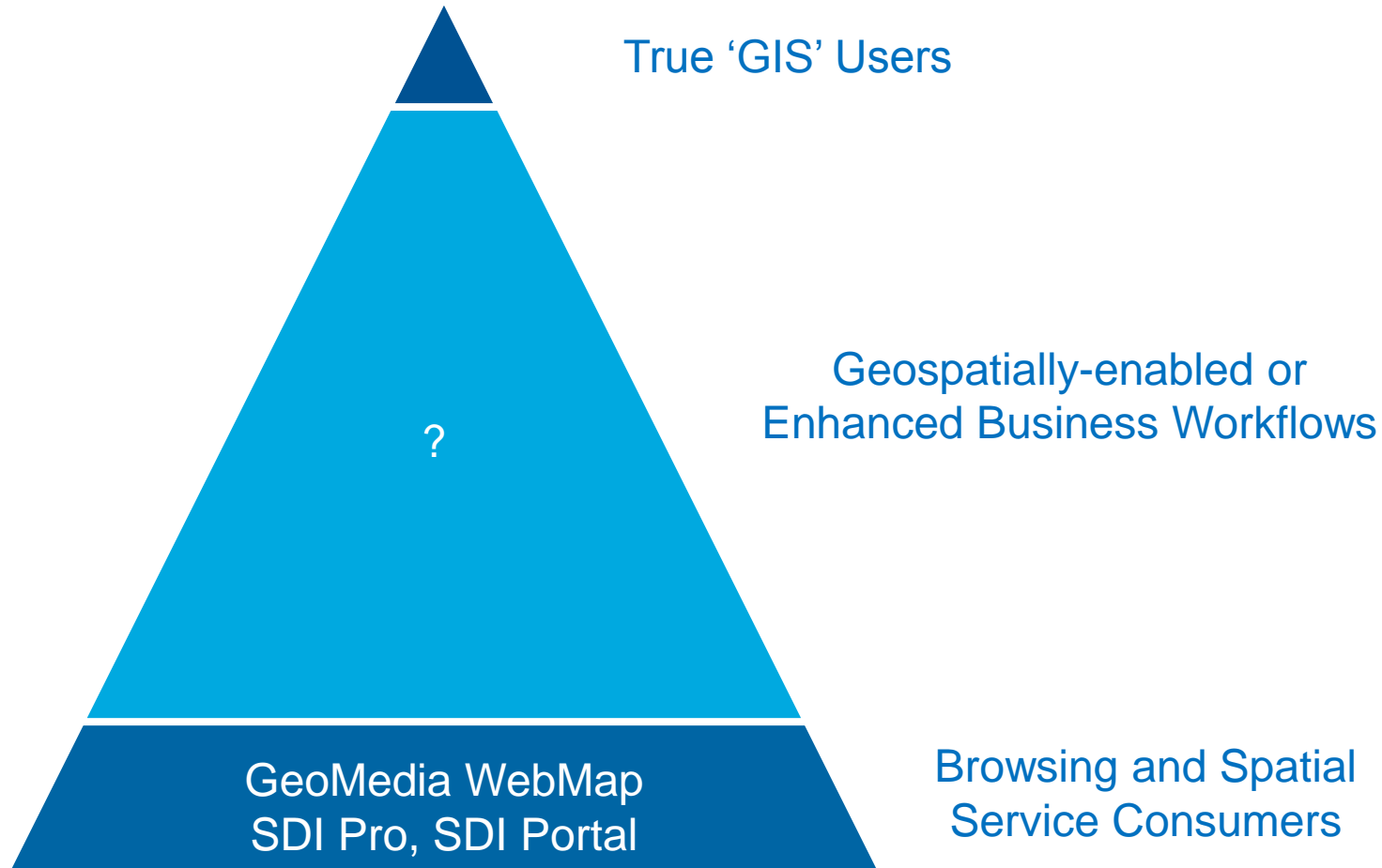
# 1<sup>st</sup> Generation: 'Enterprise GIS'

---



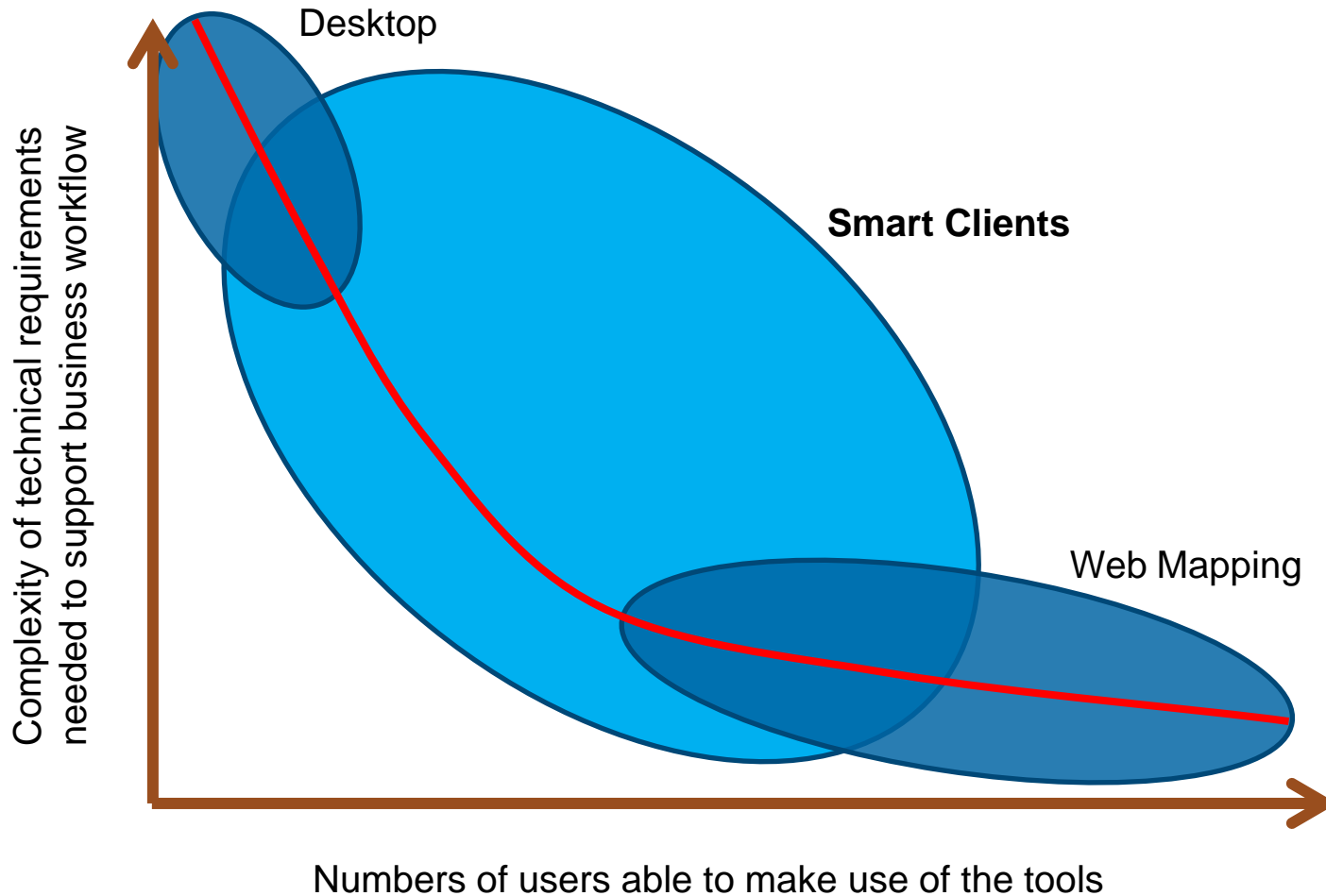
## 2<sup>nd</sup> Generation: the 'Geospatially-enabled' Enterprise

GeoMedia / Pro / TM / etc.



# 'Geospatially-enabled' Enterprises

Matching the delivery of spatial functionality to users' abilities and business needs



# 'Geospatially-enabled' Enterprises?

## Vanilla Desktop

- GeoMedia, Pro, 3D, Image, Transportation Manager

## Spatially Enabled Enterprise Workflows

- Geospatial apps with Industry Workflows e.g. G/Tech, OSOW
- Custom project: customise desktop/Web
- Custom project: geospatial embedded in business apps e.g. SAP, Maximo, Siebel
- 

## Web-mapping & Spatial Services

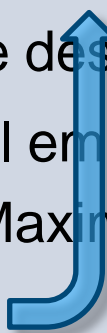
- Simple browsing / use remote data source
- Stream into a business app

# 'Geospatially-enabled' Enterprises?

## Vanilla Desktop

- GeoMedia, Pro, 3D, Image, Transportation Manager

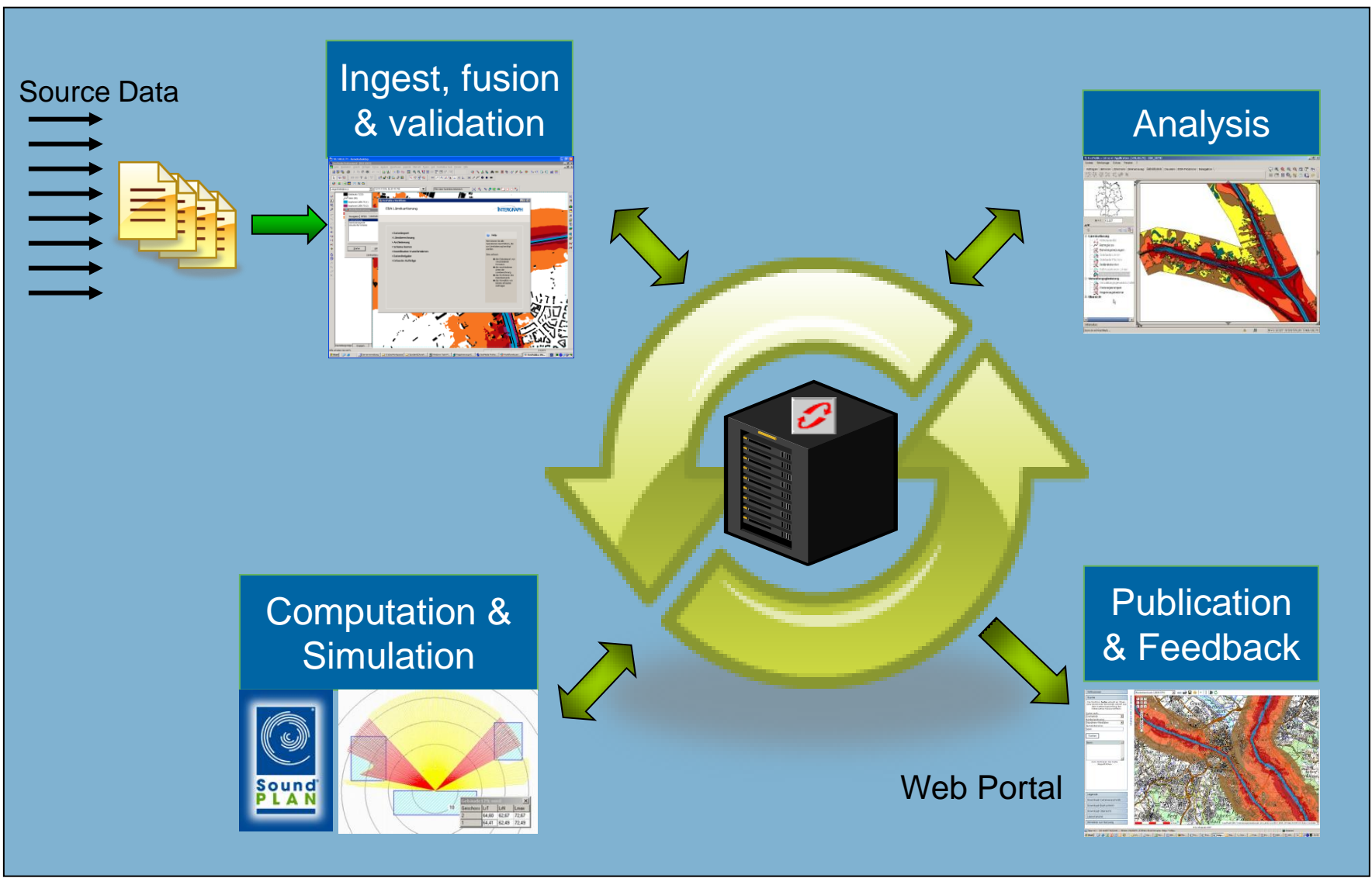
## Spatially Enabled Enterprise Workflows

- Geospatial apps with Industry Workflows e.g. G/Tech, OSOW
  - Custom project: customise desktop/Web
  - Custom project: geospatial embedded in business apps e.g. SAP, Maximo, Siebel
  - **GeoMedia<sup>®</sup> Smart Client**
- 

## Web-mapping & Spatial Services

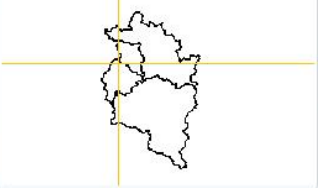
- Simple browsing / use remote data source
- Stream into a business app

# Repeatable, Sustainable, Auditable Workflows



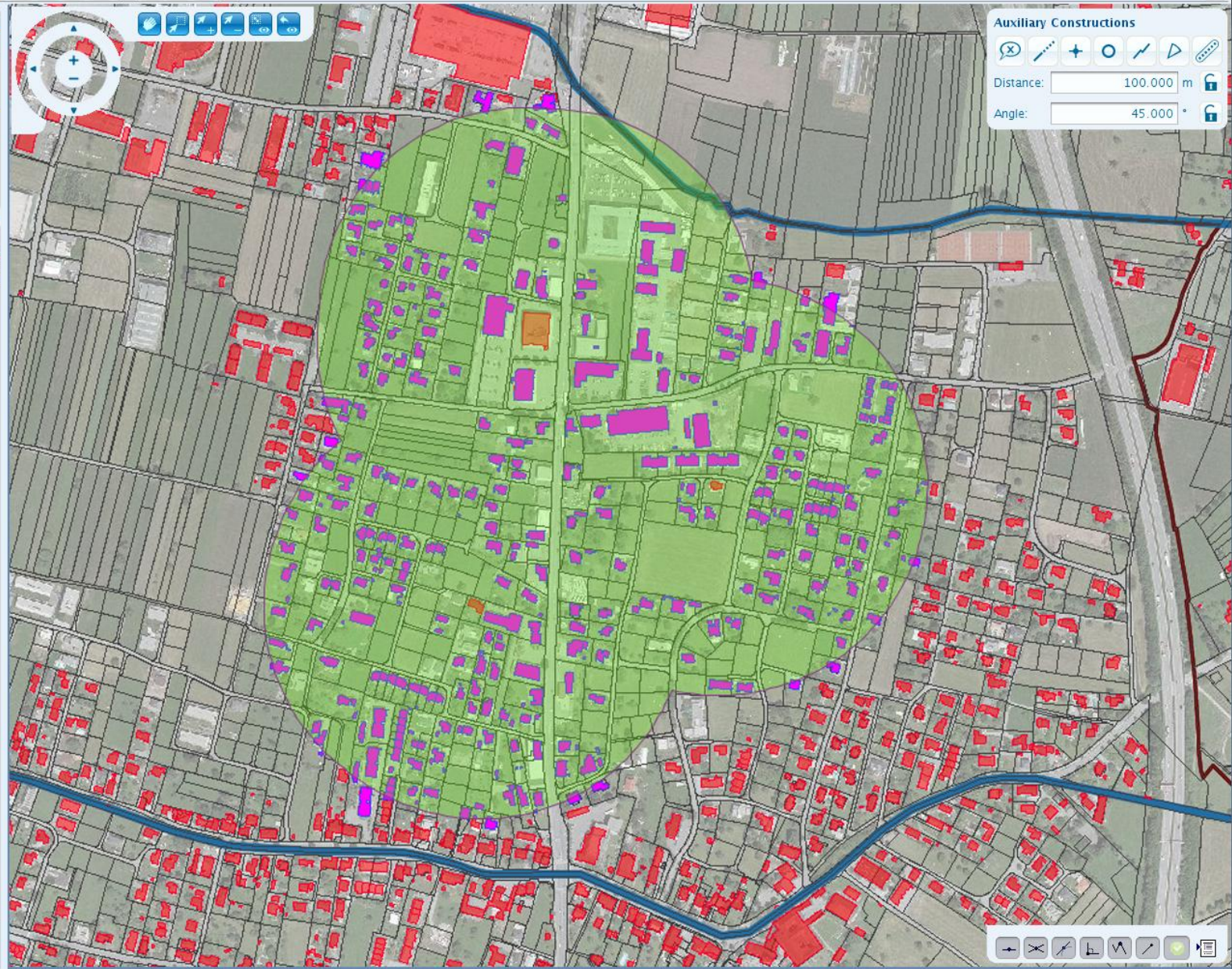
Übersicht

M = 1 : 1700



Legende

- recreation
  - ski piste
  - ski lift
- administrative borders
  - Höhenmodell
  - points of interest
    - municipality name
    - county name
    - county border
  - municipality border
- traffic
  - Wanderwegsschilder
  - Unterführung
  - motorway label
  - railway
  - forest road
  - transport road
  - private road
  - municipal road
  - state road
  - Notrufsäulen
  - Kilometrierung A14 / S16
  - motorway
  - bridge
  - tunnel
- building
  - building
- topographic map
  - topographic map 100
  - topographic map 200



Auxiliary Constructions

Distance: 100.000 m

Angle: 45.000 °





Übersicht

M = 1 : 1700

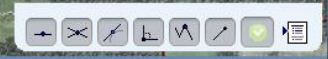
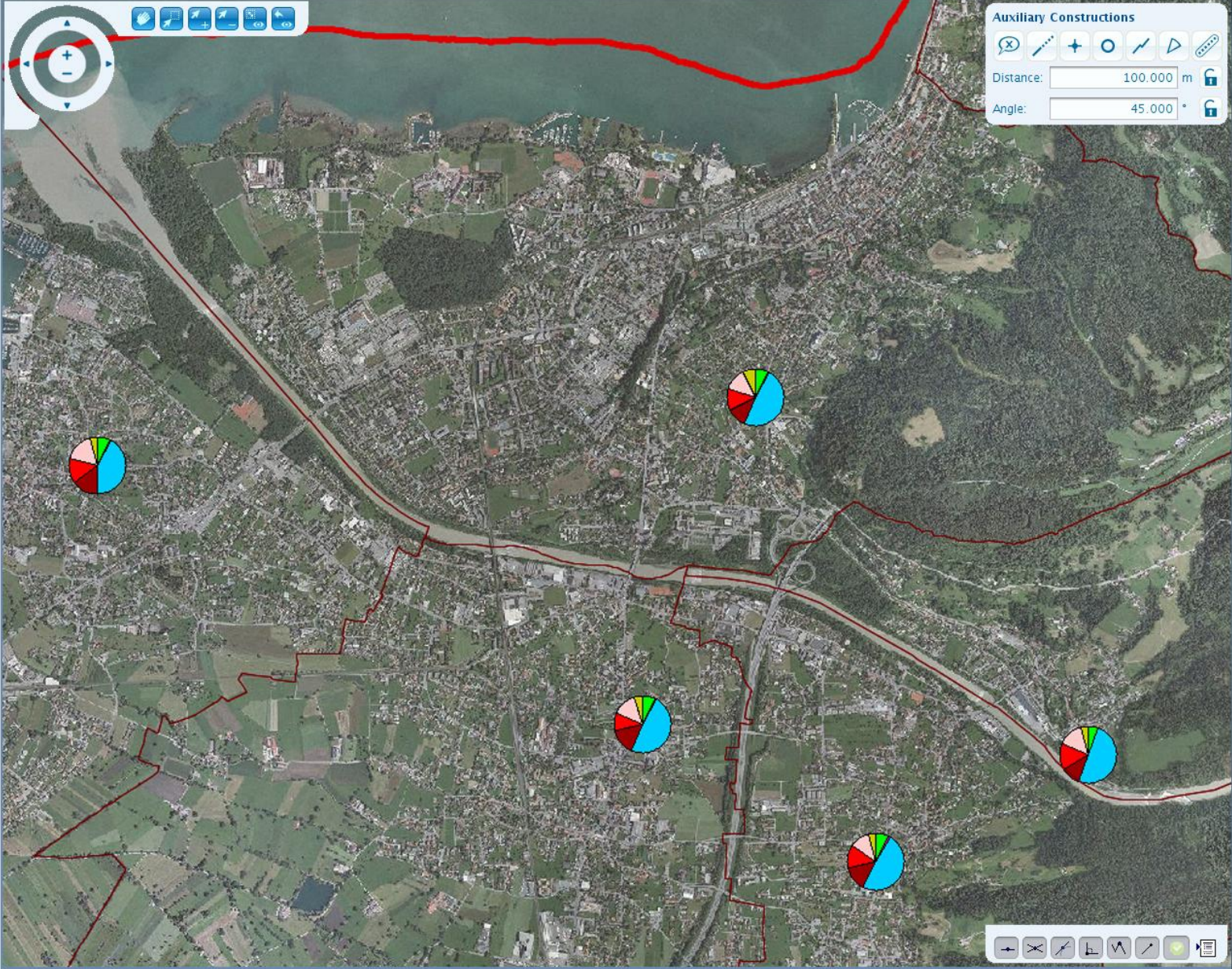
Legende

- recreation
  - ski piste
  - ski lift
- administrative borders
  - Höhenmodell
  - points of interest
    - municipality name
    - county name
    - county border
  - municipality border
- traffic
  - Wanderwegsschilder
  - Unterführung
  - motorway label
  - railway
  - forest road
  - transport road
  - private road
  - municipal road
  - state road
  - Notrufsäulen
  - Kilometrierung A14 / S16
  - motorway
  - bridge
  - tunnel
- building
  - building
- topographic map
  - topographic map 100
  - topographic map 200

Auxiliary Constructions

Distance: 100.000 m

Angle: 45.000 °



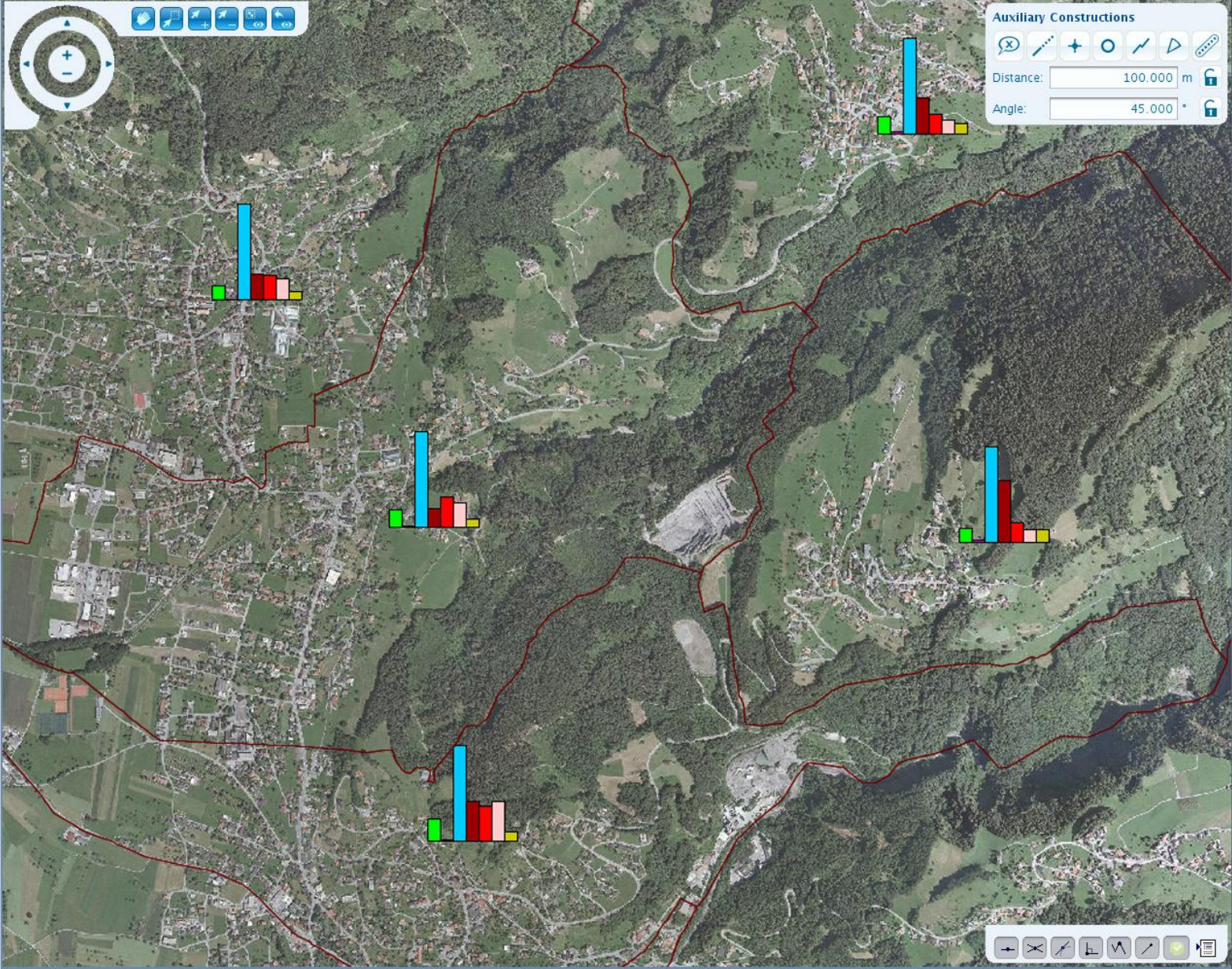


Übersicht

M = 1 : 1700

Legende

- recreation
  - ski piste
  - ski lift
- administrative borders
  - Höhenmodell
  - points of interest
    - municipality name
    - county name
    - county border
  - municipality border
- traffic
  - Wanderwegsschilder
  - Unterführung
  - motorway label
  - railway
  - forest road
  - transport road
  - private road
  - municipal road
  - state road
  - Notrufsäulen
  - Kilometrierung A14 / S16
  - motorway
  - bridge
  - tunnel
- building
  - building
- topographic map
  - topographic map 100
  - topographic map 200



Auxiliary Constructions

Distance: 100.000 m

Angle: 45.000 °

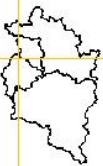


Queries QuickPick Edit Query (spatial) Measure Redlining



Übersicht

M = 1 : 1700



Legende

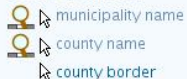
recreation



administrative borders

Höhenmodell

points of interest



municipality border

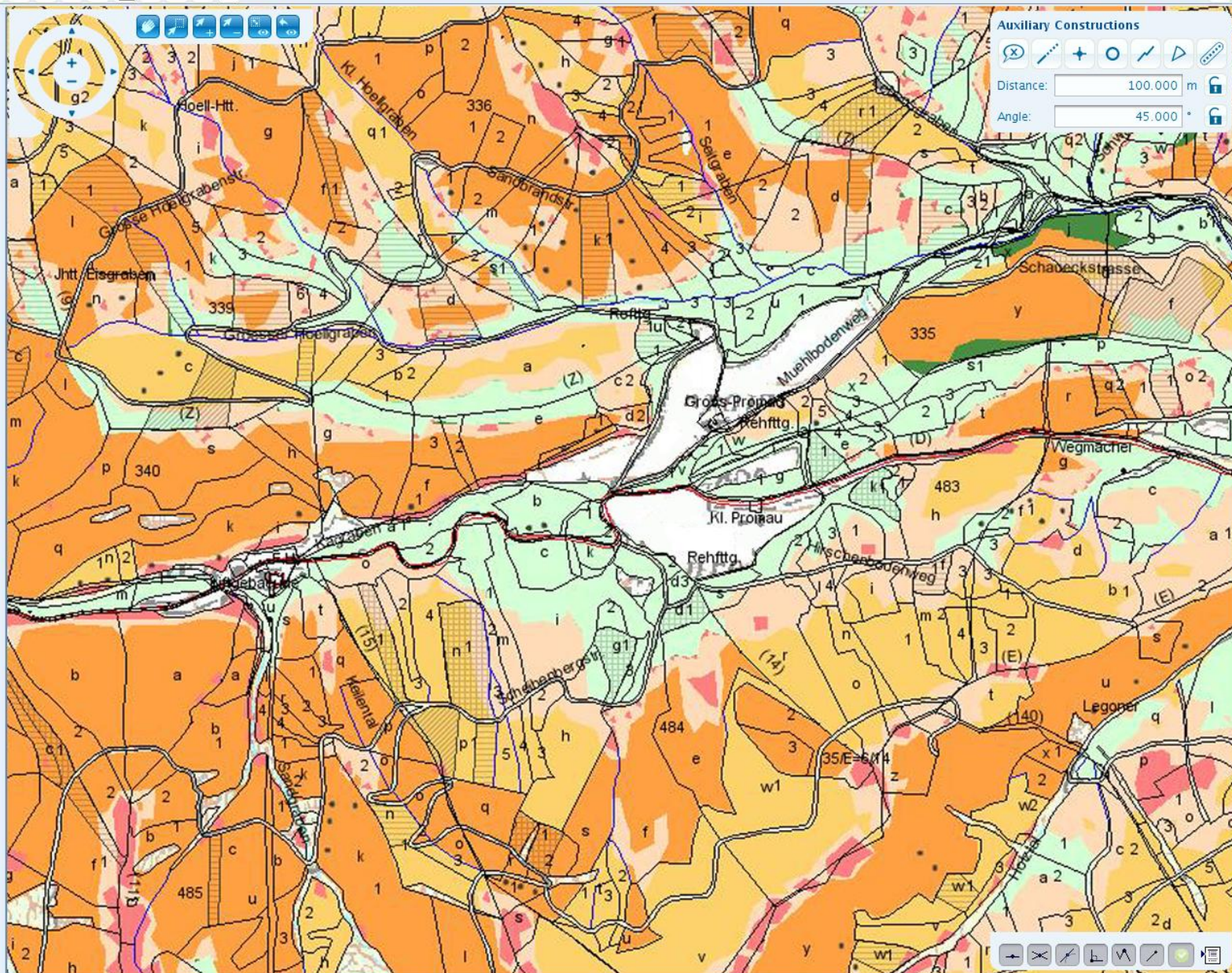
traffic



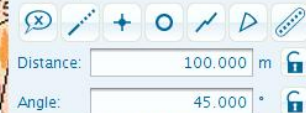
building



topographic map



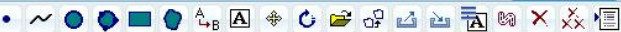
Auxiliary Constructions



Distance: 100.000 m

Angle: 45.000 °

Queries QuickPick Edit Query (spatial) Measure Redlining



Übersicht

M = 1 : 1700



Legende

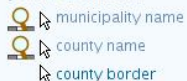
recreation



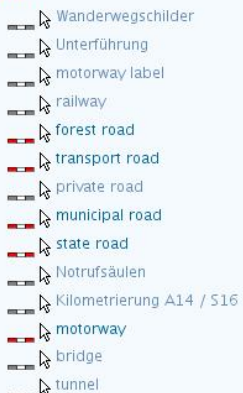
administrative borders

Höhenmodell

points of interest



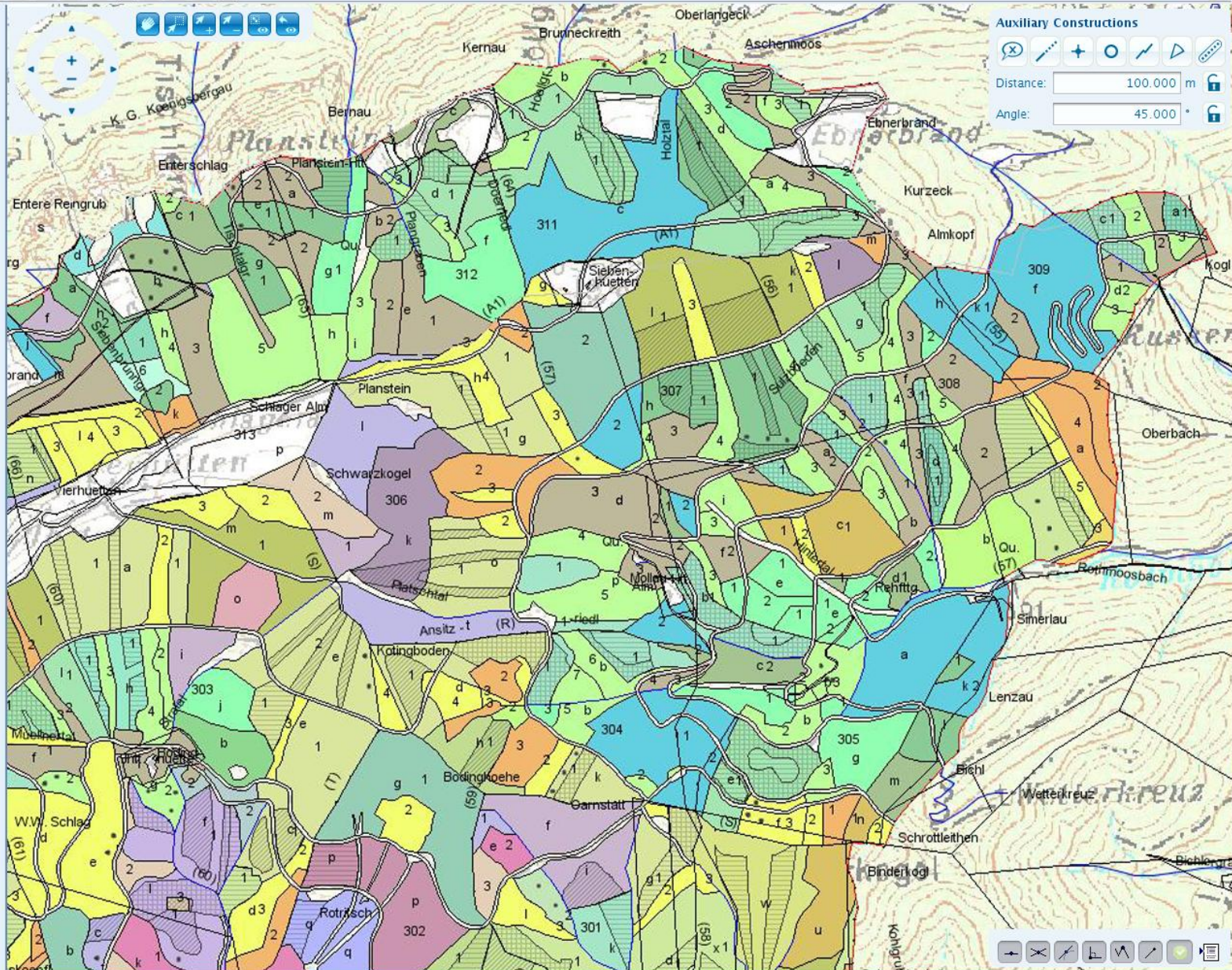
traffic



building



topographic map



Auxiliary Constructions



Distance: 100.000 m

Angle: 45.000 °

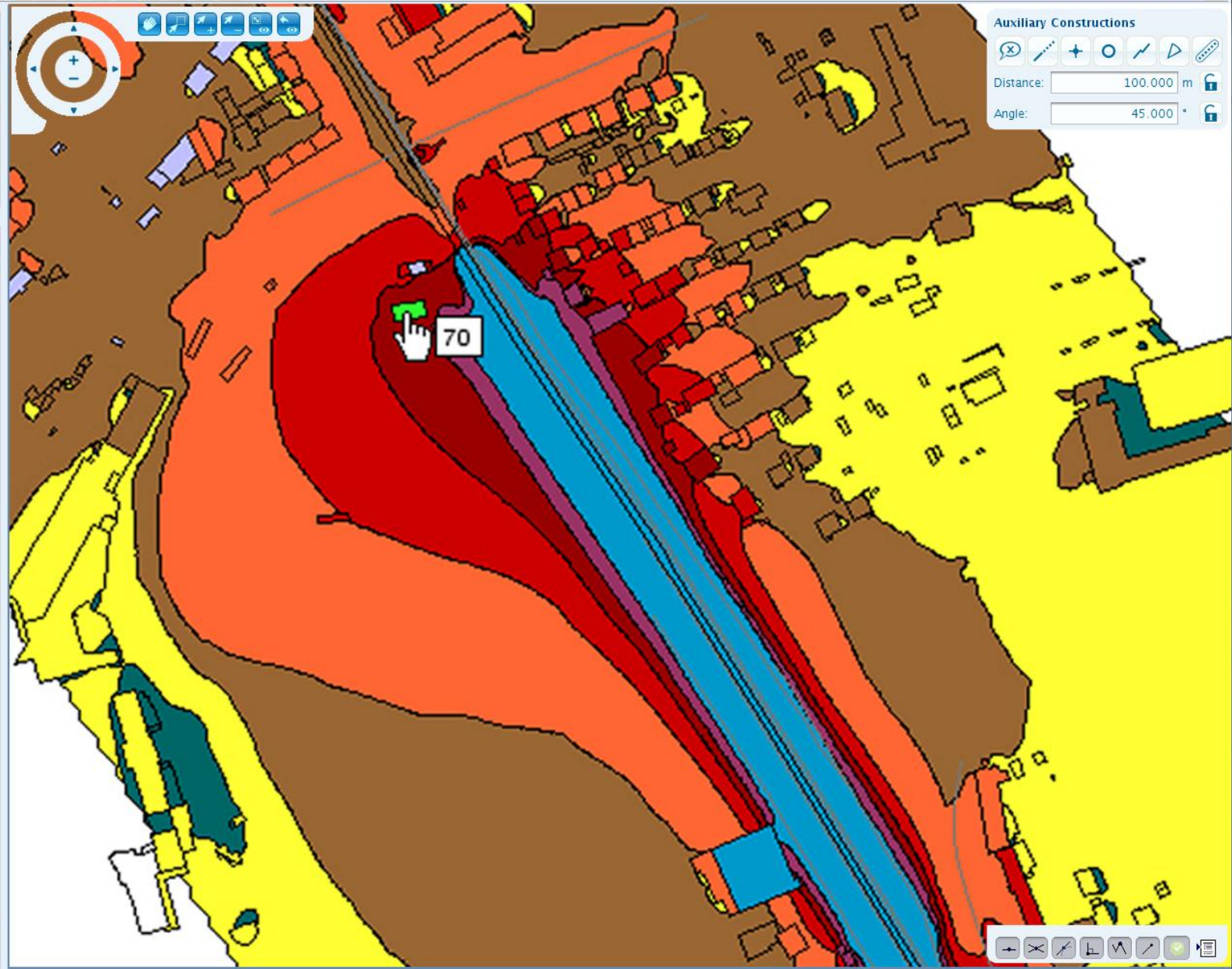


Übersicht

M = 1 : 1700

Legende

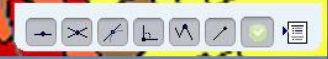
- recreation
  - ski piste
  - ski lift
- administrative borders
  - Höhenmodell
  - points of interest
    - municipality name
    - county name
    - county border
  - municipality border
- traffic
  - Wanderwegsschilder
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  - railway
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  - private road
  - municipal road
  - state road
  - Notrufsäulen
  - Kilometrierung A14 / S16
  - motorway
  - bridge
  - tunnel
- building
  - building
- topographic map
  - topographic map 100
  - topographic map 200



Auxiliary Constructions

Distance: 100.000 m

Angle: 45.000 °



# Übersichtskarte

BNr/TBNr: 123456  
BBK: 9999/MUSTER  
Gemeinde: 11111/M

Name: JOSEF MUSTER

BNr/TBNr: 123456  
BBK: 9999/MUSTERBBK  
Gemeinde: 11111/MUSTERGEMEINDE

Name: JOSEF MUSTER  
Adresse: ORTSCHAFT 1  
Ort: 9999 MUSTERORT

# HOFKARTE



Luftbilddatum: 06.07.2001 bis 29.07.2001  
Invekos Datenbestand: MFA 2003  
1 20 40 60 80 100 m  
1cm = 25m  
DKM Datenkopie vom Jahr 2002  
© Bundesamt für Eich- und Vermessungswesen  
Luftbild: Schöberl



Luftbilddatum: 06.07.2001 bis 29.07.2001  
Invekos Datenbestand: MFA 2003

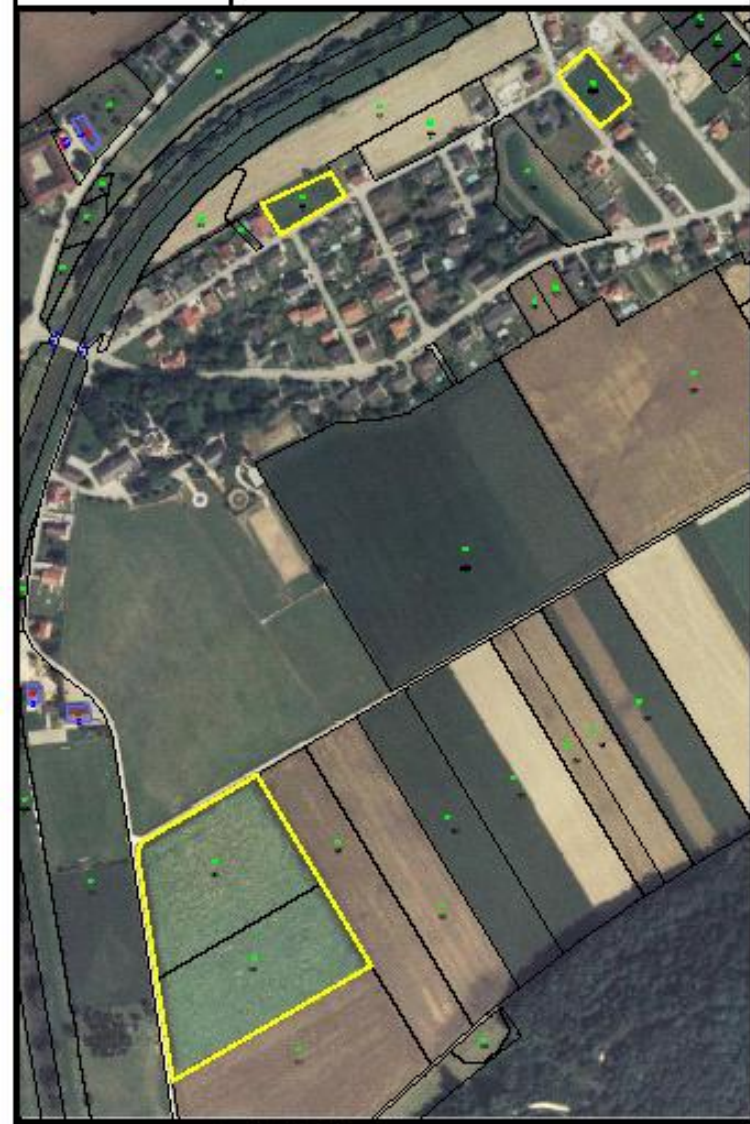


DKM Datenkopie vom Jahr 2002  
© Bundesamt für Eich- und Vermessungswesen

BNr/TBNr: 123456  
BBK: 9999/MUSTERBBK  
Gemeinde: 11111/MUSTERGEMEINDE

Name, Adresse: JOSEF MUSTER  
ORTSCHAFT 1  
9999 MUSTERORT

**OFKARTE**  
M 1:2500



Luftbilddatum: 26.07.2001  
Invekos Datenbestand: MFA 2003  
1 20 40 60 80 100 m  
1cm = 25m  
DKM Datenkopie vom Jahr 2002  
© Bundesamt für Eich- und Vermessungswesen

**Legende:**

- Grundstücke (Gd)
- Naturgebieten
- Landwirtschaft
- Wald
- Weiden
- Streuweiden
- Halweiden
- Weingärten
- Gebäude
- Teilweise genutzte Gd
- Teilweise Gd-Träger

Fd = Feldfläche  
 Wd = Weidungsgebiet  
 \*) Weidungsgebiet  
 Feldfläche 26.07.2001

N  
W  
E  
S

Luftbild: 20040000

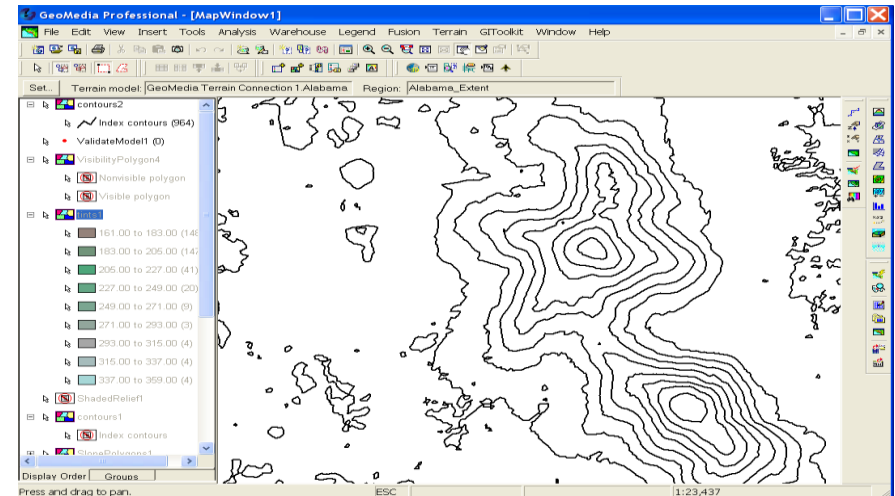
Invekos Datenbestand: MFA 2003  
 Invekos Datenbestand: MFA 2003  
 © Bundesamt für Eich- und Vermessungswesen

# GeoMedia Rapid Map

- For use in rapid response or crisis situations
  - Web based
  - “Near spec” map production

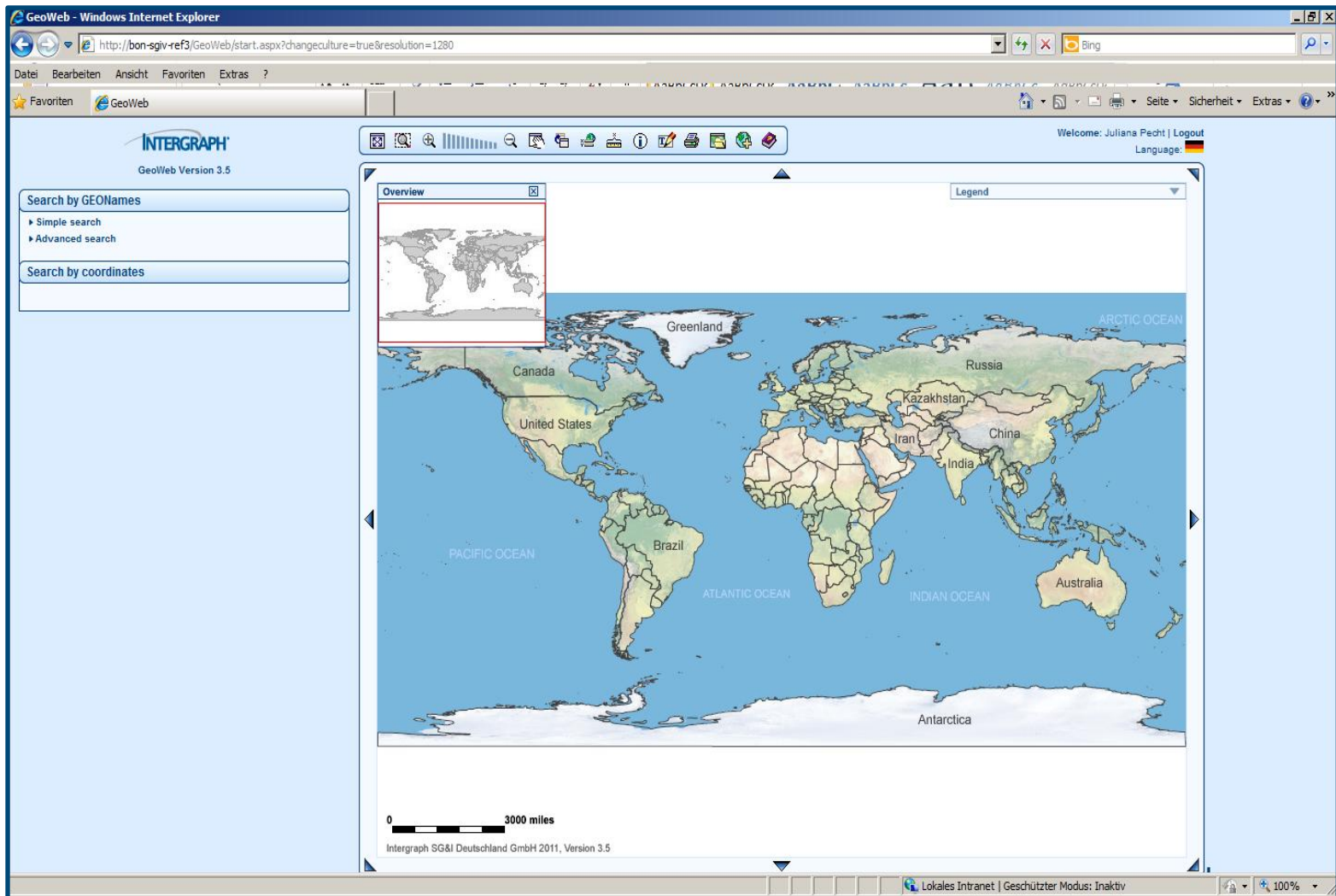


- Prepare elevation data in a semi-automated fashion
  - Support rapid map generation



# Rapid Map - Workflow

- Client Startup Screen





# Rapid Map - Workflow

- Legend Entries

The screenshot displays the GeoWeb application interface within a Windows Internet Explorer browser. The browser's address bar shows the URL: <http://bon-sgiv-ref3/GeoWeb/start.aspx?changeCulture=true&resolution=1280>. The application header includes the Intergraph logo and "GeoWeb Version 3.5". A search panel on the left offers "Search by GEONames" (with "Simple search" and "Advanced search" options) and "Search by coordinates". The main map area shows a grid overlay over the Caribbean Sea, with labels for "Cuba", "Haiti", "Santo Domingo", "Port-Salut", and "San Juan". An "Overview" window in the top-left corner of the map area shows a world map with a red box indicating the current view's location. A legend window on the right lists the following categories and counts:

- MDG incomplete (2)
- MDG (389)
- JOG (75)
- Cities (14)
- Countries (26)
- Topography (1)
- Oceans (4)

At the bottom of the legend, there are checkboxes for "All categories open", "Vector data", and "Raster data". A scale bar at the bottom left of the map indicates "0" to "200 miles". The footer of the application shows "Intergraph SG&I Deutschland GmbH 2011" and "Vereins". The browser's status bar at the bottom indicates "Lokales Intranet | Geschützter Modus: Inaktiv".

# Rapid Map - Workflow

- Search by GeoNames

The screenshot displays the GeoWeb application running in a Windows Internet Explorer browser. The browser's address bar shows the URL: `http://bon-sgfv-ref3/GeoWeb/start.aspx?changeCulture=true&resolution=1280`. The application interface includes a top navigation bar with the Intergraph logo and version information (GeoWeb Version 3.5). A search panel on the left is titled "Search by GEONames" and contains the following fields and options:

- Regions:** A dropdown menu with "America" selected.
- Countries:** A dropdown menu with "Haiti" selected.
- Locations:** A text input field containing "Port au\*".
- Search:** A button to execute the search.
- Search results (1):** A list showing "Port au Prince International" as the only result.
- Options:** Links for "Alternative notation", "Detailed report: open | export as CSV file", "Center map to selected location", and "Fit map on all selected locations".

The main map area shows a grid overlay on the Caribbean Sea region. A red dot marks the location of "Port au Prince International" on the island of Haiti. Other labeled locations include Saint John's, Roseau, Castries, Kingstown, Bridgetown, and Saint George's. A scale bar at the bottom indicates 0 to 200 miles. The browser's status bar at the bottom shows "Fertig" and "Lokales Intranet | Geschützter Modus: Inaktiv".

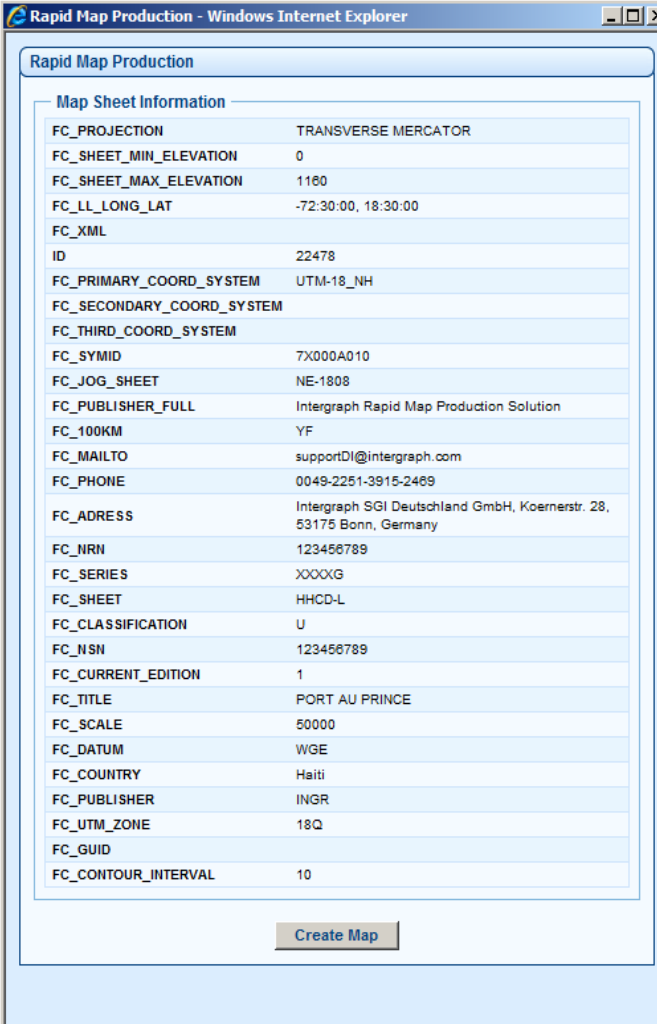
# Rapid Map - Workflow

- Search by Coordinates

The screenshot displays the GeoWeb application interface within a Windows Internet Explorer browser window. The browser's address bar shows the URL: `http://bon-sgiv-ref3/GeoWeb/start.aspx?changeCulture=true&resolution=1280`. The application header includes the Intergraph logo and the text "GeoWeb Version 3.5". A navigation menu on the left contains a "Main menu" button and a "Search by coordinates" section. This section is divided into "Center coordinate" and "Corner coordinates" tabs. Under "Center coordinate", there are input fields for Longitude (Degree: 69, Min: 19, Sec: 33) and Latitude (Degree: 19, Min: 20, Sec: 14). Radio buttons allow selection of "West" or "East" for longitude and "North" or "South" for latitude. Below these fields, there are two options for centering the map: "with map scale change:" (with a value of 1:13837838) and "with radius of:" (with a value of 513 mi). An "Update map" button is located at the bottom of this section. The main map area shows a grid overlay on a map of the Caribbean region, with labels for "Cuba", "Haiti", "Saint-Domingue", "Saint-John", "Roseau", "Castries", "Kingstown", "Bridgetown", and "Saint George's". An "Overview" window in the top-left corner of the map area shows a world map with a red box indicating the current map's location. A "Legend" window is visible in the top-right corner. The bottom of the interface features a scale bar (0 to 200 miles) and a status bar with the text "Intergraph SG&I Deutschland GmbH 2011. Vertriebszentrum". The browser's status bar at the very bottom indicates "Lokales Intranet | Geschützter Modus: Inaktiv".

# Rapid Map - Workflow

- Submit selected Map Sheet for generation

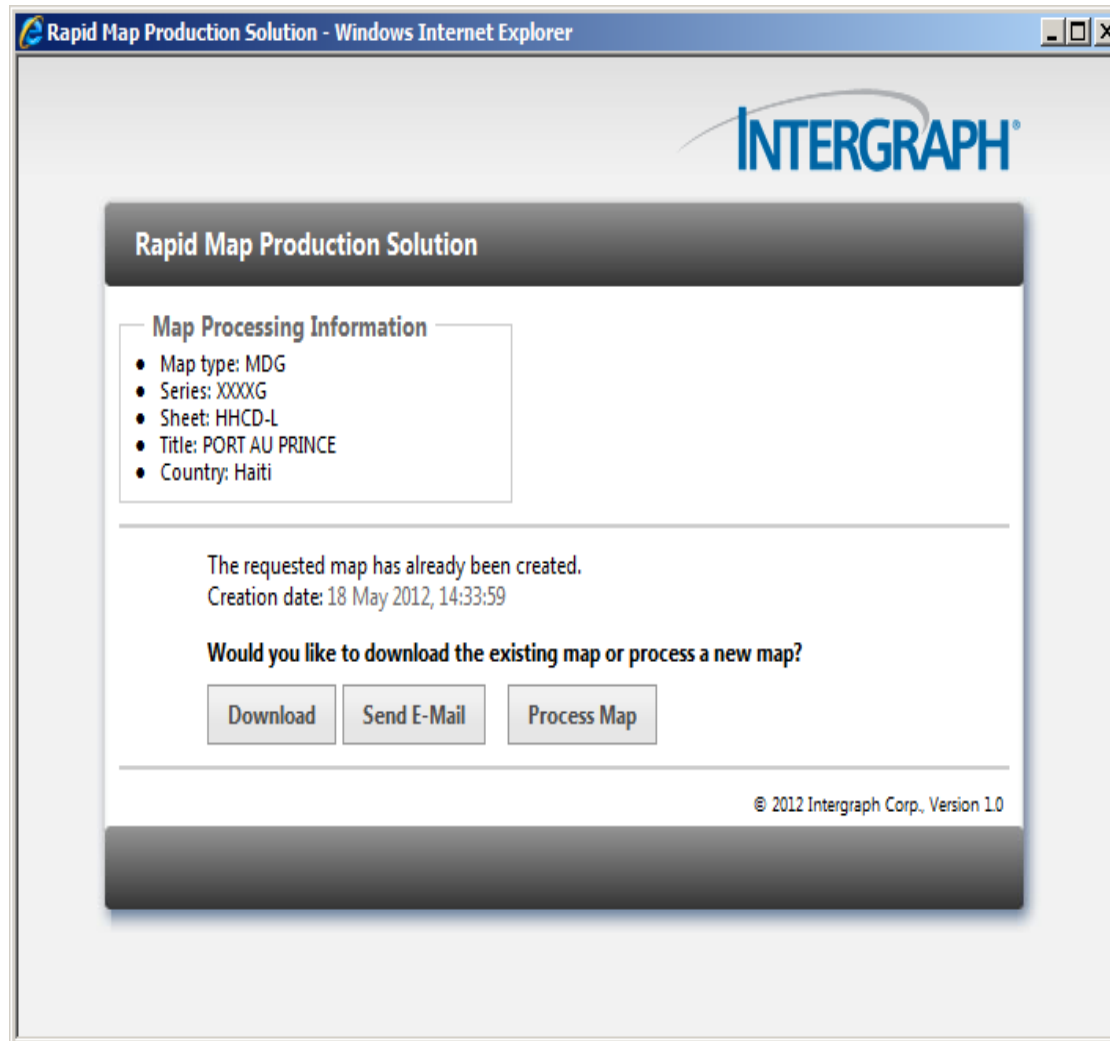


The screenshot shows a web browser window titled "Rapid Map Production - Windows Internet Explorer". The main content area is titled "Rapid Map Production" and contains a section for "Map Sheet Information". This section displays a list of parameters and their values for a specific map sheet. At the bottom of the form, there is a "Create Map" button.

Map Sheet Information	
FC_PROJECTION	TRANSVERSE MERCATOR
FC_SHEET_MIN_ELEVATION	0
FC_SHEET_MAX_ELEVATION	1160
FC_LL_LONG_LAT	-72:30:00, 18:30:00
FC_XML	
ID	22478
FC_PRIMARY_COORD_SYSTEM	UTM-18_NH
FC_SECONDARY_COORD_SYSTEM	
FC_THIRD_COORD_SYSTEM	
FC_SYMID	7X000A010
FC_JOG_SHEET	NE-1808
FC_PUBLISHER_FULL	Intergraph Rapid Map Production Solution
FC_100KM	YF
FC_MAILTO	supportDI@intergraph.com
FC_PHONE	0049-2251-3915-2489
FC_ADRESS	Intergraph SGI Deutschland GmbH, Koernerstr. 28, 53175 Bonn, Germany
FC_NRN	123456789
FC_SERIES	XXXXG
FC_SHEET	HHCD-L
FC_CLASSIFICATION	U
FC_HSN	123456789
FC_CURRENT_EDITION	1
FC_TITLE	PORT AU PRINCE
FC_SCALE	50000
FC_DATUM	WGE
FC_COUNTRY	Haiti
FC_PUBLISHER	INGR
FC_UTM_ZONE	18Q
FC_GUID	
FC_CONTOUR_INTERVAL	10

# Rapid Map - Workflow

- Generate electronic map (PDF via Email)



# Rapid Map - Workflow

- Map Processing...

The screenshot shows a web browser window titled "Rapid Map Production Solution - Windows Internet Explorer". The page features the INTERGRAPH logo at the top right. Below the logo is a dark header bar with the text "Rapid Map Production Solution".

The main content area is titled "Map Processing Information" and contains a list of map details:

- Map type: MDG
- Series: XXXXG
- Sheet: HHCD-L
- Title: PORT AU PRINCE
- Country: Haiti

Below this information is a vertical progress bar with eight steps:

1. Clipping from Database (checked)
2. Creating Marginalia (checked)
3. Creating Text Nodes (checked)
4. Creating Features (Processing...)
5. Creating Symbols (unchecked)
6. Resolving Conflicts (unchecked)
7. Creating Labels (unchecked)
8. Creating PDF file (unchecked)

At the bottom of the progress bar, there is a box displaying "Processing Time: 00:08:14" and a "Stop Processing" button. The footer of the page reads "© 2012 Intergraph Corp., Version 1.0".

# Rapid Map - Workflow

- Map Processing...

The screenshot shows a web browser window titled "Rapid Map Production Solution - Windows Internet Explorer". The page features the Intergraph logo at the top right. Below the logo is a dark header with the text "Rapid Map Production Solution".

The main content area is titled "Map Processing Information" and contains a list of map details:

- Map type: MDG
- Series: XXXXG
- Sheet: HHCD-L
- Title: PORT AU PRINCE
- Country: Haiti

Below this information is a vertical progress bar with eight steps:

- ✓ 1. Clipping from Database
- ✓ 2. Creating Marginalia
- ✓ 3. Creating Text Nodes
- ✓ 4. Creating Features
- ✓ 5. Creating Symbols
- ⌚ 6. Resolving Conflicts  
Processing...
7. Creating Labels
8. Creating PDF file

At the bottom of the progress bar, there is a box containing the text "Processing Time: 00:13:11" and a "Stop Processing" button.

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# Rapid Map - Workflow

- Output PDF

Rapid Map Production Solution - Windows Internet Explorer

INTERGRAPH<sup>®</sup>

**Rapid Map Production Solution**

Map Processing Information

- Map type: MDG
- Series: XXXXG
- Sheet: HHCD-L
- Title: PORT AU PRINCE
- Country: Haiti

- ✓ 1. Clipping from Database
- ✓ 2. Creating Marginalia
- ✓ 3. Creating Text Nodes
- ✓ 4. Creating Features
- ✓ 5. Creating Symbols
- ✓ 6. Resolving Conflicts
- ✓ 7. Creating Labels
8. Creating PDF file  
Processing...

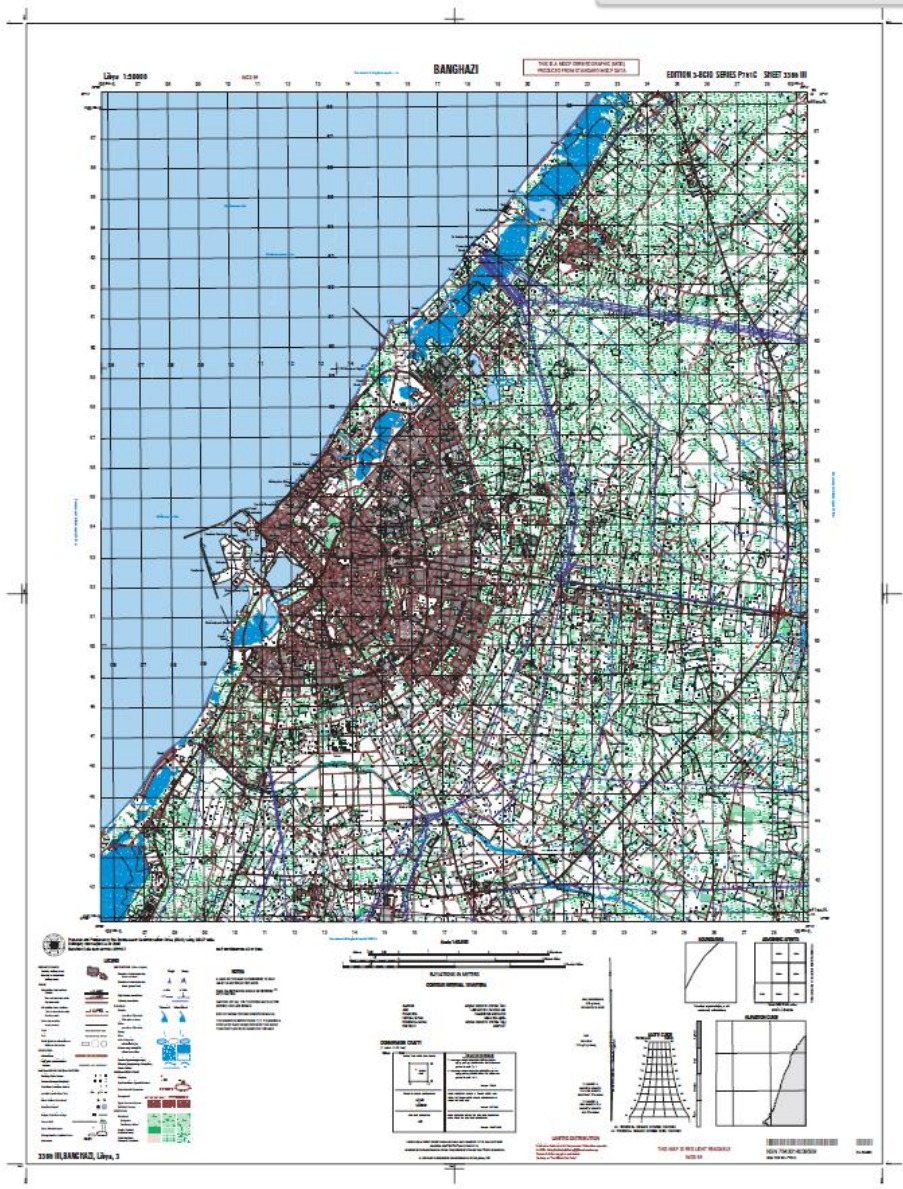
Processing Time: 00:13:27

Stop Processing

© 2012 Intergraph Corp., Version 1.0



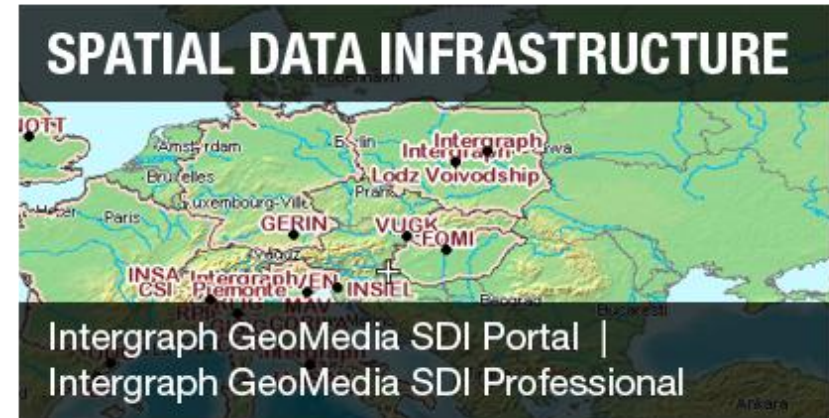
Breite: 32,11005      Länge: 20,08778



Example:  
**P761G 3389 III, BANGHAZI**  
GeoPDF (file size 5.76 MB)

# Enterprise Offerings

- Extend the utilization of geospatial data and information across departments and organizations by leveraging the following technologies:



# INTERGRAPH®

# erdas

Geomedia  
SDI pro

ERDAS  
Apollo  
Essentials  
SDI

Geomedia  
Webmap  
Pro

ERDAS  
APOLLO  
Pro

# INTER

# INTERGRAPH®

# erdas

# erdas

an Intergraph® brand

ERDAS  
Apollo  
Essentials  
SDI

Intergraph  
Enterprise  
Solution

## INTERGRAPH ENTERPRISE PORTAL

Powered by INTERGRAPH

Current browser language

Map Guide

Tools Measurements Data Sources Selection Search Time Edit Authentication Quality Monitor

Map Content  
Search geographic names  
Apollo Catalog Content  
Search Apollo Catalog  
Analyses  
Settings  
Clip-Zip-Ship  
Geo Processing

Select My Processes

Description

Name: Change detection  
Description: Identify changes in elevation using two LAS files.  
Find matching datasets

Input Data

Before Elevation:   
After Elevation:   
Bbox:

Execute

Done

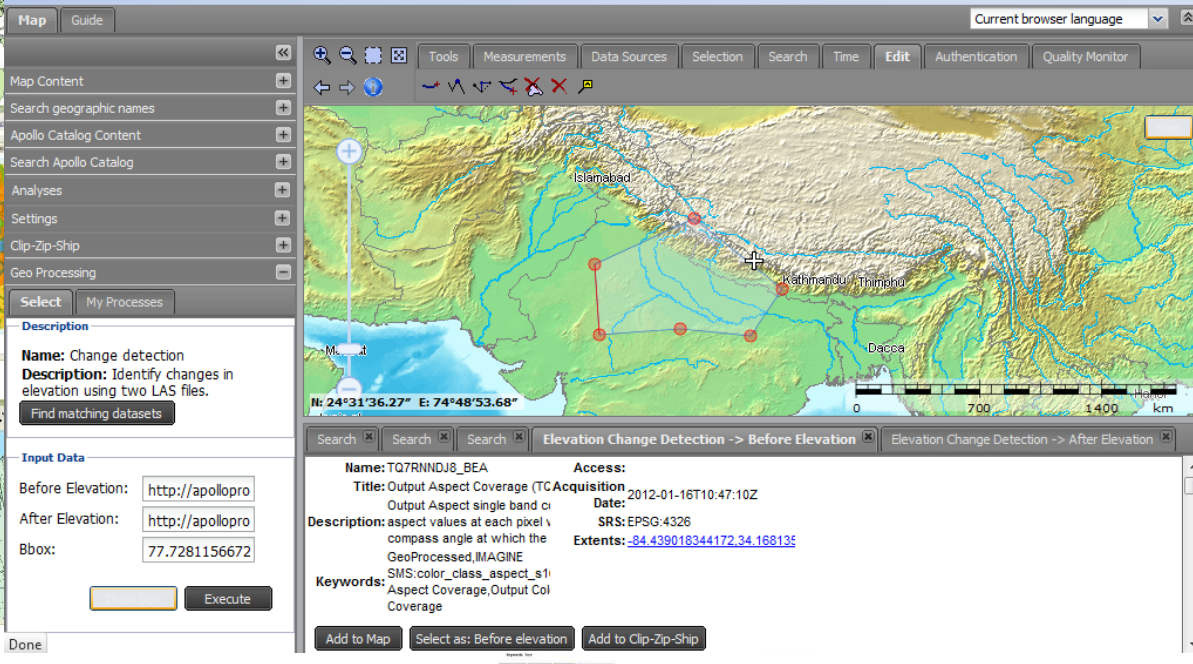
Search Search Search Elevation Change Detection -> Before Elevation Elevation Change Detection -> After Elevation

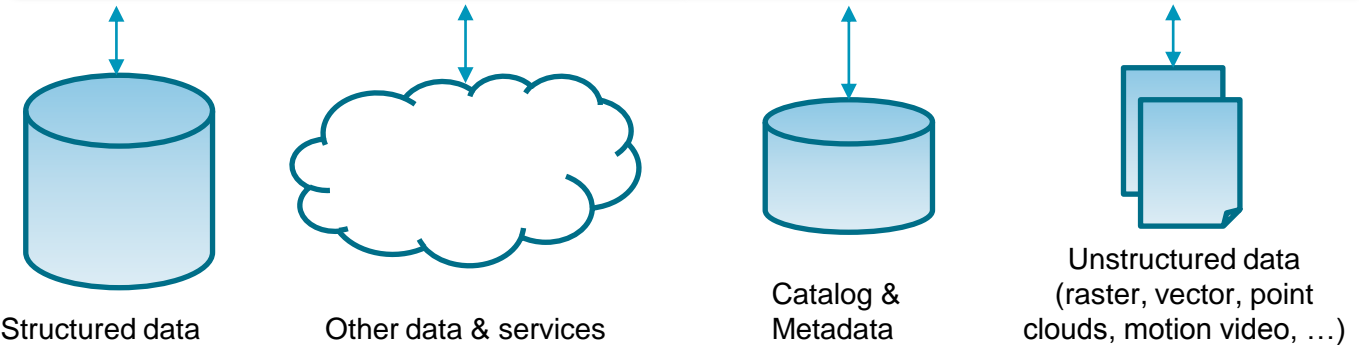
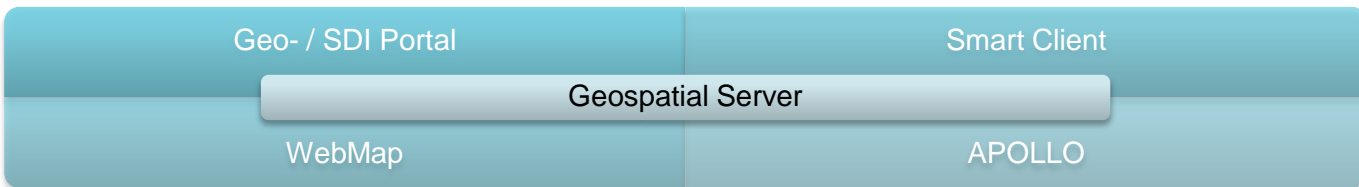
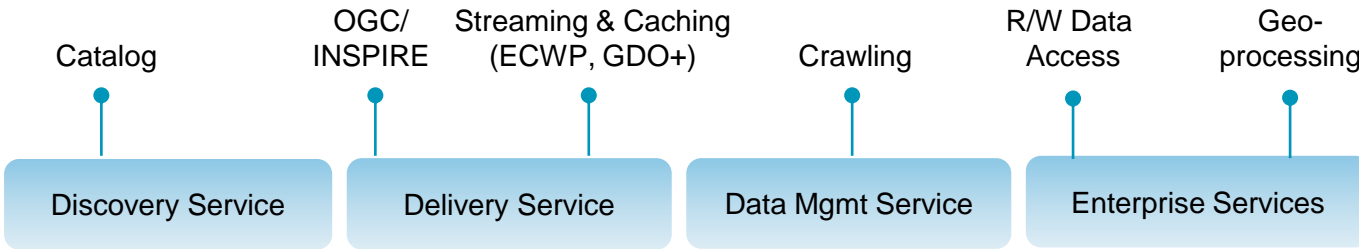
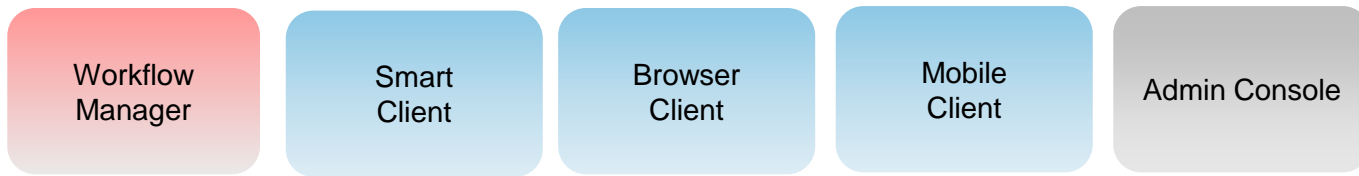
Name: TQ7RINDJ8\_BEA Access

Title: Output Aspect Coverage (TC Acquisition Date: 2012-01-16T10:47:10Z  
Description: aspect values at each pixel v compass angle at which the GeoProcessed\_MAGINE  
SMS: color\_class\_aspect\_s1 Extents: -84.439018344172.34.168135

Keywords: Aspect Coverage, Output Col Coverage

Add to Map Select as: Before elevation Add to Clip-Zip-Ship





# Cloud Computing

---

- What's being offered in the cloud
  - **Infrastructure as a Service (IaaS)** e.g. Amazon Elastic Compute Cloud (EC2)
  - **Platform as a Service (PaaS)** e.g. Windows Azure
  - **Software as a Service (SaaS)** e.g. Bing Maps, Google Docs, Microsoft Office Live, SFDC
- **Public Clouds and Private Clouds**
  - **Public Clouds, Not for everyone:** Regulatory and legal issues
- We have products that run “in the cloud” today
- We are doing SaaS projects today using GeoMedia Smart Client
- Continue to make our software “cloud ready”
- Exploring “corporate” SaaS offerings



A word cloud featuring a variety of terms related to technology, business, and innovation. The most prominent words are 'Innovation' and 'Integration' in large blue font, 'Change' in large green font, and 'Leader' in large blue font on the right. Other significant words include 'Data', 'Standards-Based', and 'Real-Time' in large grey/blue font. Smaller words include 'Success', 'Expertise', 'Interoperability', 'Infrastructure', 'Mobile', 'Cost-Efficient', 'Fusion', 'Intelligence', 'Security', 'Analysis', 'Breadth', 'Growth', 'Support', 'Empowerment', 'Visualization', 'Manage', 'Protect', 'Intelligence', 'Revolutionary', 'Mission-Critical', 'Integrated', 'Workflow', 'Partnerships', 'Leadership', 'Simplify', 'Time-Savings', 'Pioneer', 'Enterprise', 'Proven', 'Agile', 'Life', 'Reimagine', 'Surveying', 'Creativity', 'Actionable', 'Insight', 'Global', 'Dynamic', 'Enhance', 'Property', 'Sensor', 'Productivity', 'Visionary', 'Synergies', 'Geospatial', 'Scalable', 'Intuitive', 'Flexible', and 'Visionary'.