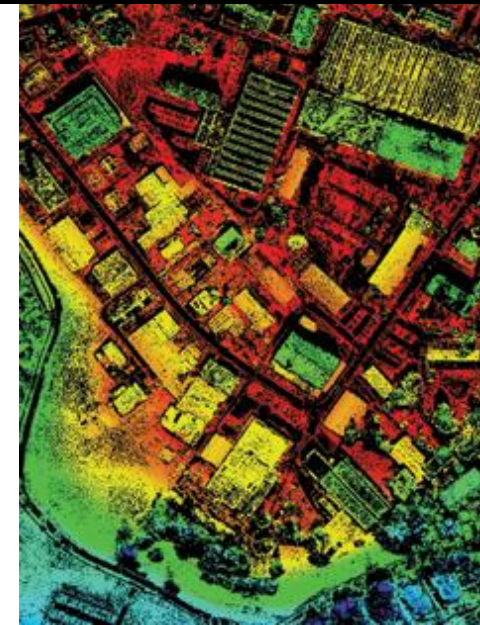
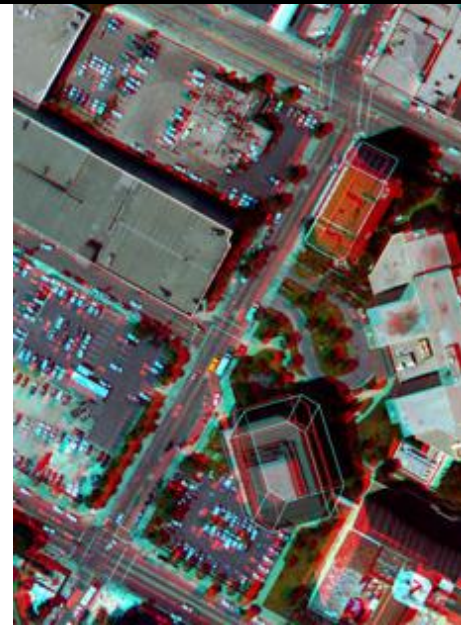
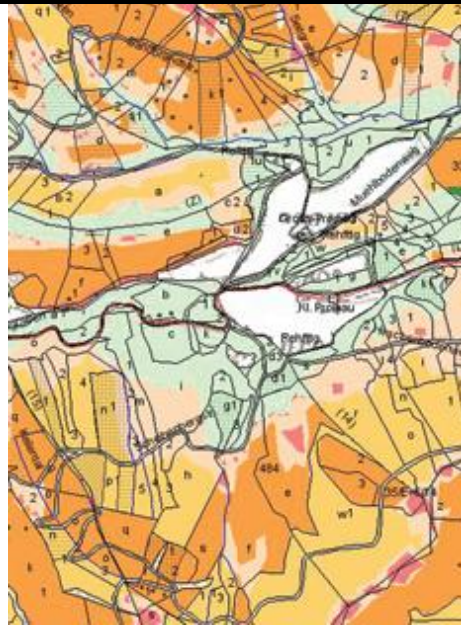


SMARTER DECISIONS FOR GEOSPATIAL

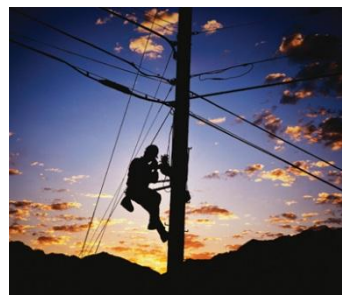


“From the Sensor to the Internet with Hexagon Geospatial Technologies“

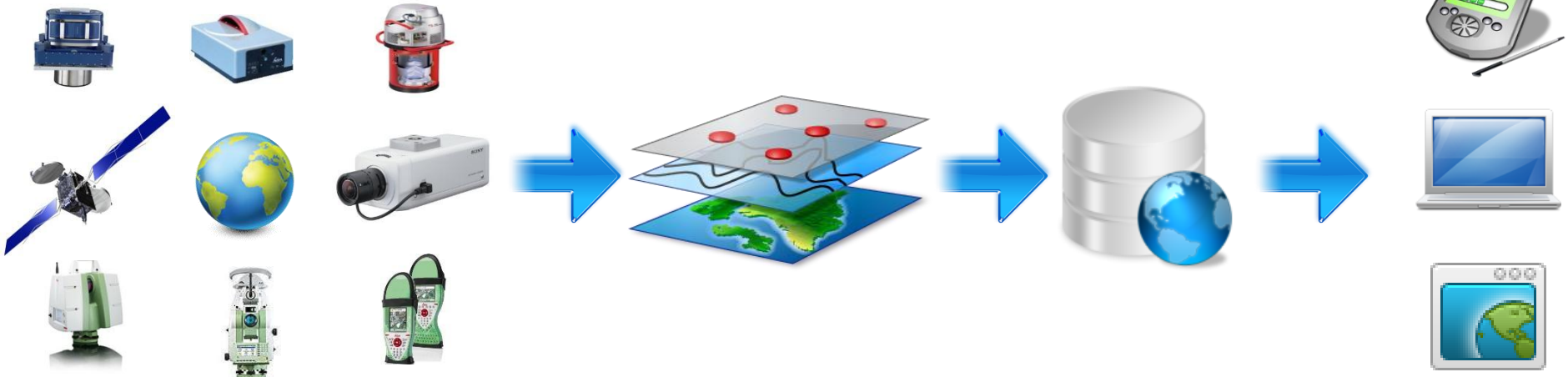
Jairo Linares, Regional Sales Manager, Americas
Intergraph Geospatial
August 17, 2012



From the Sensor to the Internet



Geospatial Information Value Chain



Capture

Process

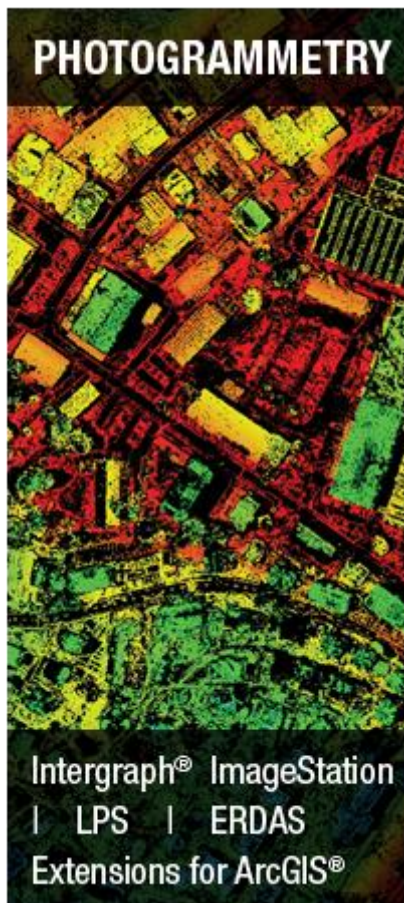
Share

Deliver

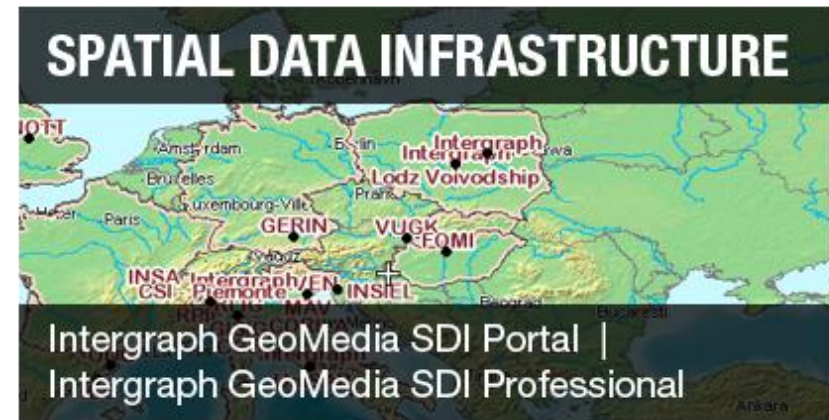
From the Sensor to the Internet



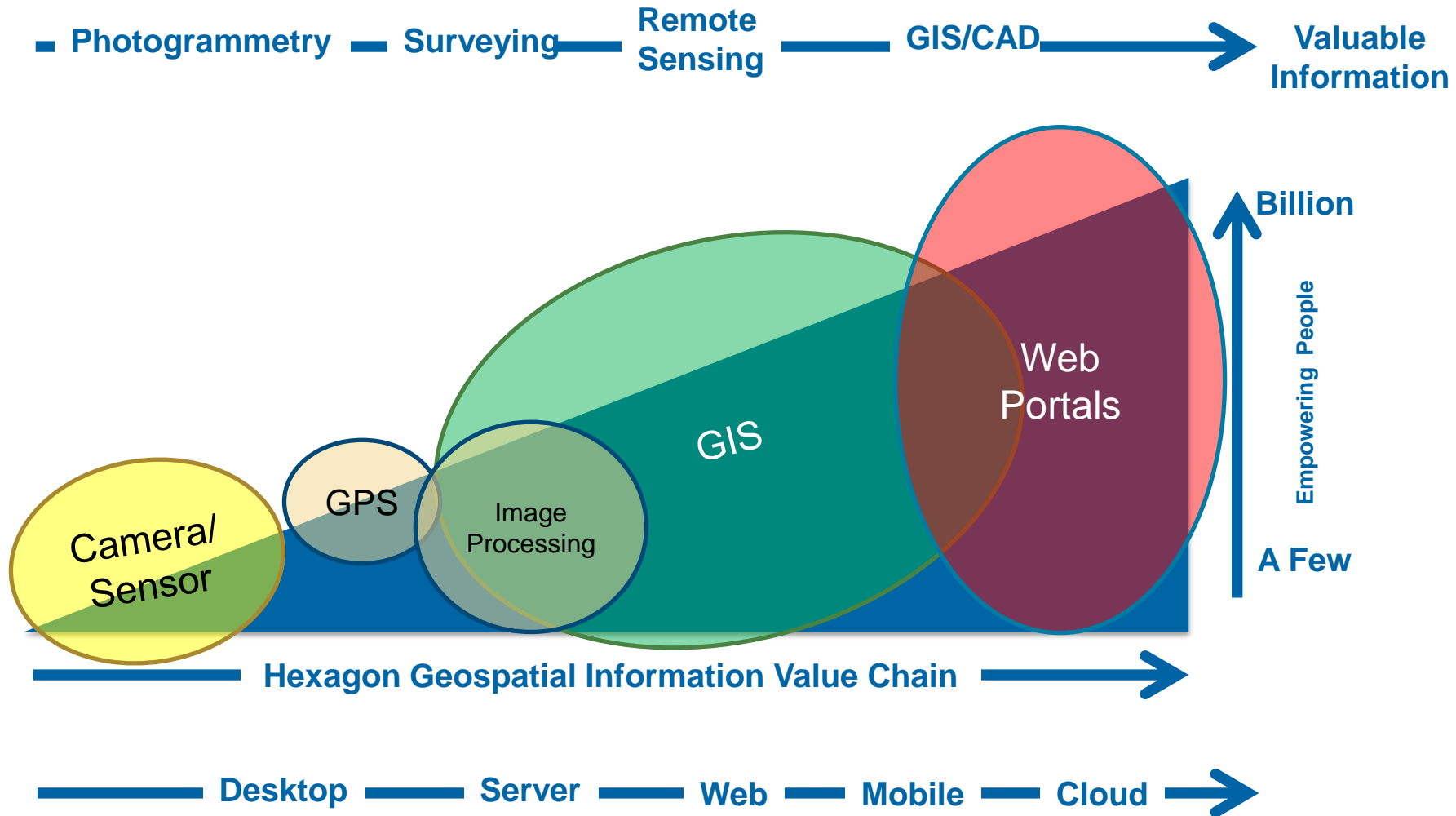
- Un sistema de autoría de información para producción geoespacial y análisis con productos especializados en las siguientes ramas geoespaciales:



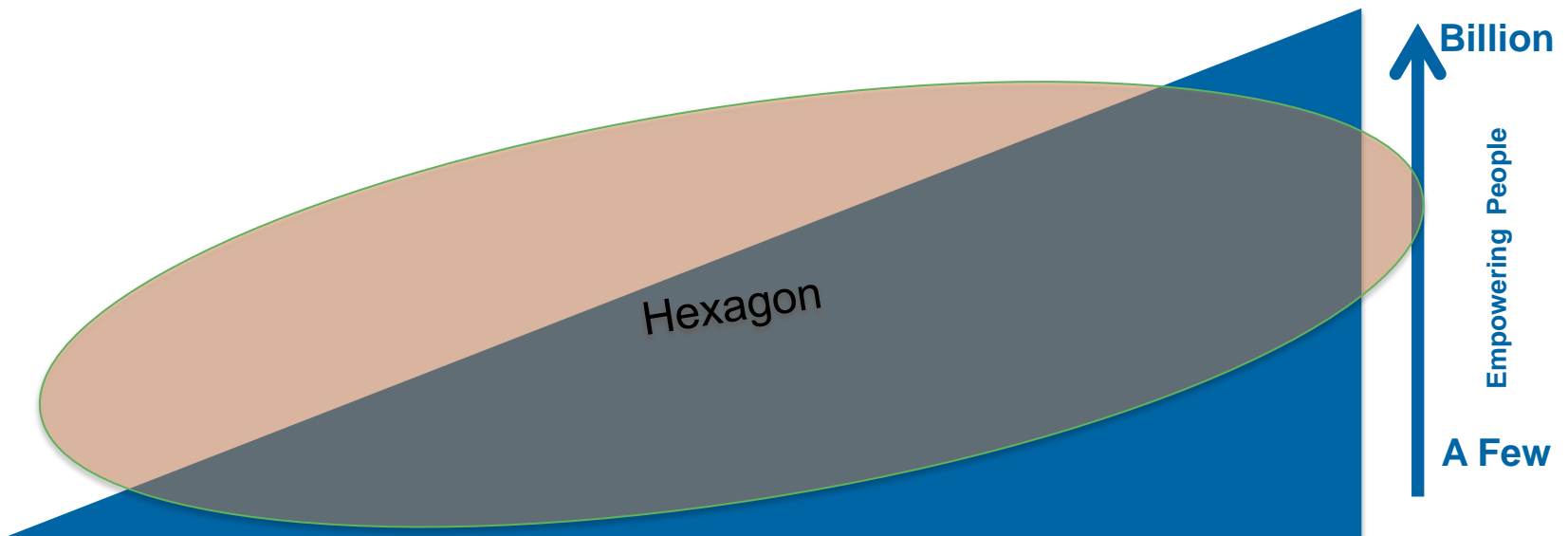
- Extienden la utilización de los datos geospaciales e información a través de los diferentes departamentos de la organización.



Segmentation of Product Acquisitions



HEXAGON's Companies in One Value Chain



The Geospatial Ecosystem



Field Mapping & Update



Satellite Sensor Data



Geo-Portals



Users & Consumers



Intranet/Internet



Information Products

Web Services

IT



Server



Spatial Database

ORACLE

Microsoft

IBM



Data

Data



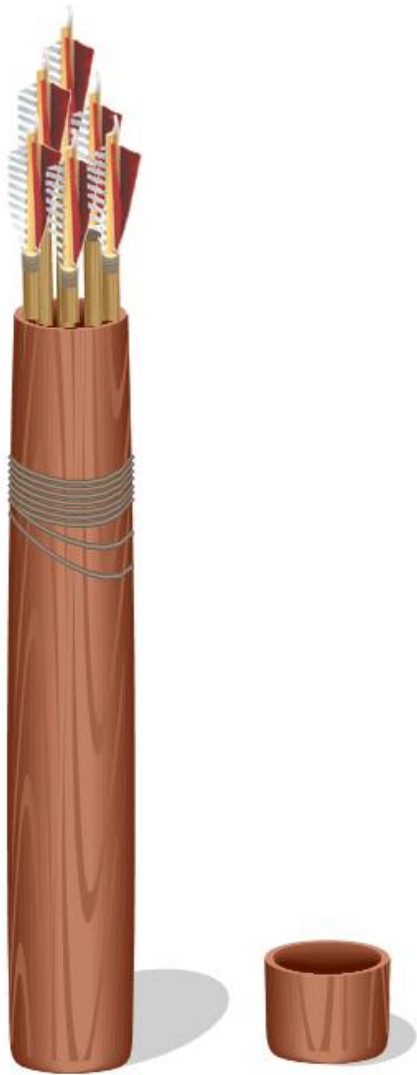
Airborne Sensors



Terrestrial Sensors



Seven Arrows of a Complete Product Portfolio



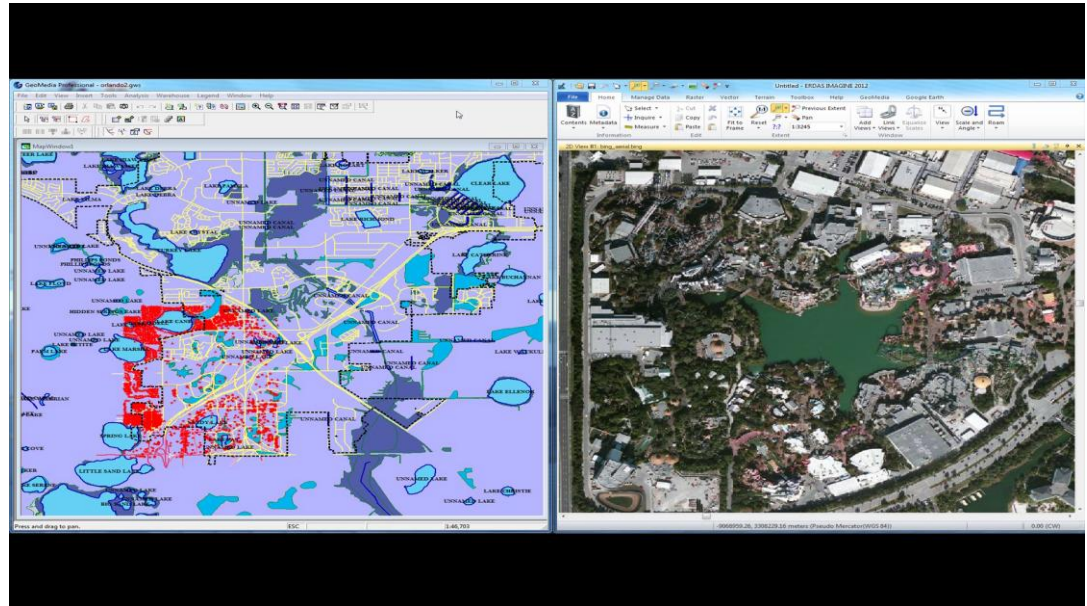
- 01 **IMAGINE** IMAGE MASTER/POINT CLOUD
- 02 **GEOMEDIA** VECTOR GIS
- 03 **APOLLO & WEBMAP ESS** PUBLISH
- 04 **APOLLO ADVANTAGE** DATA MANAGEMENT
- 05 **GEOMEDIA SMART CLIENTS** WORKFLOW BASED WEB GIS
- 06 **GEOMEDIA SDI PORTAL** GEOPORTAL
- 07 **APOLLO & WEBMAP PRO** DYNAMIC GEO PROCESSING

GeoMedia and ERDAS IMAGINE Integration



“Live Link” between IMAGINE and GeoMedia

- Zoom, Pan, Roam operations inside IMAGINE drive GeoMedia’s Map Window
- See GeoMedia warehouse features inside IMAGINE
- Use IMAGINE’s modeling environment to update feature attributes in a GeoMedia warehouse

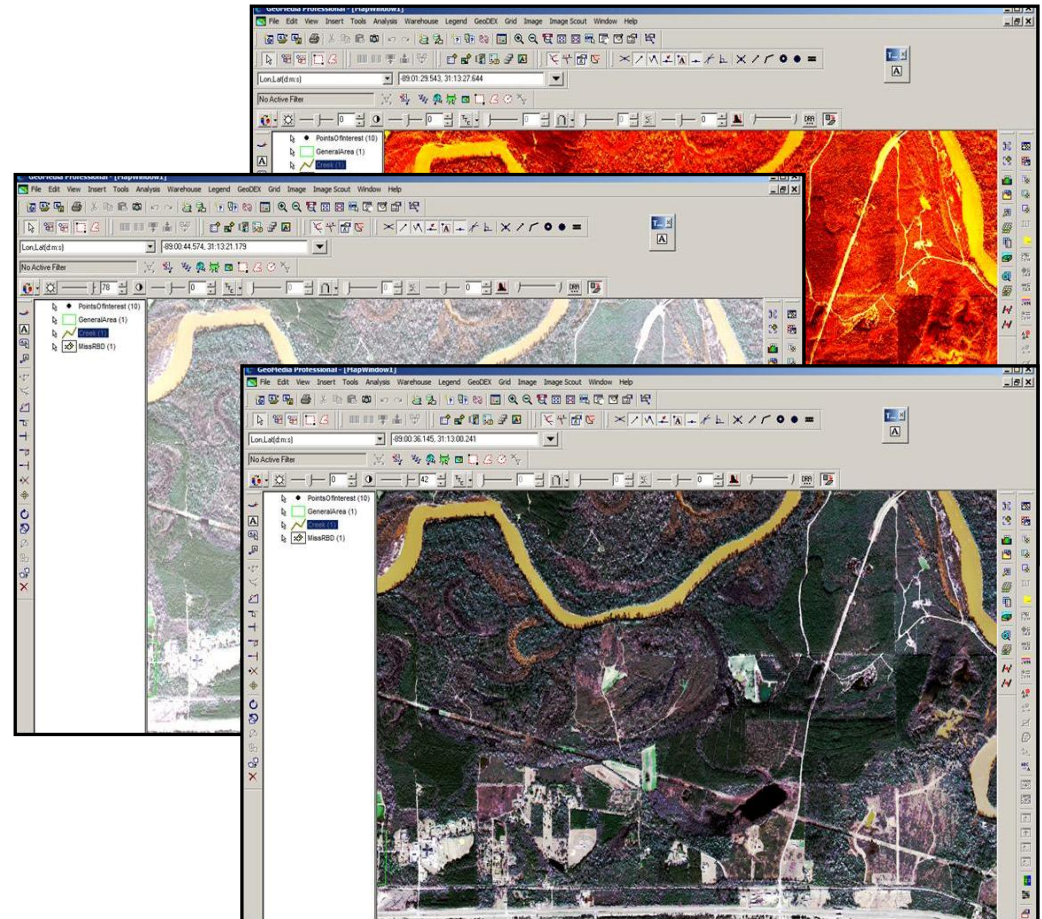


GeoMedia and ERDAS IMAGINE Integration

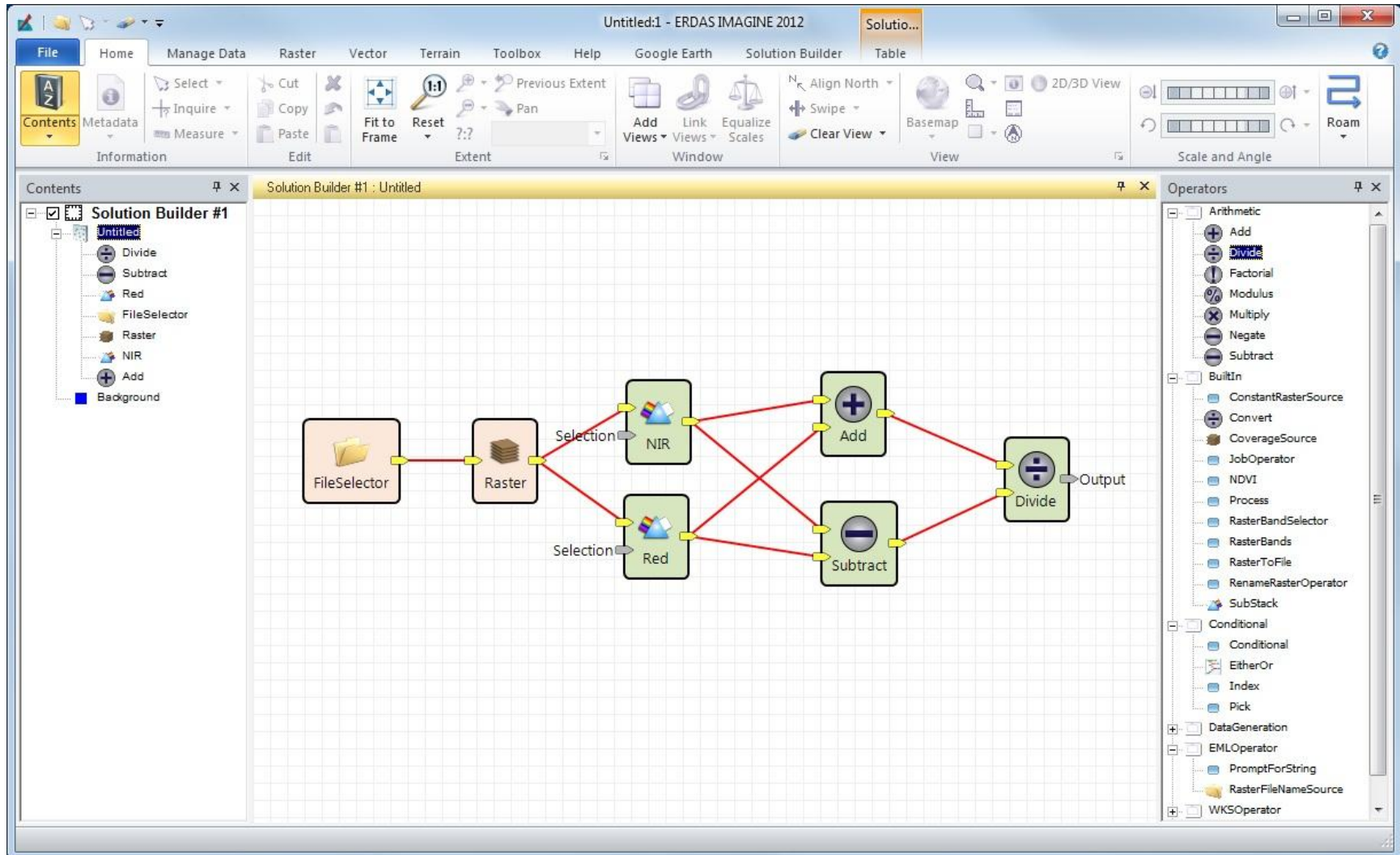


Image Enhancements from IMAGINE to GeoMedia

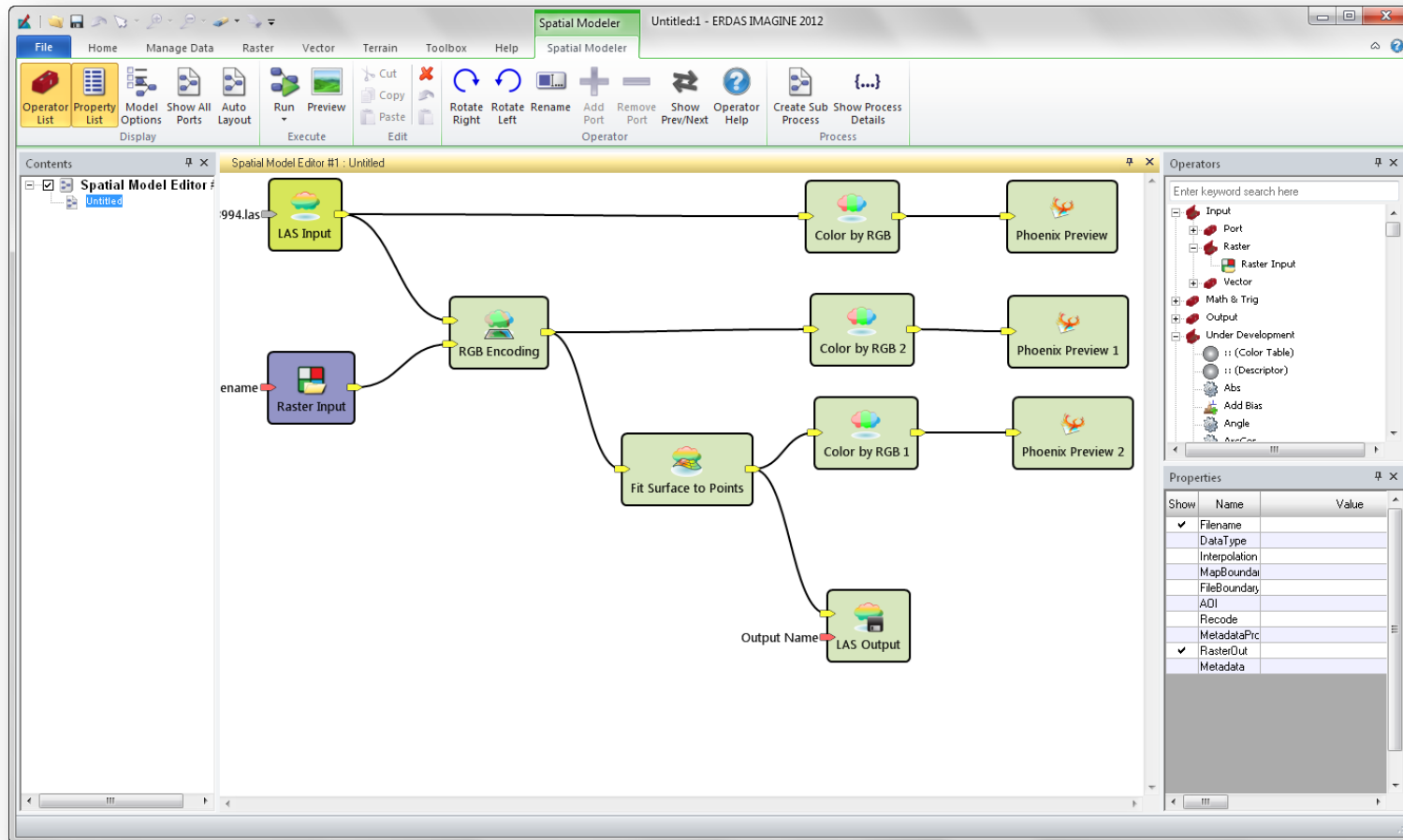
- Incorporate functionality similar to GeoMedia Image into GeoMedia Desktop products using ERDAS IMAGINE software
- Multi-band images
- Raster/Image following for vector capture



Solutions Builder Interface



Dynamic Geospatial Fusion



GIS + REMOTE SENSING + PHOTOGRAMMETRY + CAD

Data is Fused and Presented on the Fly

The screenshot displays the ERDAS IMAGINE 2012 Spatial Modeler interface. The main window is titled "Spatial Model Editor #1 - ndvi_stats". On the left, a workflow diagram shows a sequence of operations: Raster Source, Band Selection, Add, Scale, Mean, and Output. The central area shows a fused satellite image with a red overlay. On the right, the Operators panel lists various processing tools, and the Properties panel shows the output settings for the RasterOut operation.

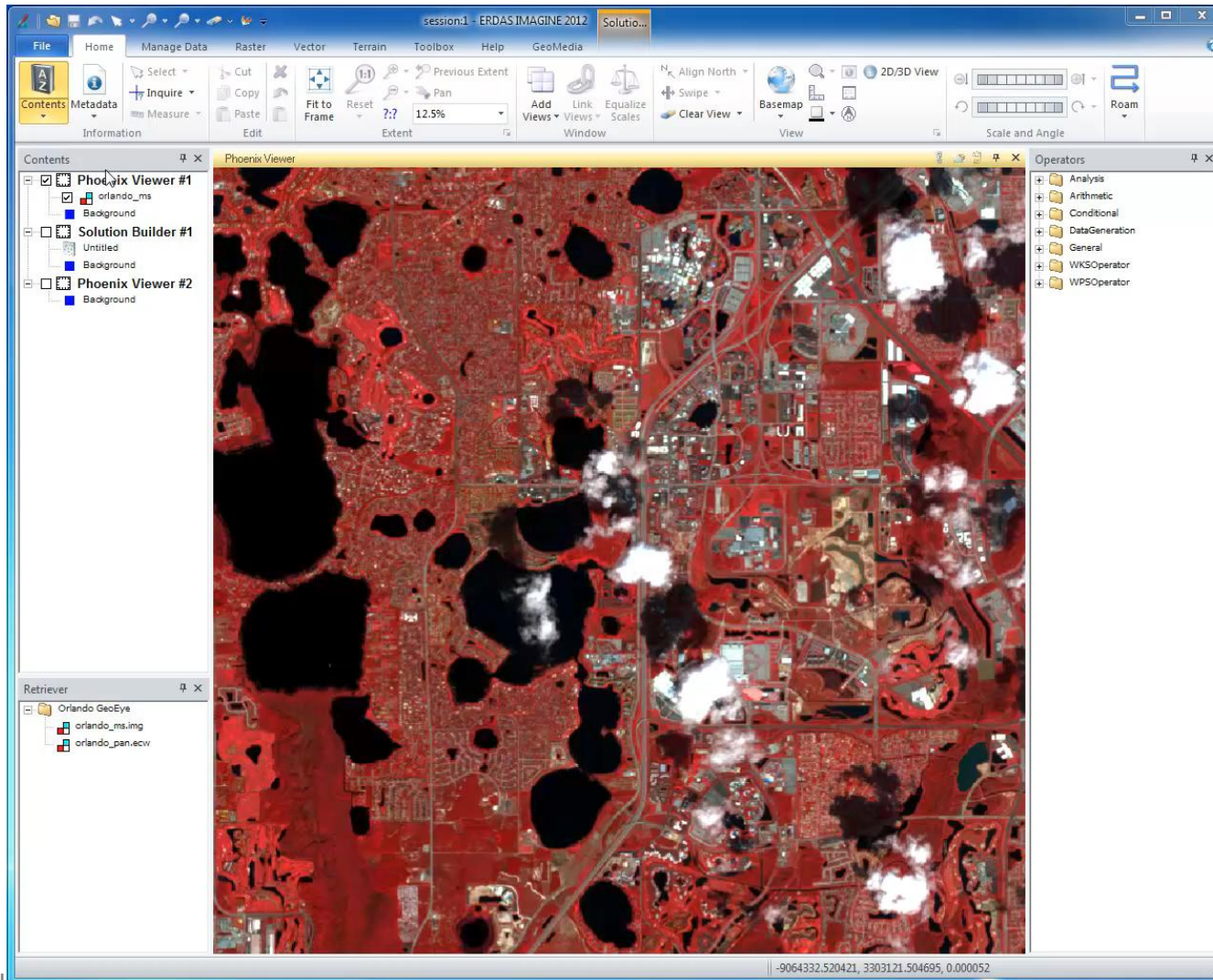
Operators Panel:

- Input
 - Port
 - Raster
 - Raster Input
 - Vector
- Math & Trig
- Output
- Under Development
 - :: (Color Table)
 - :: (Descriptor)
 - Abs
 - Add Bias
 - Angle
 - Area Calc

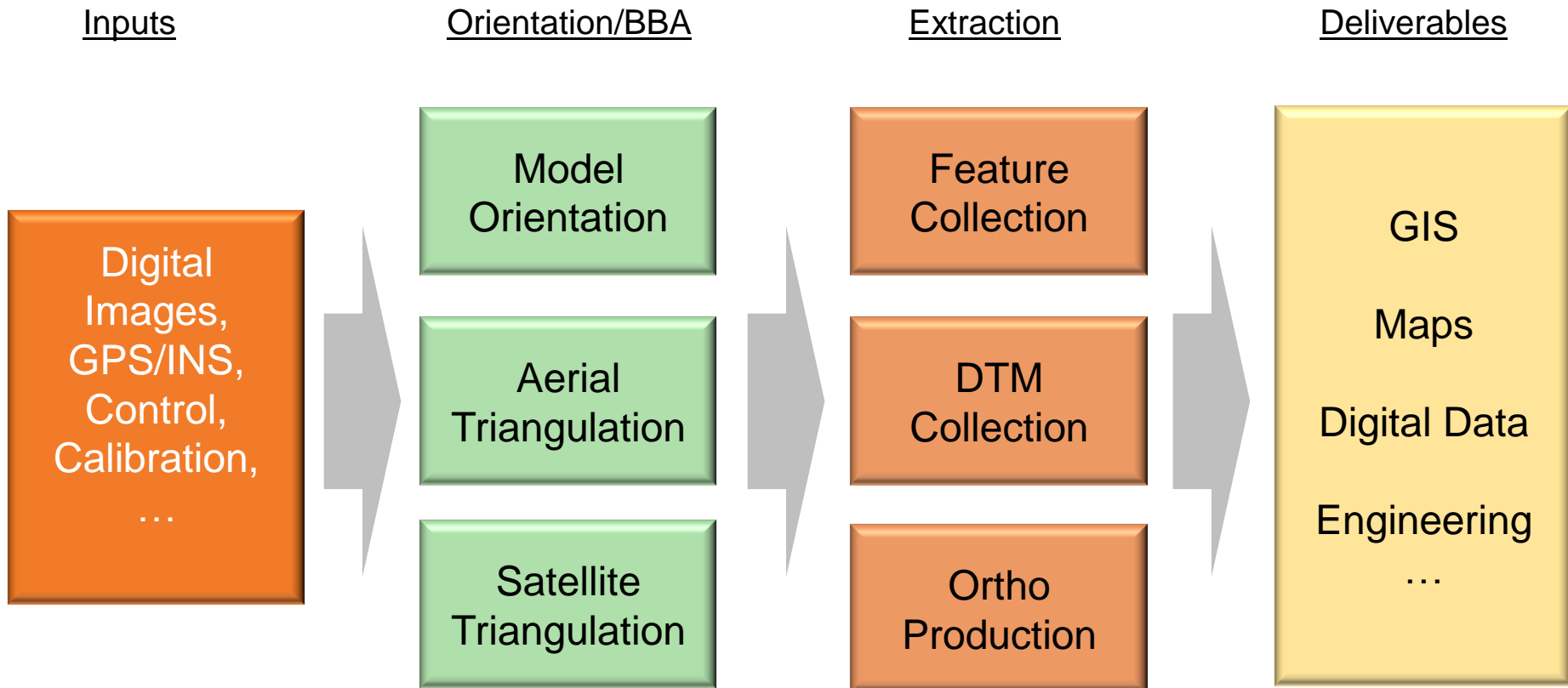
Properties Panel:

Show	Name	Value
<input checked="" type="checkbox"/>	Filename	
<input type="checkbox"/>	Data Type	
<input type="checkbox"/>	Interpolation	
<input type="checkbox"/>	Map Boundary	
<input type="checkbox"/>	File Boundary	
<input type="checkbox"/>	ADI	
<input type="checkbox"/>	Recode	
<input type="checkbox"/>	Metadata Prc	
<input checked="" type="checkbox"/>	Raster Out	
<input type="checkbox"/>	Metadata	

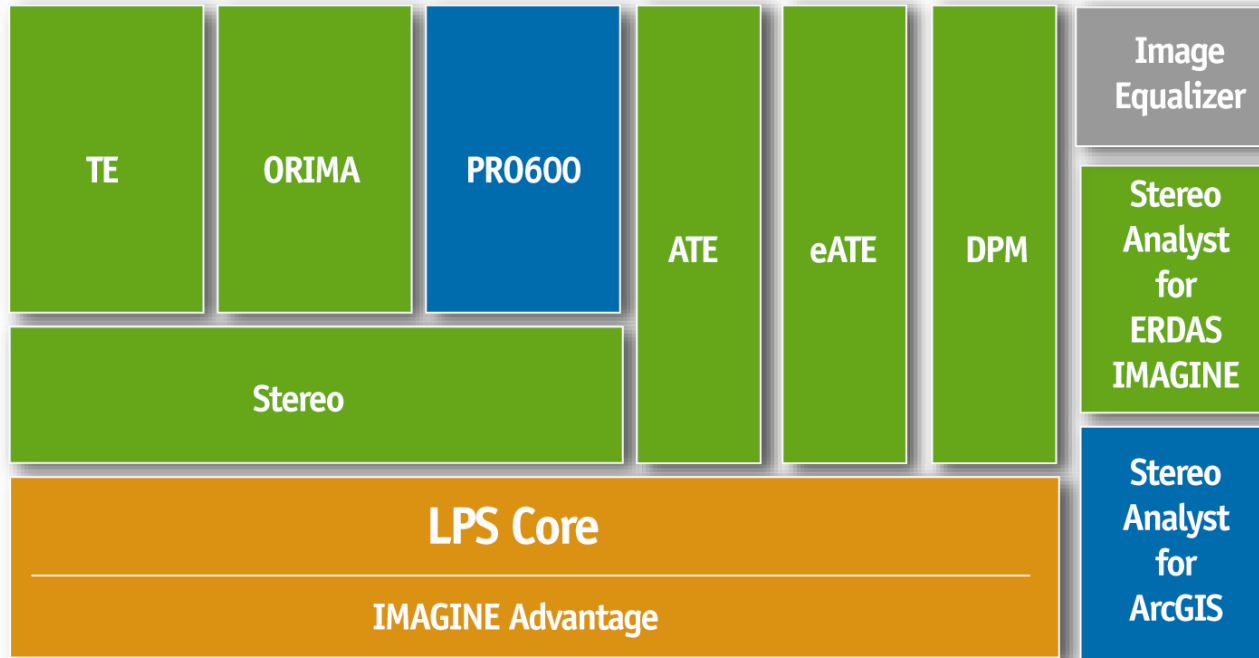
Data is Fused and Presented on the Fly



Generalized Photogrammetry Workflow



LPS Modules



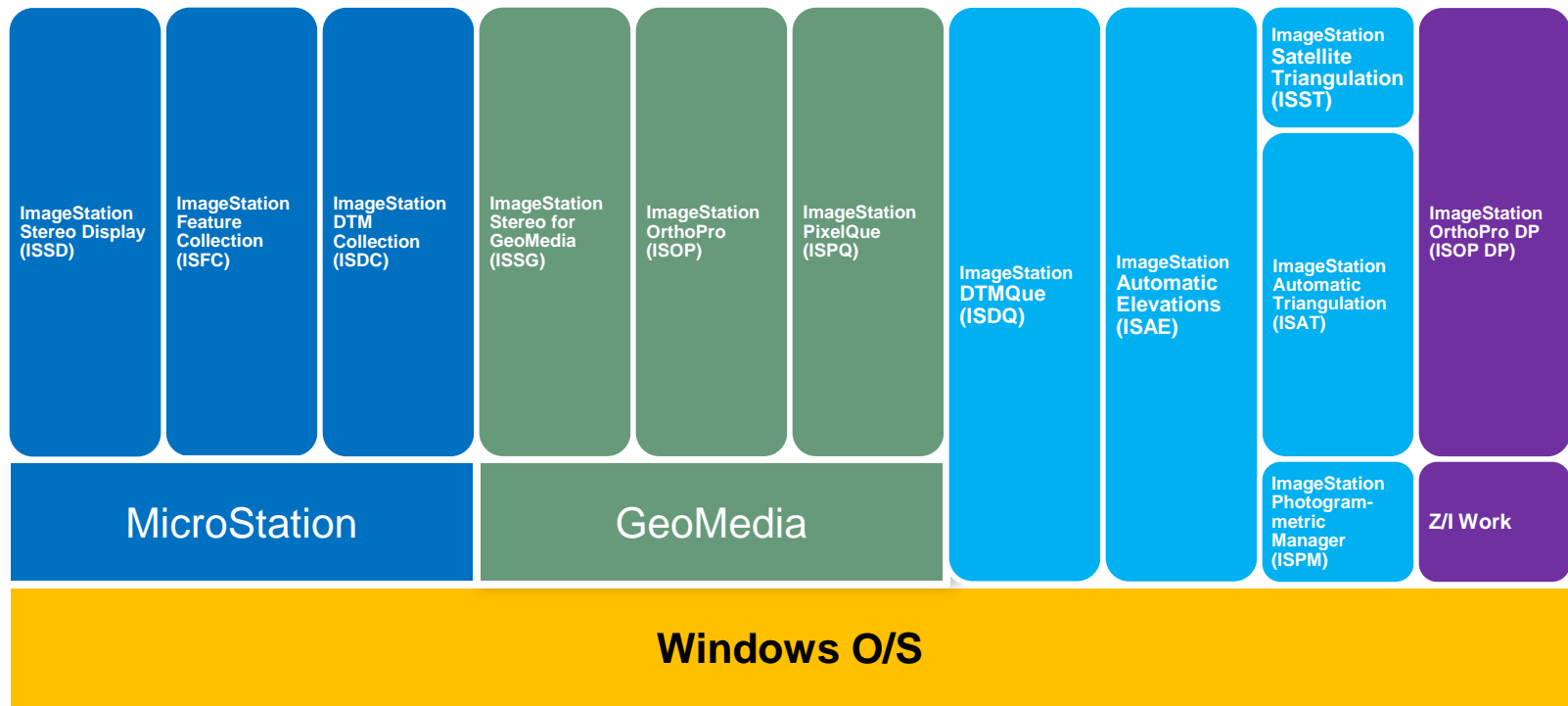
- LPS Core

- Core Add-on Modules

- Stand-alone

- Interoperable

ImageStation Modules



Point Cloud Tool

Untitled:1 - ERDAS IMAGINE 2012 Point Cloud

File Home Manage Data Raster Vector Terrain Toolbox Help GeoMedia Google Earth Drawing Table Point Cloud Point Cloud

Color by Elevation Add Manage Display Color Schema New Profile Along Track Across Track Profile Set Constant Z Bias Fit Surface Reclassify Edit Measure Measure Room

Contents 2D View #1: Lidar Collection 272326.las

2D View #1

- Lidar Collection
 - 272326.las
 - 272327.las
 - 272328.las
 - 272329.las
 - 272330.las
 - 272331.las
 - 272332.las
 - 272333.las
 - 272334.las
 - 272335.las
 - 272336.las
 - 272401.las
 - 272402.las
 - 272403.las
 - 272404.las
 - 272405.las
 - 272406.las
 - 272407.las
 - 272408.las

272326.las

Row	Y	Z	Intensity	Return	Class
1	1501829.410000	114.990000	192	1/1	1
2	1501829.500000	115.500000	90	1/2	1
3	1501829.500000	101.260000	162	2/2	2
4	1501829.580000	120.010000	164	1/2	1
5	1501829.590000	101.690000	58	2/2	2
6	1501829.670000	116.790000	152	1/2	1
7	1501829.680000	101.730000	76	2/2	2
8	1501829.760000	113.300000	166	1/1	1
9	1501829.860000	100.910000	255	1/1	2
10	1501829.950000	101.100000	255	1/1	2
11	1501830.040000	101.030000	255	1/1	2
12	1501830.130000	101.170000	255	1/1	2
13	1501830.220000	101.330000	255	1/1	2
14	1501830.310000	101.410000	255	1/1	2
15	1501830.400000	101.050000	255	1/1	2
16	1501830.490000	101.420000	255	1/1	2
17	1501830.580000	101.180000	255	1/1	2
18	1501830.670000	101.520000	255	1/1	2
19	1501830.990000	101.570000	255	1/1	2
20	1501830.890000	108.810000	255	1/1	1
21	1501830.800000	101.600000	255	1/1	2

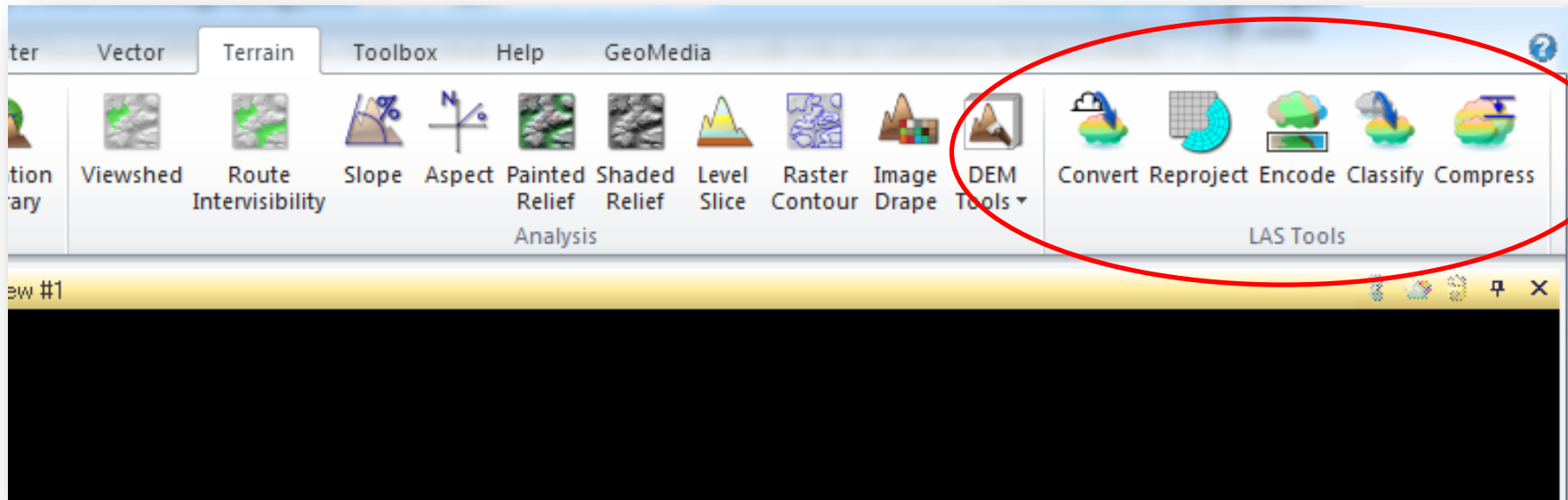
Point Cloud Profile

Lidar Collection

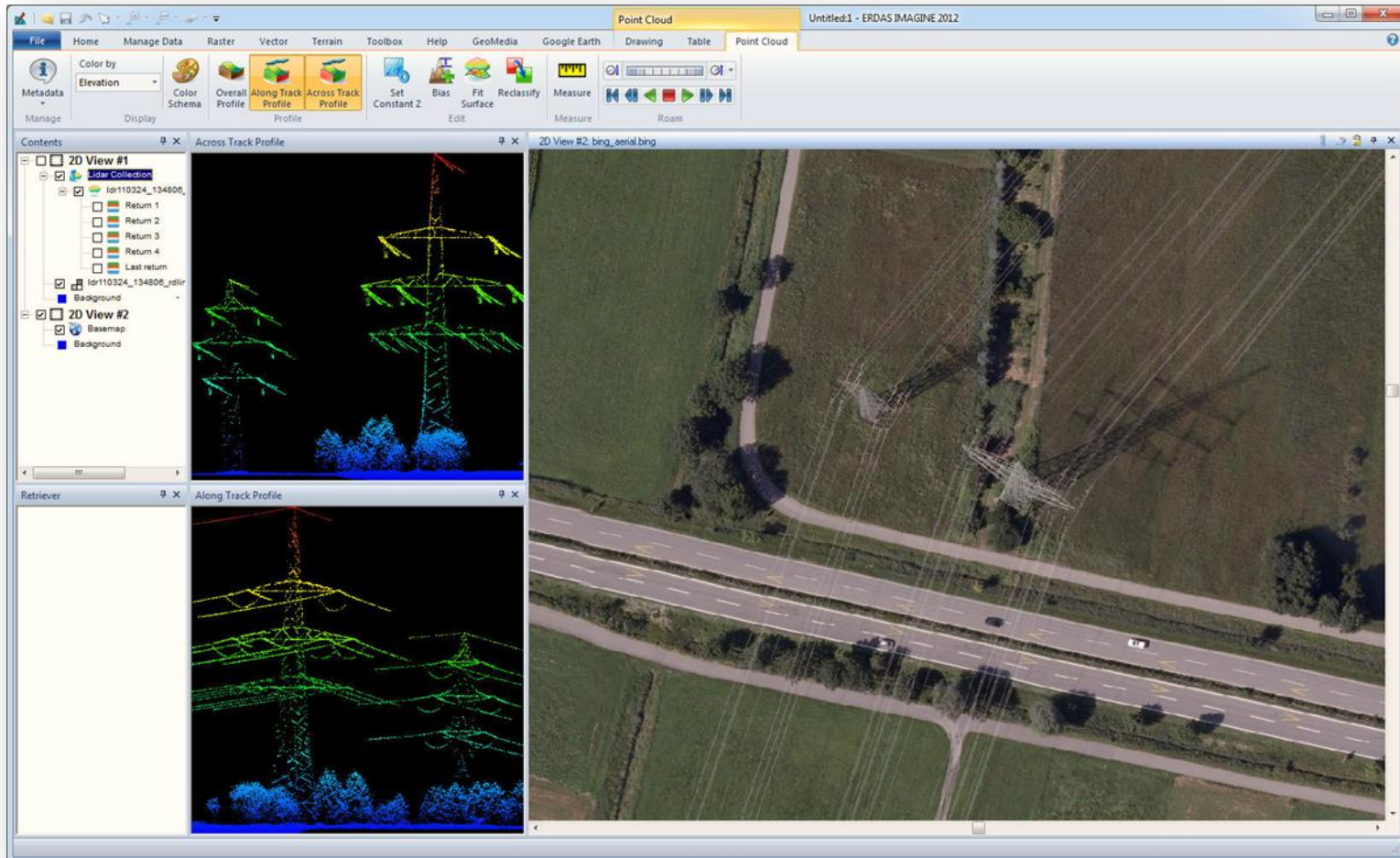
Row	File Name	LAS Version	Point Format	Point Count	SRS	Extent
1	272325.las	1.0	Type 1	7955097		471575, 1496547, 83 --- 476908, 1501931, 755
2	272326.las	1.0	Type 1	10973890		466305, 1496540, -1035 --- 471603, 1501844, 1109
3	272327.las	1.0	Type 1	8217452		460985, 1496509, 91 --- 466308, 1501830, 342
4	272328.las	1.0	Type 1	7341599		455634, 1496475, 92 --- 460992, 1501790, 1124
5	272329.las	1.0	Type 1	8284784		450381, 1496439, 91 --- 455711, 1501764, 575
6	272330.las	1.0	Type 1	8631777		444883, 1496418, 91 --- 450395, 1501728, 782
7	272331.las	1.0	Type 1	8631777		444883, 1496418, 91 --- 450395, 1501728, 782

0.00 (CW)

More LAS functions

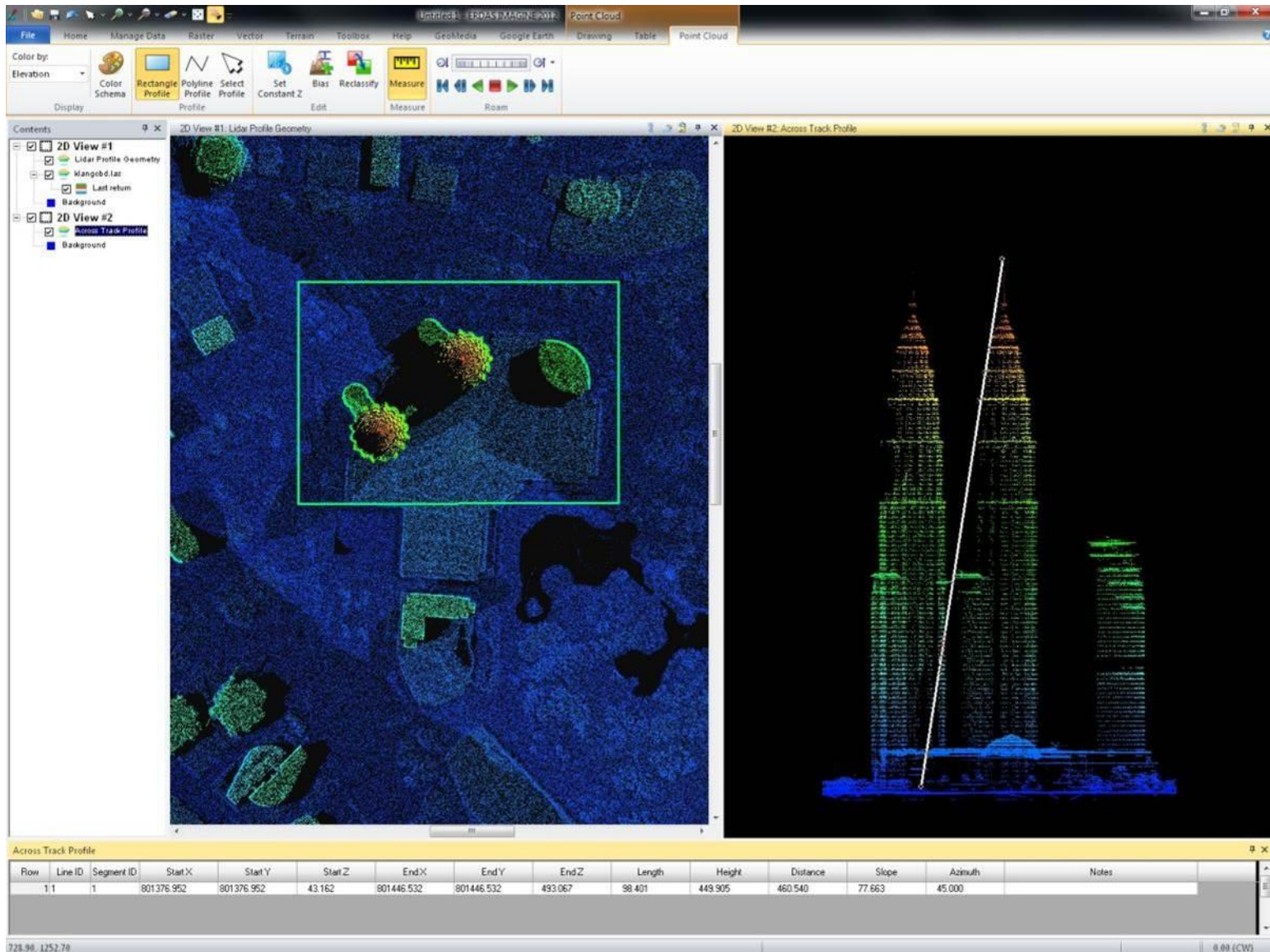


GEOSPATIAL MIXING



Aerial Imagery + Terrestrial LiDAR = Dynamic Information

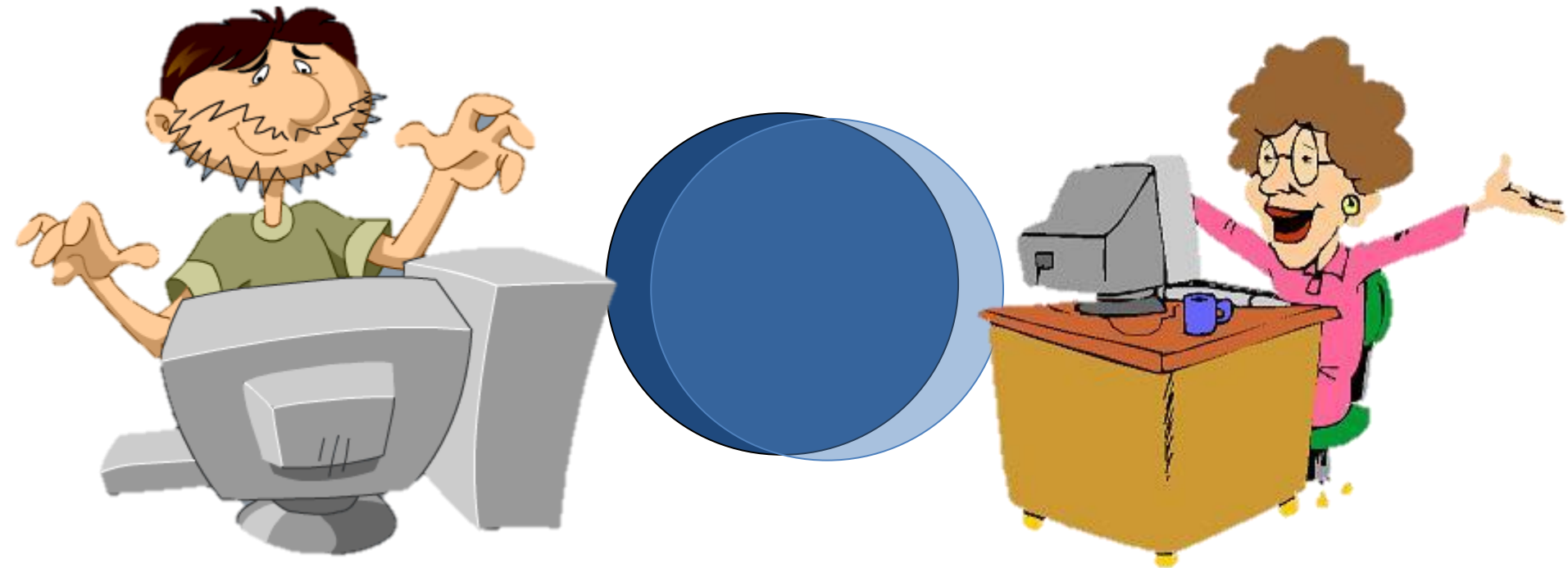
LIDAR Allows Direct Measurement of the 3rd Dimension



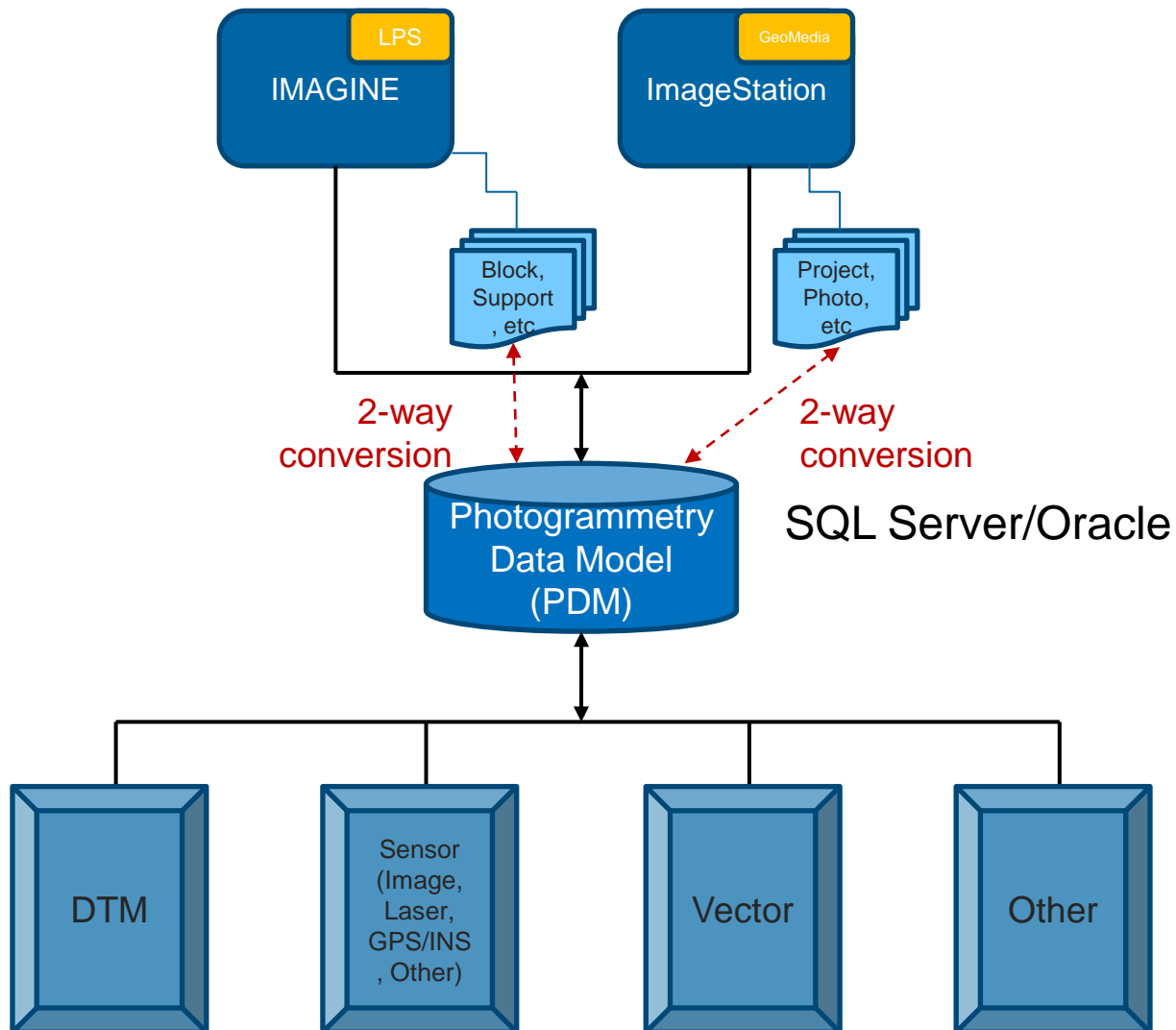
LPS vs ImageImageStation Functional Comparison



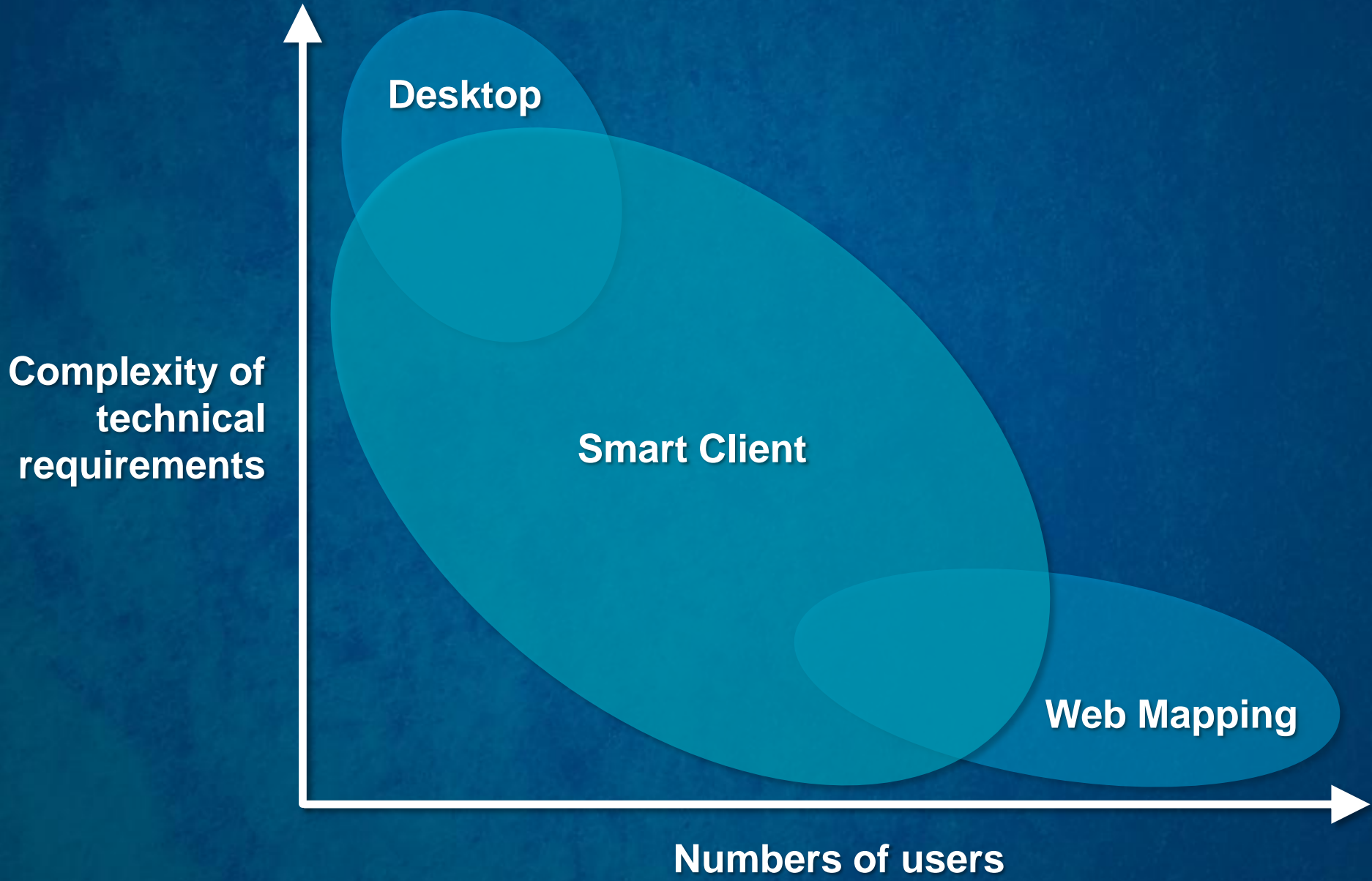
Almost 100% functional overlap (which you'd expect)



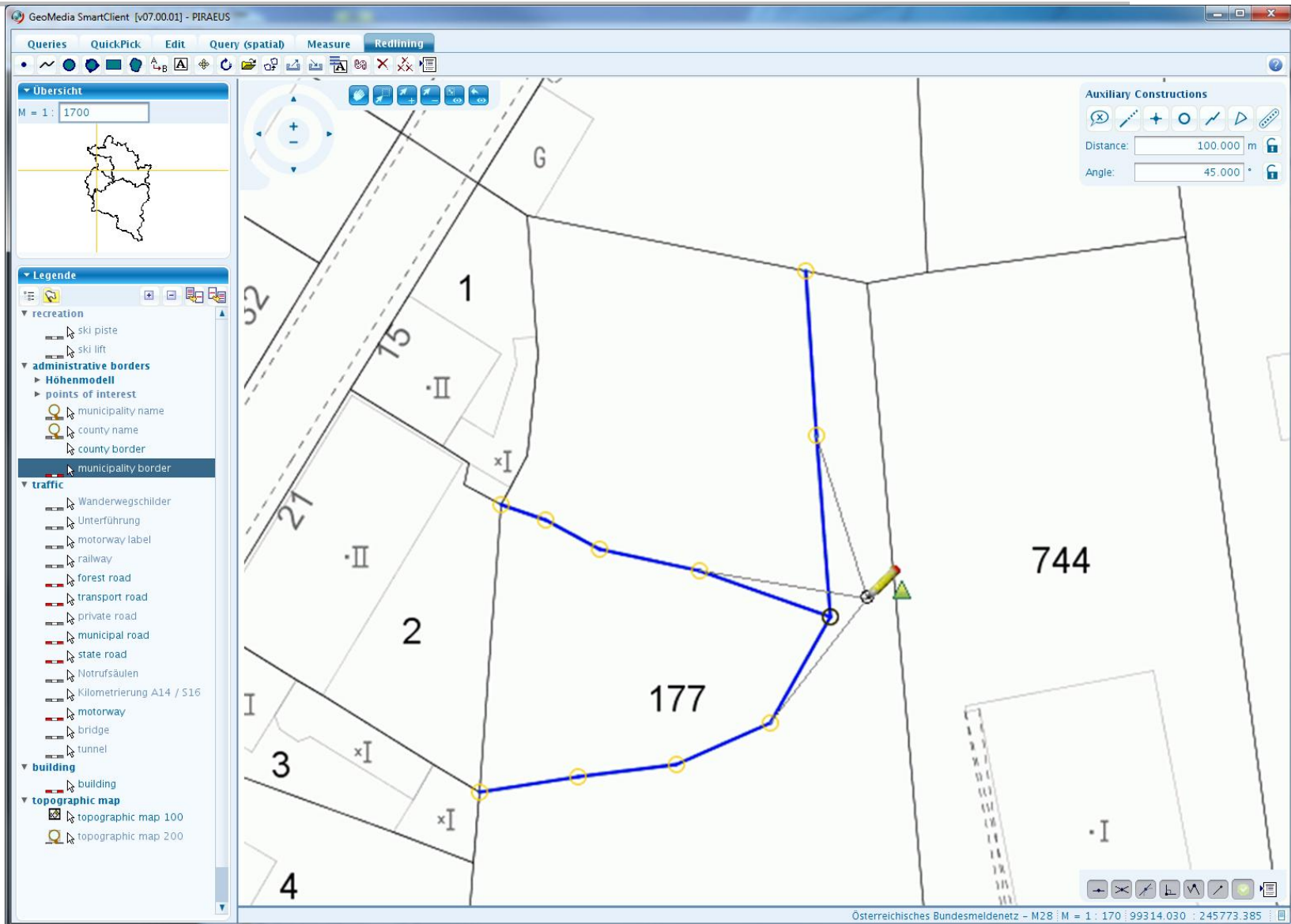
Photogrammetry Data Model (PDM)



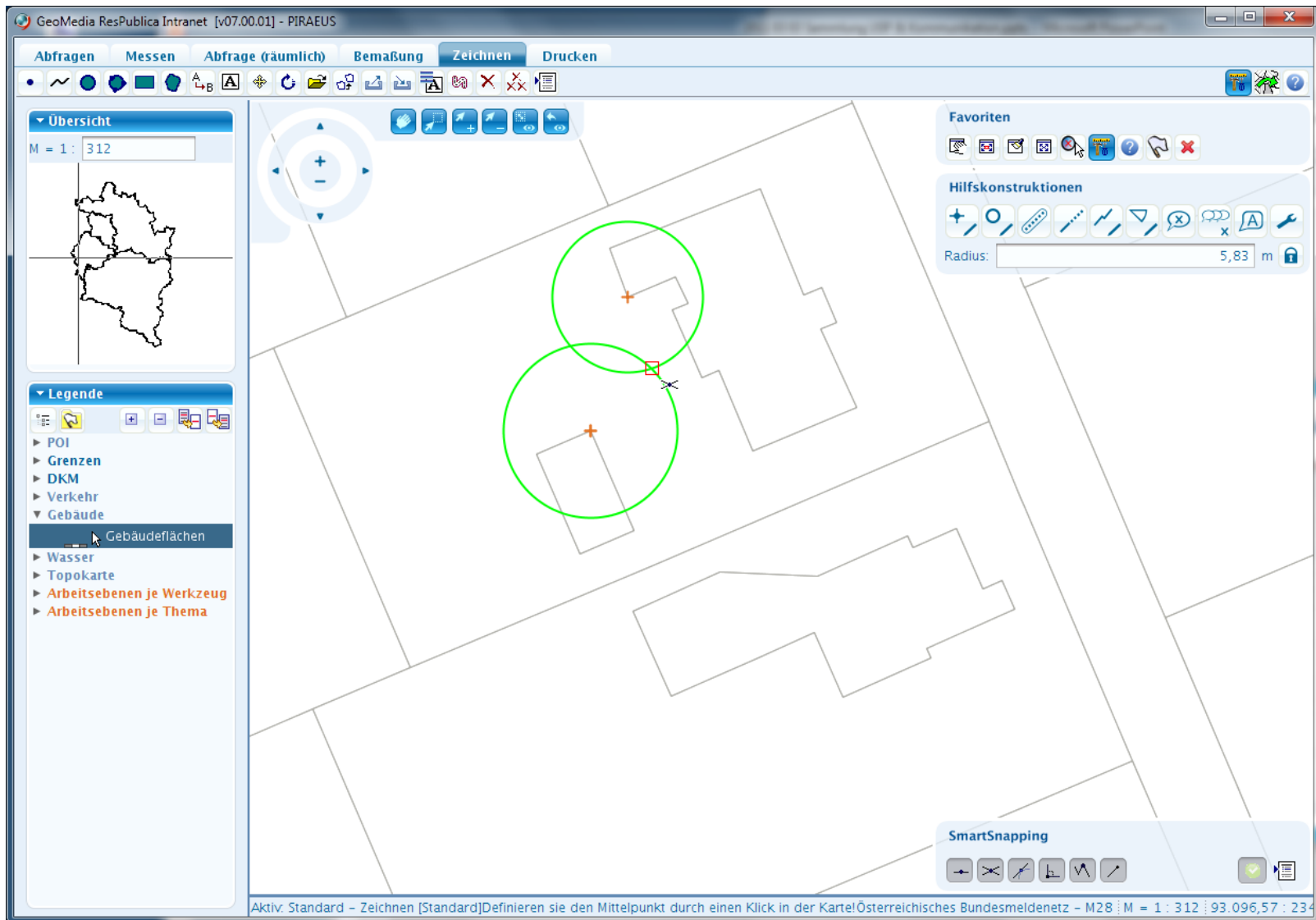
Matching Functionality to Users' Abilities and Needs



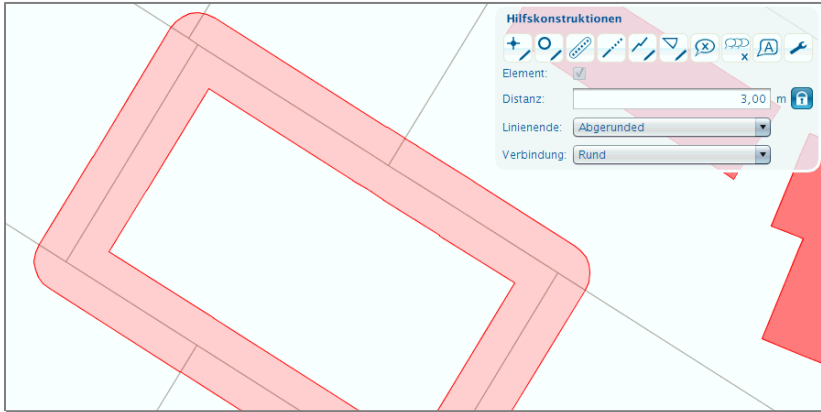
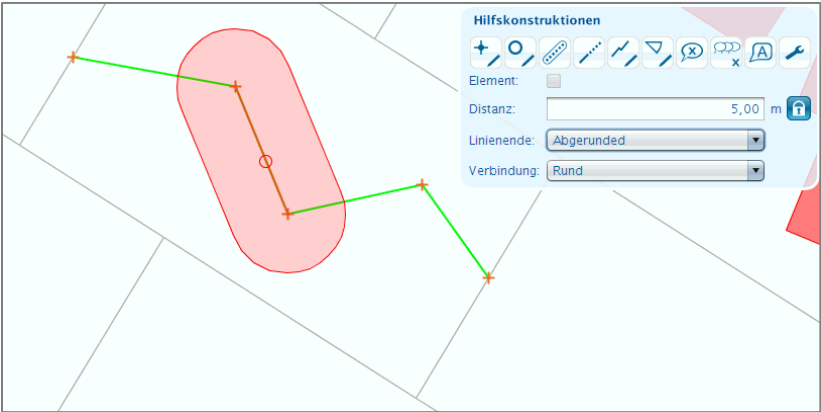
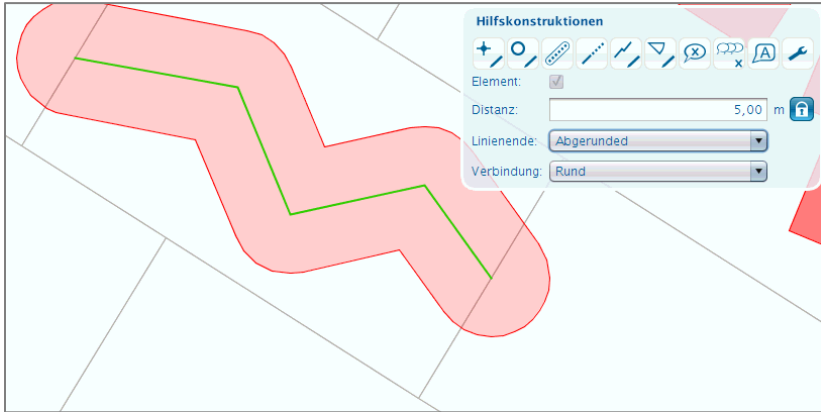
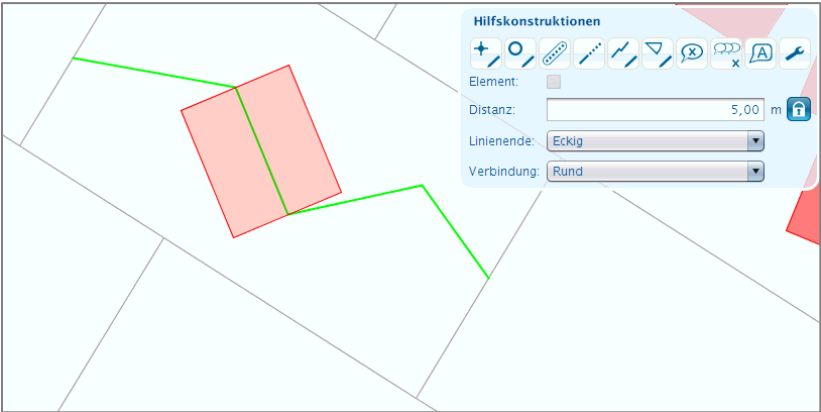
GeoMedia® Smart Client – Powerful Editing Capabilities



GeoMedia® Smart Client – CAD tools embedded

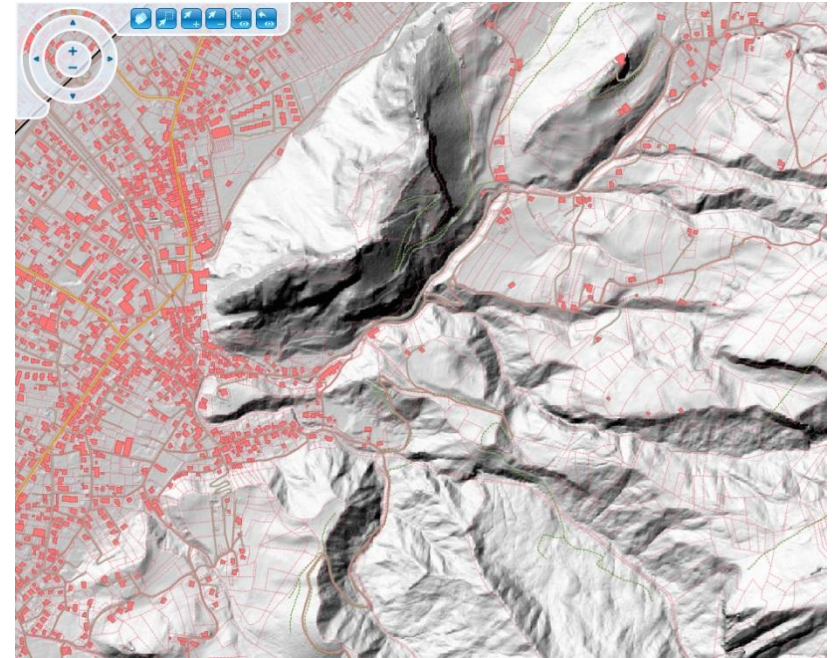
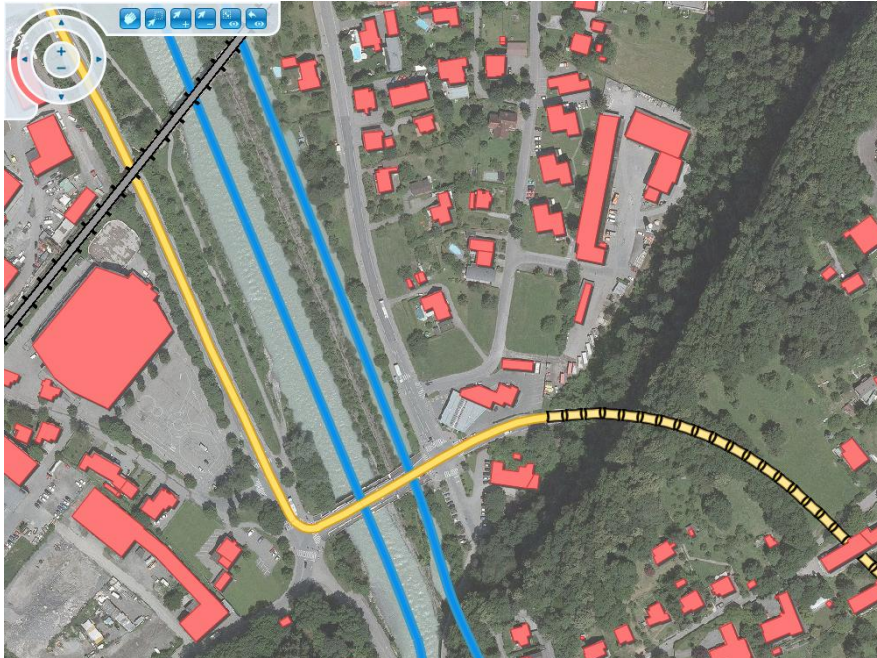


GeoMedia® Smart Client – Buffer functions



GeoMedia® Smart Client – high level cartographic map display

- Extended style capabilities for GeoMedia Smart Client based on **OGC standard “Symbology Encoding” (SE)**
- Definition of very complex and scale-dependent styles
- Use of SVG and GIF icons to style line strings and area fills
- Support of Rich Text Format (rtf) and halo effects
- Style Editor



Mobile is Taking Geospatial to the Masses

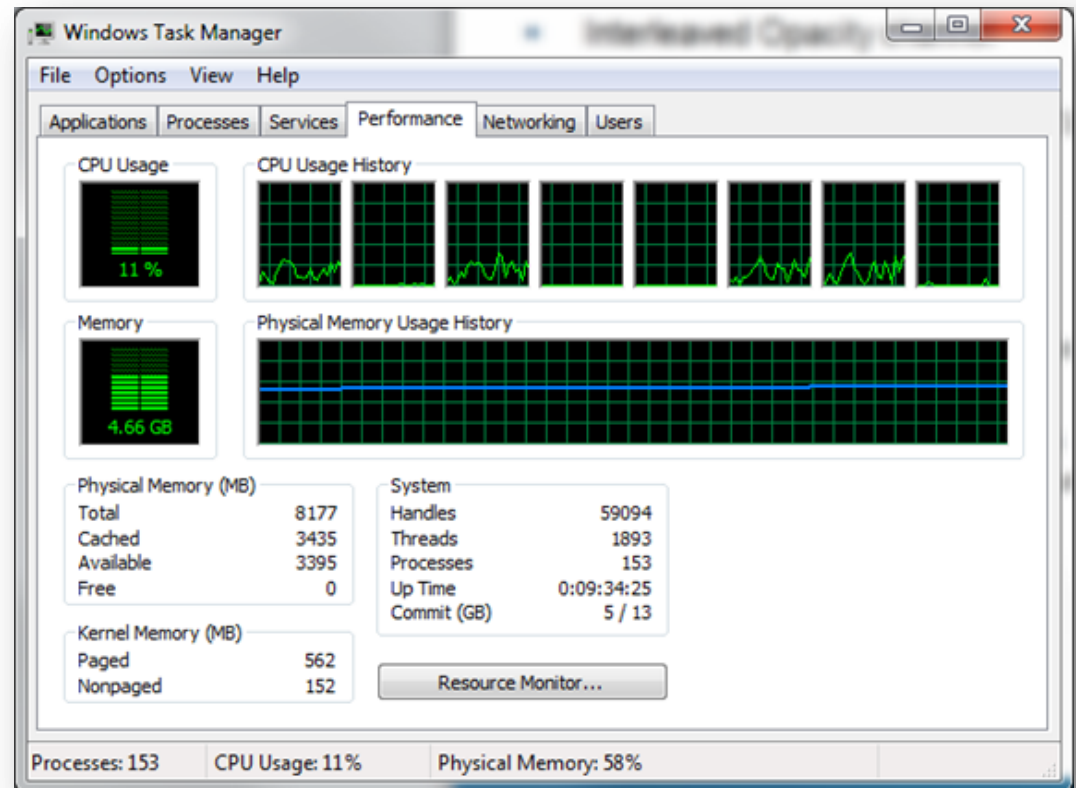
- Mobile devices are the gateway to the cloud.
- Mobile Applications are simple, intuitive and built for specific purposes.
- Heavy computing can happen on the cloud.
- Crowd Sourcing applications such as Open Street Maps benefit everyone because of the contribution from the large number of users.



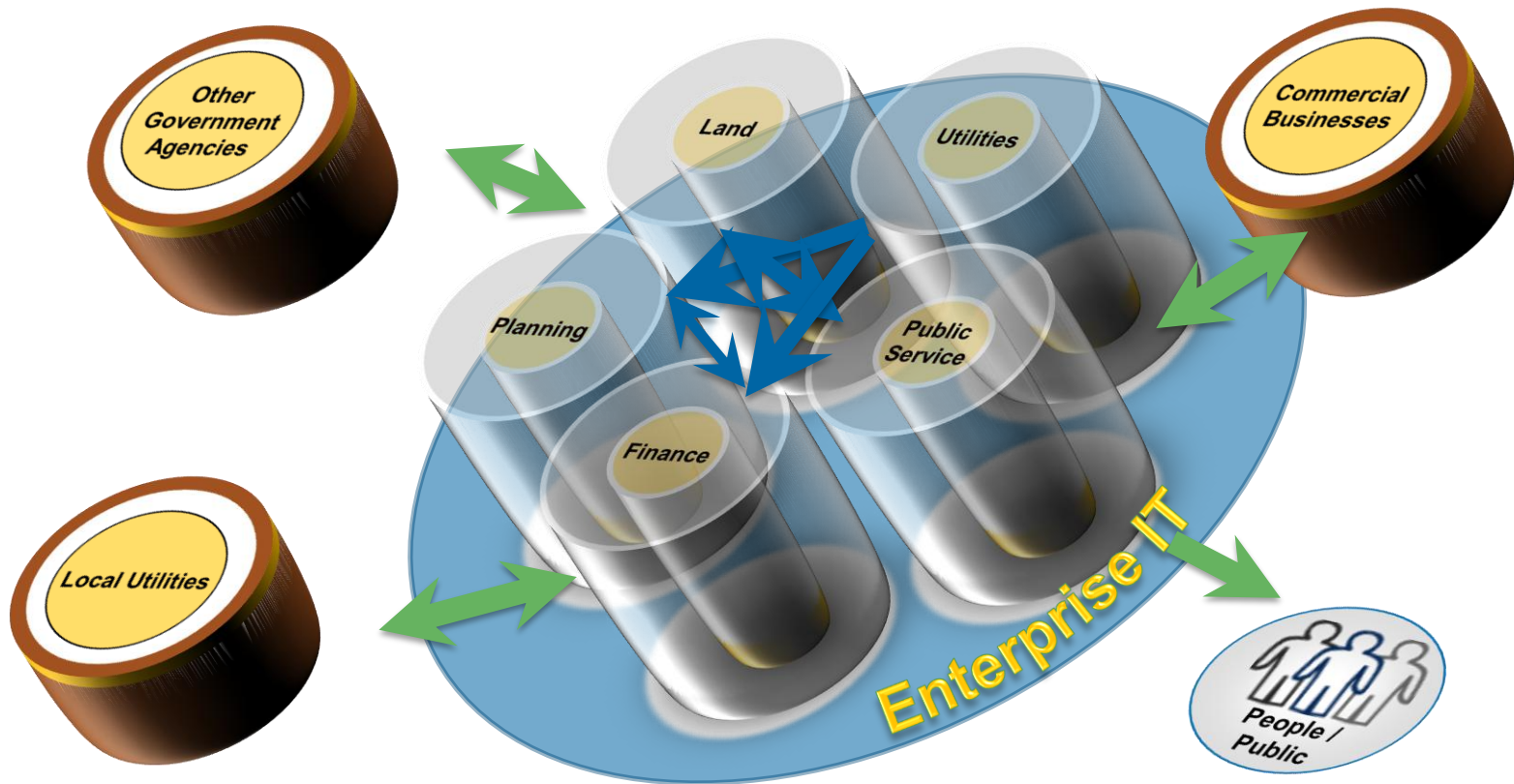
Give a Hint - Mapping Potholes in Copenhagen



- 3 - 10x faster
- 20-35% smaller
- Multi-threaded
- Supports 16-bit data

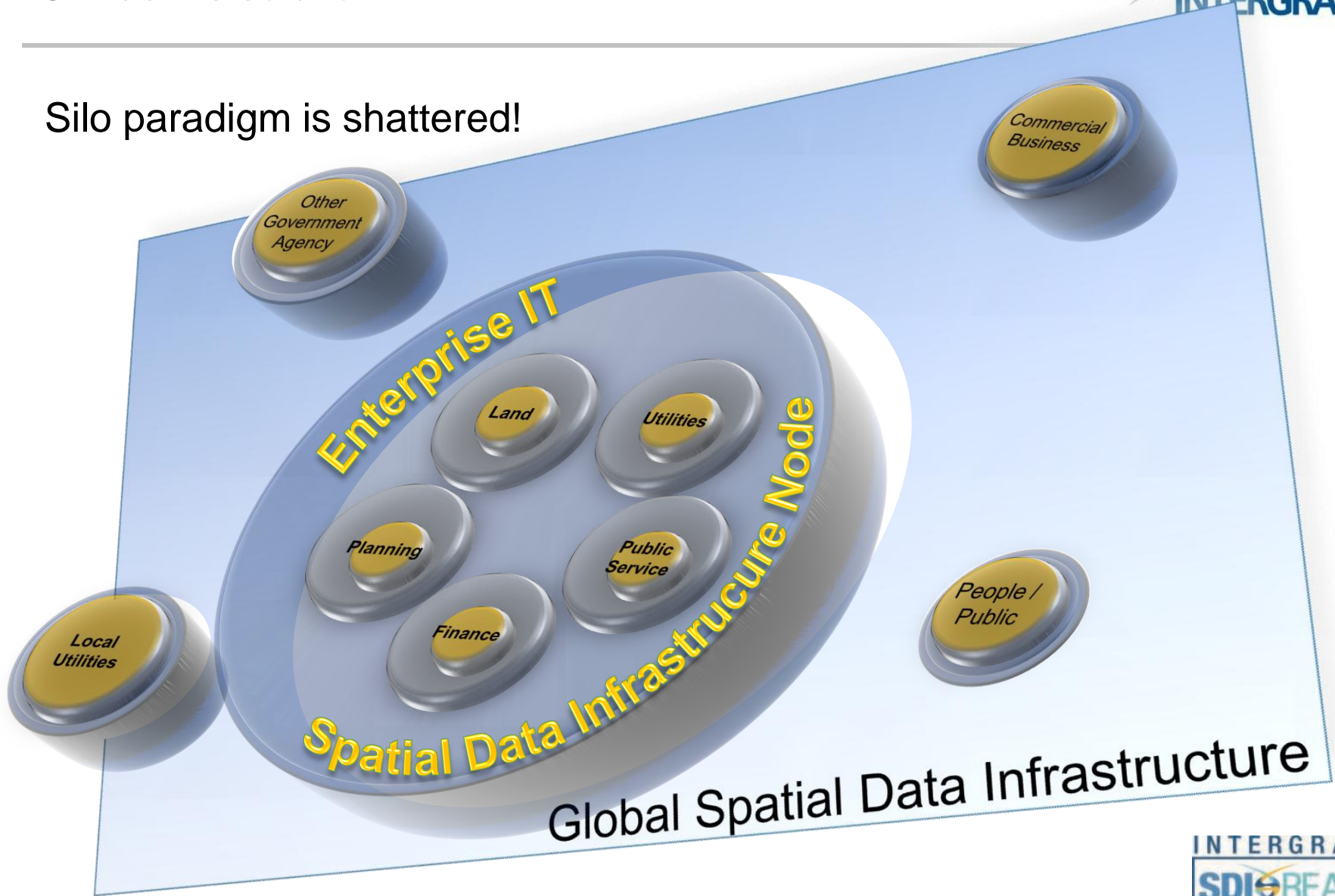


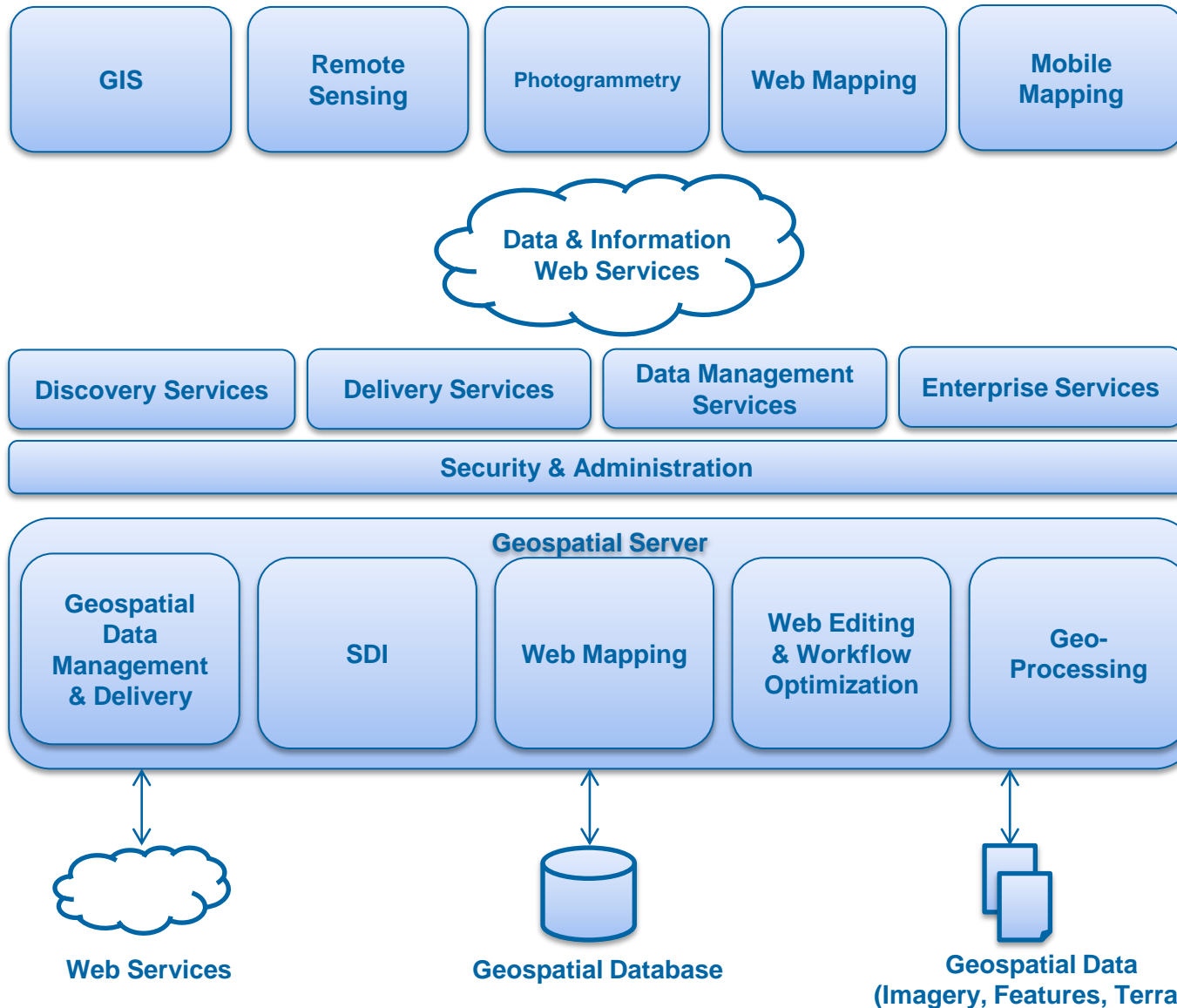
Data in silos inhibits communication and **sharing** of geospatial data and functionality



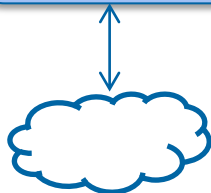
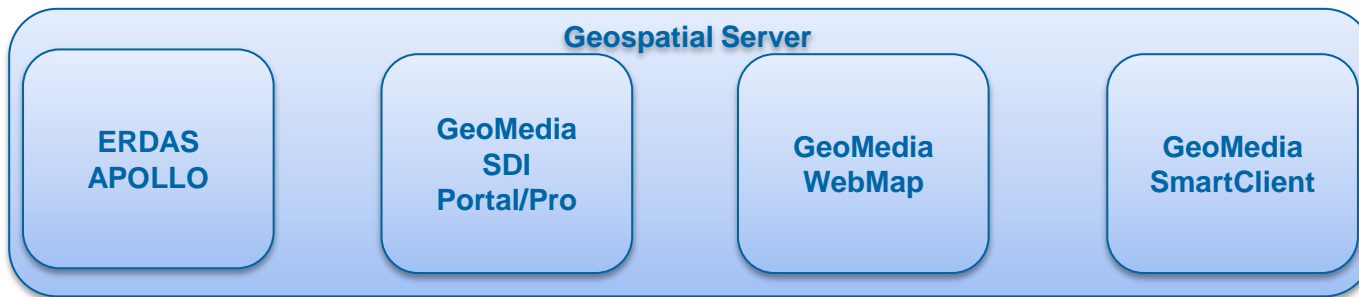
SDI as the solution

Silo paradigm is shattered!

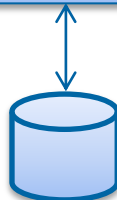




Intergraph Geospatial Products



Web Services



Geospatial Database



Geospatial Data
(Imagery, Features, Terrain)

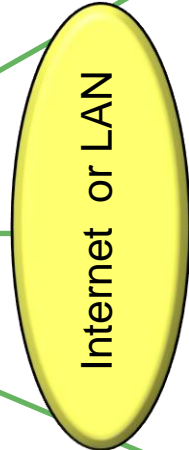
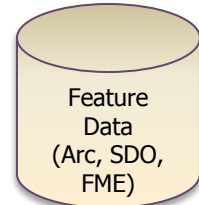
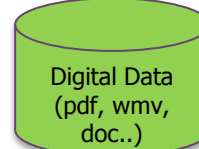
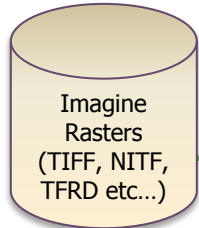
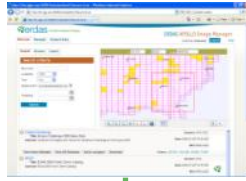


ERDAS APOLLO

ERDAS APOLLO Workflow

Management:

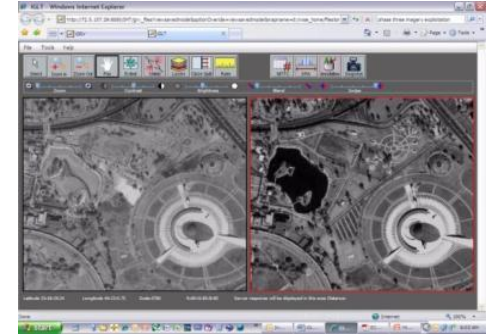
- Harvest
- Catalog



GeoSpatial Modeling Engines:
• WPS



- Discover
- View
- Download
- Create products



Analysis



Visualization and Collaboration



Feature Editing

Clip - Zip - Ship (CZS)

Multi-select

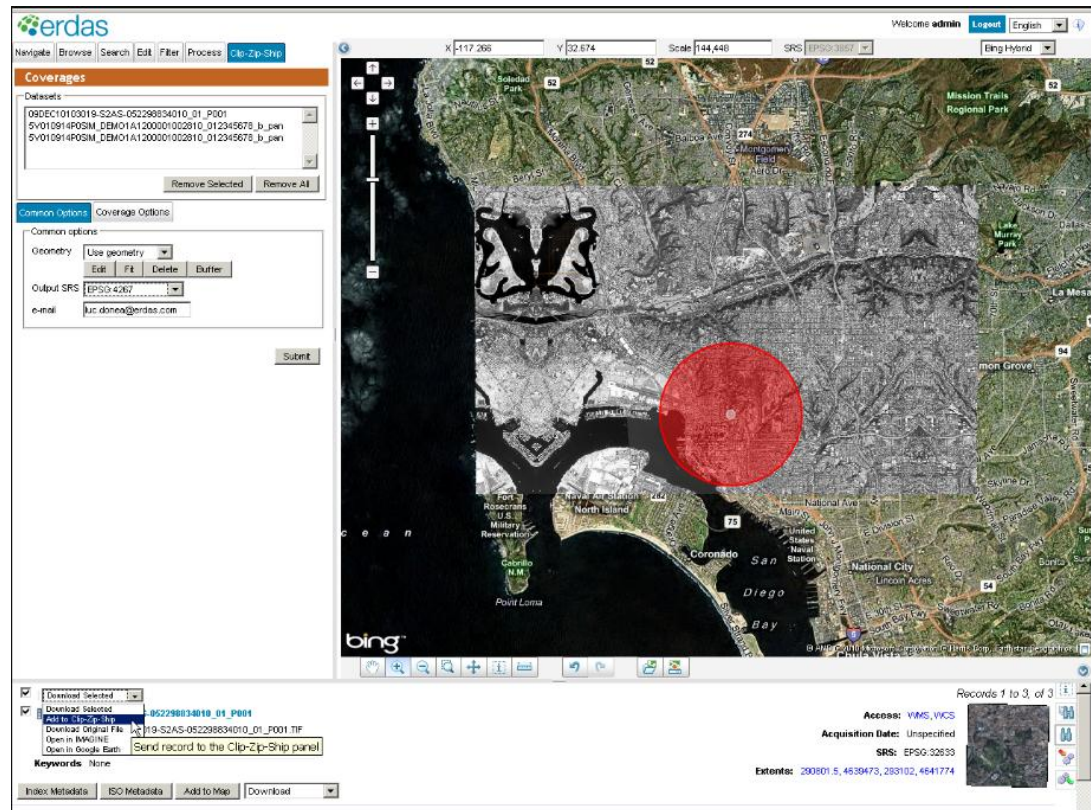
- and download bundle

Download options:

- Original files
- Send to CZS workflow
- KML to view in TITAN or Google Earth
- Shoebox to work in ERDAS IMAGINE

Common Options in CZS

- Use same geometry to clip entire bundle
- Set global SRS



Web Processing with ERDAS APOLLO

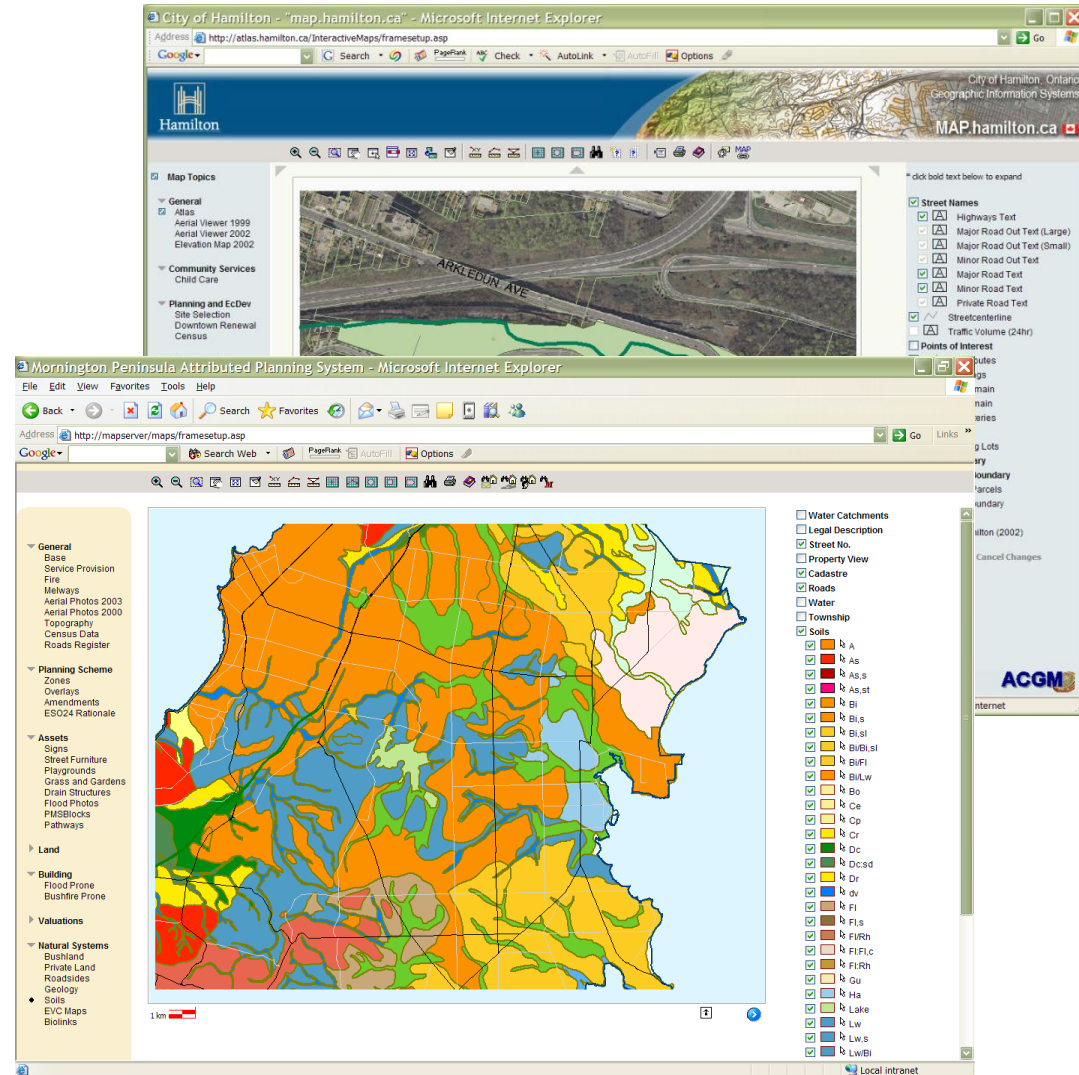
GeoMedia WebMap

- All about VISUALIZATION over the web
- Visualize your geospatial assets
- Visualize answers to your geospatial questions

Platform/toolbox for building **scalable**

server-side applications:

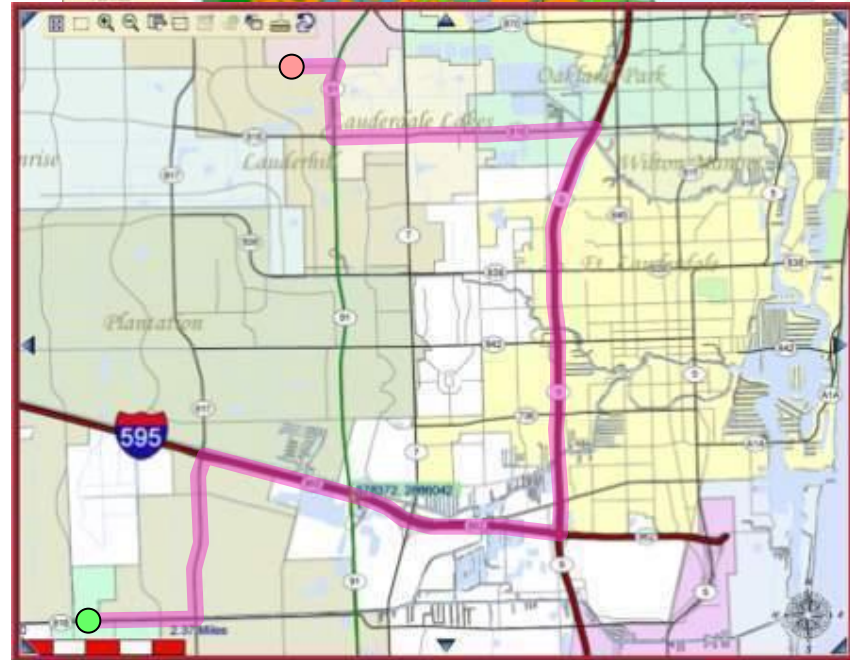
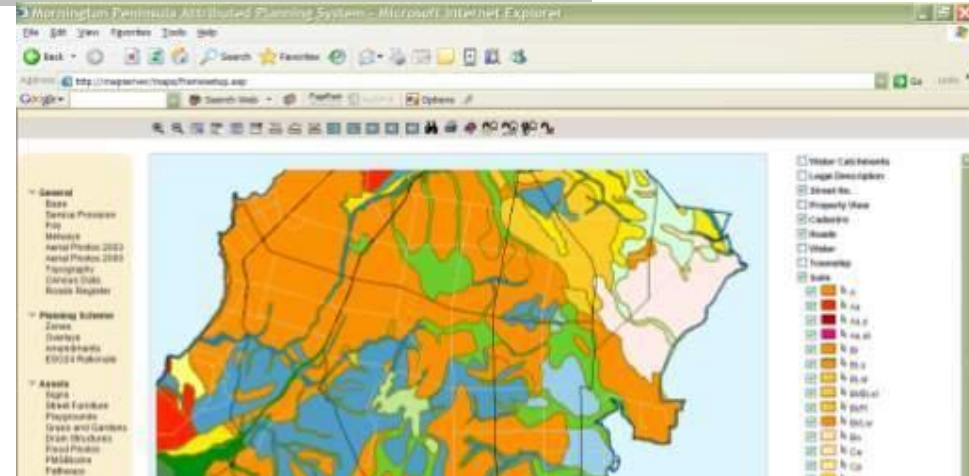
- web sites (thin-client apps)
- web services



GM WebMap Pro: Geospatial Analysis



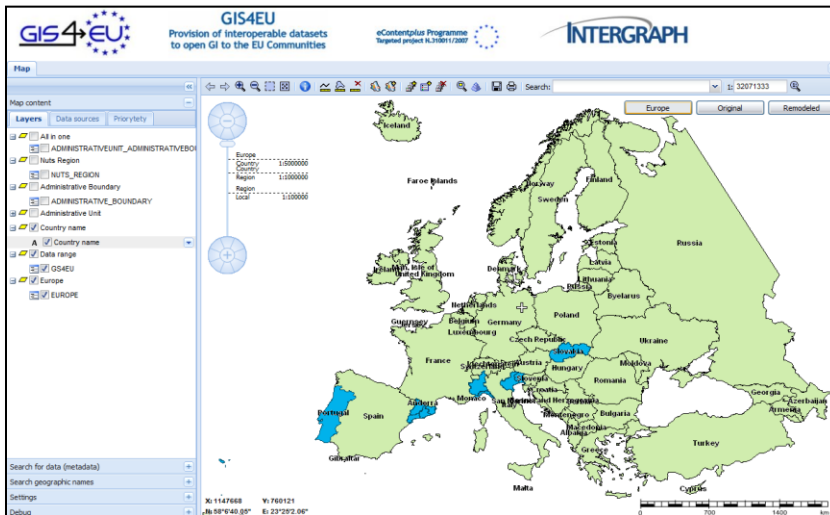
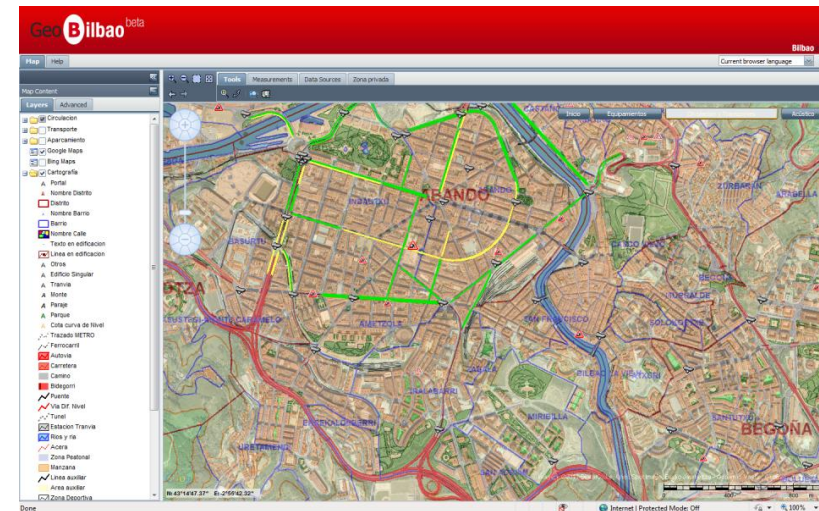
- Analyze data and perform complex what-if analysis using GeoMedia's query and pipe technology
 - Buffer zone
 - Analytical Merge, Aggregation
 - Spatial Difference, Spatial Intersection, Spatial Query
 - Functional attributes and expressions
 - Union, Join
 - Address Geocoding (and Reverse)
 - Routing
 - Dynamic Segmentation



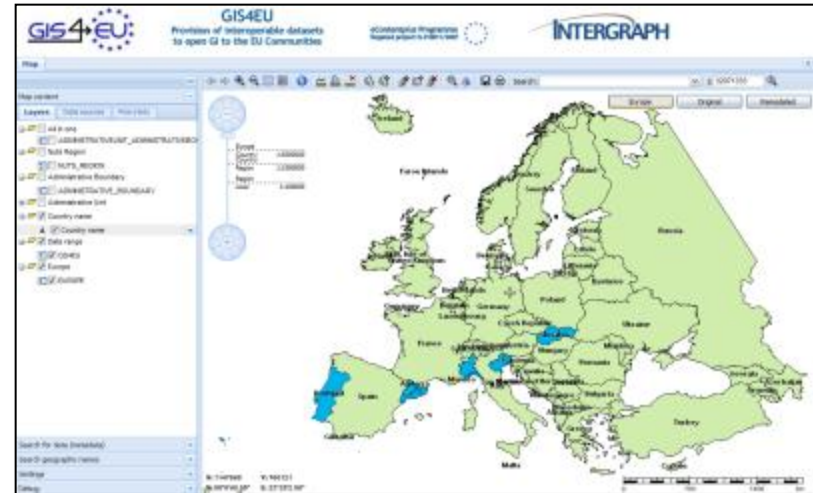
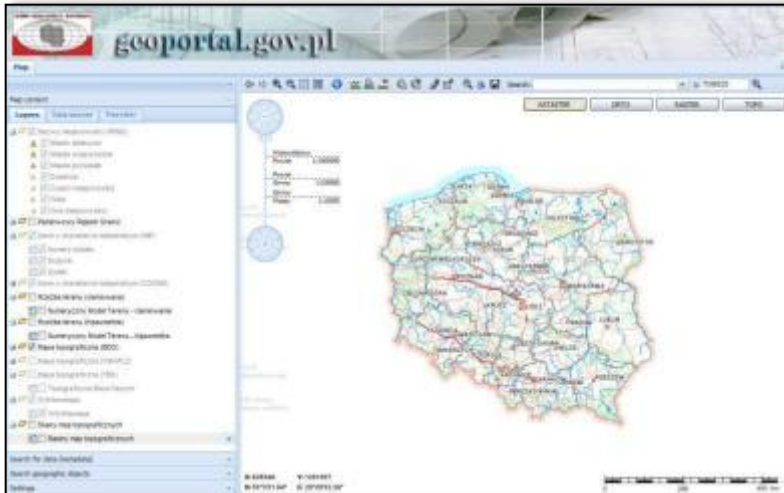
GeoMedia SDI Portal



- Ready-to-run web application to view and query SDI data sources
- Acts as a consumer/client of:
 - OGC W*S services (SDI)
 - Google Maps and Microsoft Bing Maps
- Highly configurable



GeoMedia SDI Portal – skins/themes



Geocatálogo de Imagens do Estado da Bahia



Faça seu login: Usuário: Senha:



Navegação Explorar **Buscar** Editar Filtrar Processamento Download

Busca

Tipo

Palavras-Chave

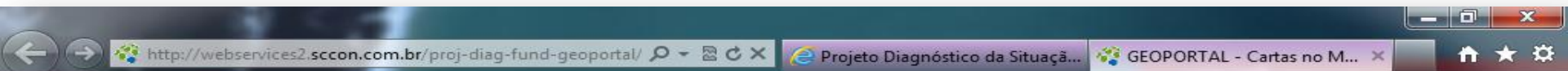
Geometria

Projeto

Data



Geocatálogo e geoportal de informações para gestão de processos



PROJETO DIAGNÓSTICO DA SITUAÇÃO FUNDIÁRIA DA REGIÃO DA TRÍPLICE FRONTEIRA DO AMAZONAS, ACRE E RONDÔNIA

Cartas do mapeamento da Amazônia no modelo DSG-EDGV/CONCAR

Navegação | Explorar | Editar | Filtrar | Buscar

Temas
Limites e Hidrografia

Camadas

- Auxiliar: Amostra RapidEye - Labrea
- ot_gleba_estadual_a
- ot_gleba_federal_a
- ot_titulo_definitivo_a
- aux_moldura
- loc_nome_local_p
- loc_nome_local_p
- hid_confluencia_p
- hid_ponto_inicio_drenagem_p
- hid_ponto_drenagem_p
- hid_trecho_massa_dagua_a
- hid_massa_dagua_a

X: -66,31 | Y: -7,74 | Escala: 92.562,00 | SRS: EPSG:4326

Camadas Encontradas

Classe	Código	Tabela	Qtd.
Ponto_Drenagem	1.08	hid_ponto_drenagem_p	1
Ponto_Inicio_Drenagem	1.14	hid_ponto_inicio_drenagem_p	1

Ponto_Inicio_Drenagem(Hidrografia)

Ponto_Inicio_Drenagem
Ponto onde se inicia um trecho de drenagem, podendo ser uma nascente ou não

Legenda

- Classe de Objetos instanciáveis
- Classe de Objetos não instanciáveis
- Classe de Objetos de outras Categorias
- Primitiva geométrica tipo ponto
- Primitiva geométrica tipo polígono
- Primitiva geométrica tipo linha
- Primitiva geométrica tipo complexo
- Associação com Classe de outros pacotes
- Associação com Classe do mesmo pacote
- Associação Não Espacial
- Sentido da seta
- Cardinalidade
- 0..*
- Agregação Especial
- Especialização Disjunta Parcial
- Especialização Disjunta Total
- Especialização Sobreposta Parcial
- Especialização Sobreposta Total

[PDF com o Diagrama de Classes completo da Categoria Hidrografia](#) | [PDF com toda especificação DSG-EDGV/CONCAR](#)

Aplicação de Gestão Ambiental



Propriedade Santa Amália
Município: Manaus / AM - Proprietário: João da Silva
Técnico Ambiental: Murilo Oliveira - Status CAR: Em Trâmite - Doc. Pendente

Selecione uma área no mapa

Selecione um tipo de edição abaixo e clique em criar:

[Editar](#) [Ajustar](#) [Deletar](#) [Buffer](#)

[Cancelar](#) [Confirmar](#)

Quadro de Áreas

Tipo	Área (ha)	% do Total
<input type="checkbox"/> Área do Imóvel	2.385,55	100,0%
<input type="checkbox"/> Hidrografia	235,57	9,9%
<input type="checkbox"/> Área de Uso Alternativo do Solo	526,36	22,1%
<input type="checkbox"/> Área Degradada	382,92	16,1%
<input type="checkbox"/> Área de Reserva Legal	986,51	41,4%
<input type="checkbox"/> ARL Degradada	71,03	3,0%
<input type="checkbox"/> APP	268,99	11,3%
<input type="checkbox"/> APP Degradada	28,70	1,2%



Gerando serviços para consumidores e gestores para os segmentos de educação e saúde

The screenshot displays the Azimute GIS application interface. At the top left, the logo for "azimute SISTEMA DE INFORMAÇÃO MULTIDIMENSIONAL" is visible. The main header area shows "Resultado da Pesquisa" and "Municípios / 2007 - Saúde / 2010". A toolbar at the top right includes icons for zooming, panning, and layers, along with buttons for "Camadas" and "Legendas".

On the left side, a blue panel titled "Selecione uma área no mapa" contains a dropdown menu for "Tipo Polígono", buttons for "Editar", "Deletar", "Buffer", "Finalizar", and "Cancelar".

The central map shows a street grid in Feira de Santana, with a red polygon highlighting a specific area. A "Operações Geométricas" (Geometric Operations) toolbar is overlaid on the map, featuring icons for various geometric functions. The map includes labels for streets like "Av. Eduardo Fróes da Mota" and "Av. Getúlio Vargas", and highways "BR 116" and "BR 324".

At the bottom, a blue bar contains the text "Opções:" followed by several icons for navigation and map management. The bottom right corner of the map area includes the text "Dados cartográficos © 2011 MapLink - Todos os direitos reservados".



Jairo Linares

Regional Sales Manager
Intergraph Geospatial

P (770) 776-3553

M (404) 307-8464

Jairo.Linares@Intergraph.com

<http://geospatial.intergraph.com>