

Pictometry:

***Technologie ukośnych zdjęć lotniczych i ich
zastosowanie w służbach specjalnych
(policja, straż pożarna, szybka pomoc)***

W-wa, 12. czerwca 2008 r.

Dr. Klaus-Dieter Hanemann

Blom Deutschland GmbH

www.blomasa.com

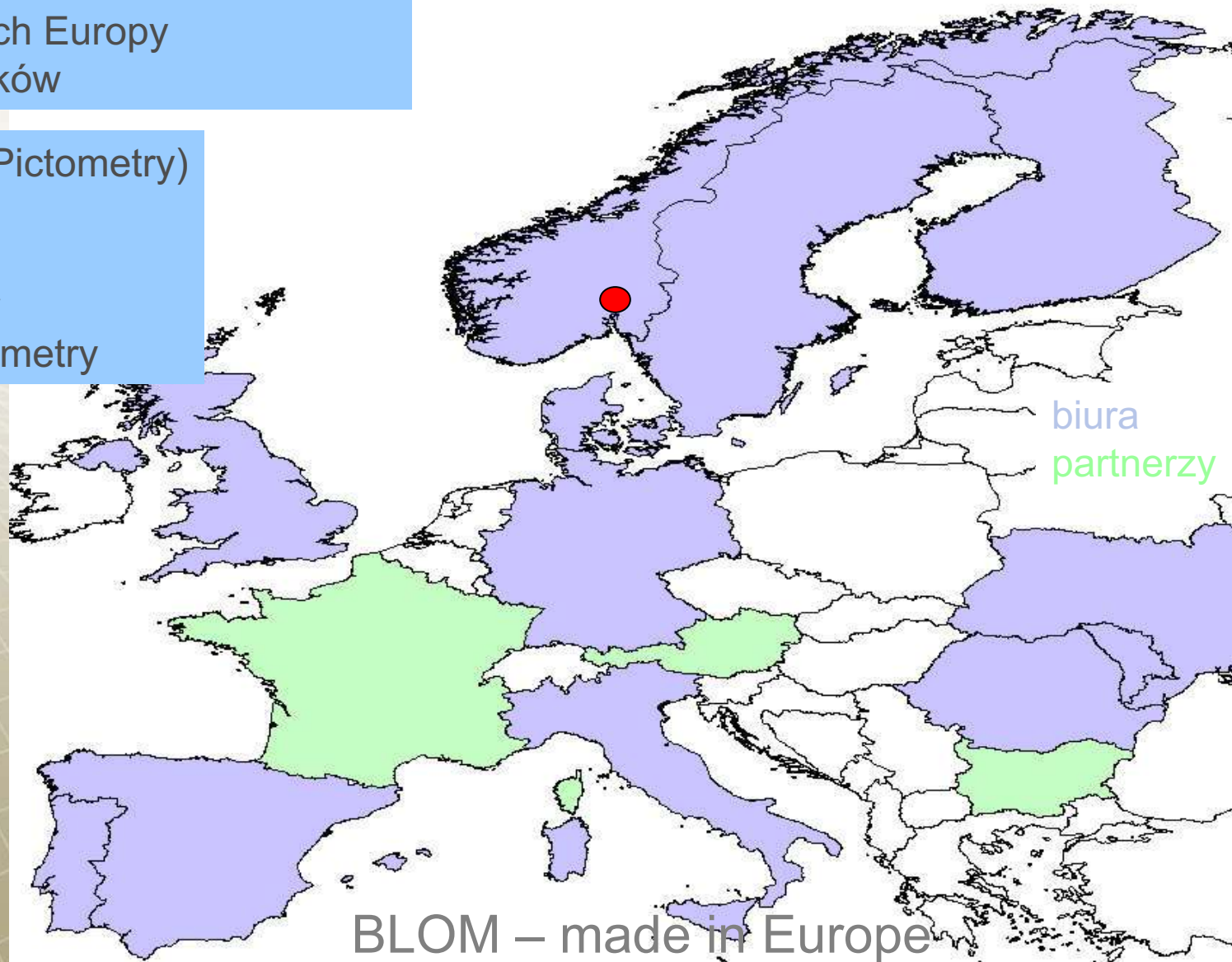
www.blompictometry.com

Blom ASA



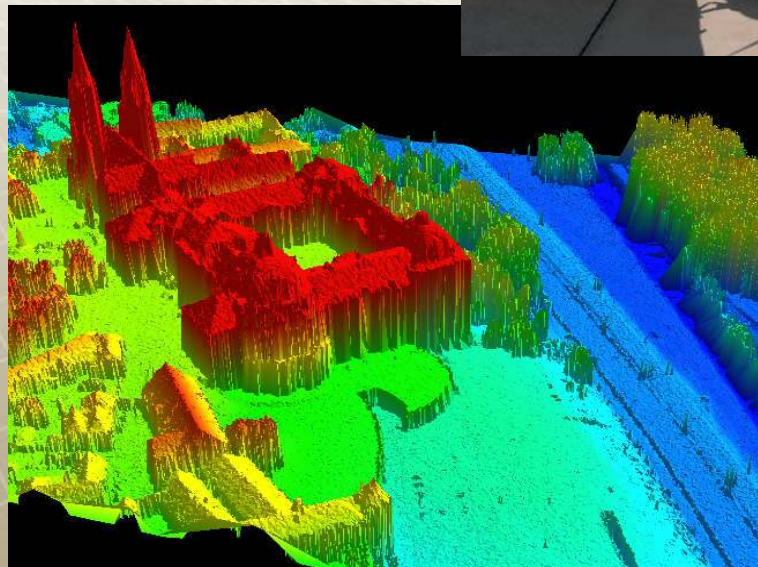
Spółka akcyjna utworzona w roku 1954
obecna w 15 krajach Europy
ok. 1000 pracowników

33 samoloty (incl. Pictometry)
4 helikoptery
9 lidarów
9 cyfrowych kamer
12 systemów Pictometry



BLOM – made in Europe

- fotogrametria lotnicza
- DTM/DSM z lidararu
- geoinformatyka
- geodezja
- Consulting



Od roku 2005 w grupie BLOM

Całkowicie nowy product na rynku
zdjęć lotniczych:

Pictometry ©

Co to jest, Pictometry® ?



Rejestracja:

- 4 kamery ukośne (45°)
- 1 pionowa
- nalot z pokryciem 60/30%, N - S
- GPS & INS
- zdjęcia pionowe: stereo
- rozmiar piksla: 15 cm przy pułapu lotu ok. 1000 m
- ≥ 12 widokow kazdego obiektu

Baza zdjęć lotniczych:

- jednoczesne zapisywanie pionowych i ukośnych zdjęć
- wszystkie zdjęcia zrektyfikowane (patent firmy Pictometry)
- wyłączna licenzja dla Europy: BLOM
- aktualizajca co 2 lata
- zdjęcia dla ok. **1000 miast** europejskich już dostępne !!
- obecnie zaczyna sie druga runda (częściowo z **rozdz. 10 cm**)

Widoki wieloperspektywne



z zachodu

pionowy



z północy

z południa



ze wschodu



Największy obecnie klient: Microsoft Virtual Earth (<http://maps.live.com>)

Plany w Polsce na rok 2008:

Bydgoszcz	211	N53°30'
Gdańsk	412	
Region Śląski	1.228	
Kraków	440	
Łódź	517	N52°30'
Lublin	206	E 17°
Poznań	329	E 19°
Szczecin	238	E 21°
Warszawa	990	E 23°
Wrocław	369	N51°30'
4.940 km²		

Zezwolenie na wykonanie lotów:
Rozmowy z GUGiK'em w toku

Dostępność zdjęć:

- przez Geosystems Polska i
- przez GUGiK

(aktualna dyskusja, nie dokończona)

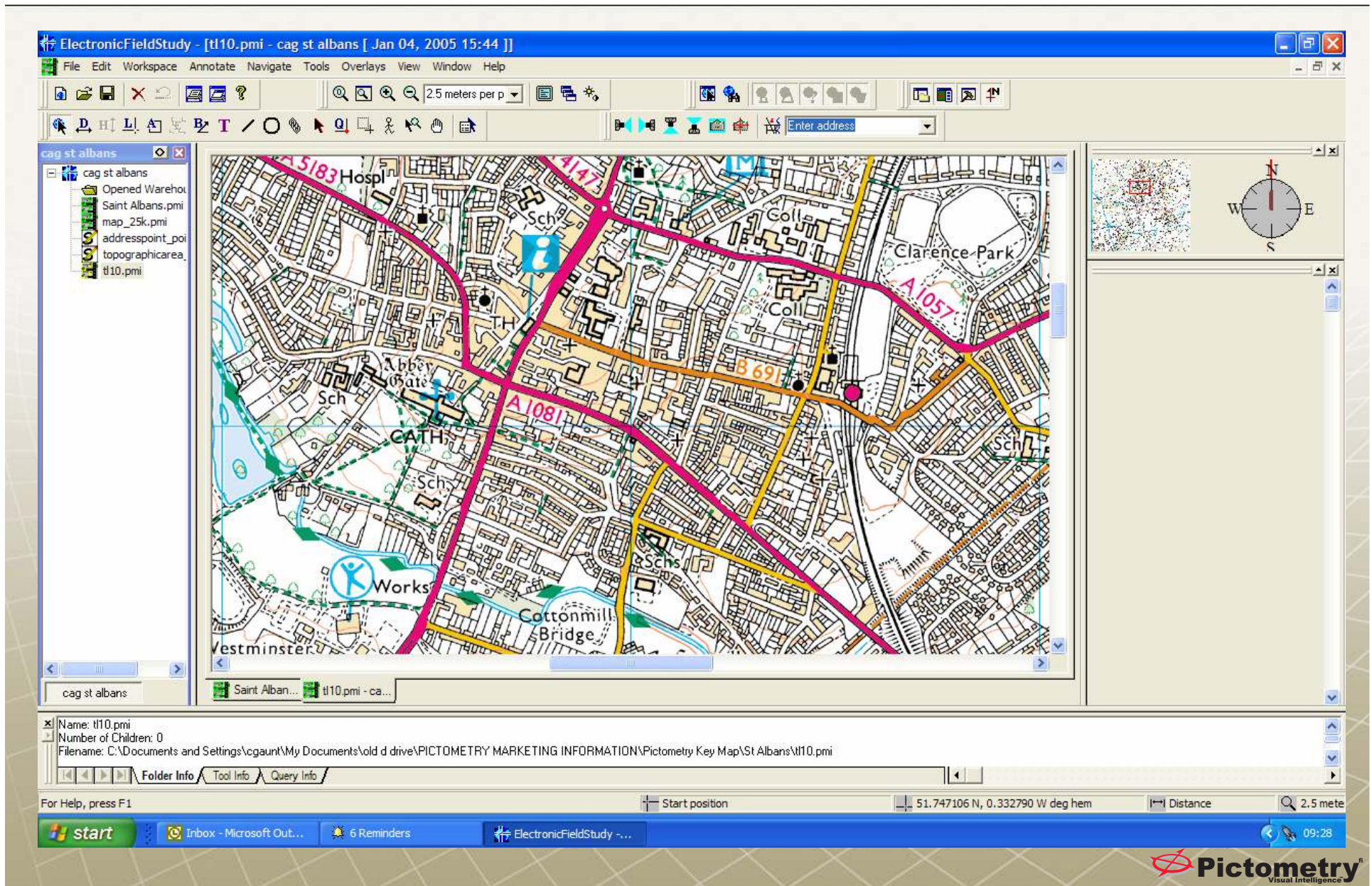
Tschechien

Image © 2008 TerraMetrics
© 2008 Europa Technologies
© 2008 Tele Atlas
Image NASA

Google

Jak skorzystać z danych Pictometry?

mapa podstawowa



The screenshot displays the 'ElectronicFieldStudy' application window. The title bar reads 'ElectronicFieldStudy - [t110.pmi - cag st albans [Jan 04, 2005 15:44]]'.

Menu Bar: File, Edit, Workspace, Annotate, Navigate, Tools, Overlays, View, Window, Help.

Toolbar: Includes icons for file operations, navigation, and a search box labeled 'Enter address'. A scale indicator shows '2.5 meters per p'.

Left Panel (Layers): 'cag st albans' contains several layers: 'Opened Warehou...', 'Saint Albans.pmi', 'map_25k.pmi', 'addresspoint_poi', 'topographicarea', and 't110.pmi'.

Main Map Area: Shows a detailed street map of Saint Albans. Major roads are highlighted in pink (A1081, A1057, A147, A5183), secondary roads in orange (B691), and minor roads in yellow. Landmarks include 'Hospl', 'Sch', 'Colla', 'Clarence-Park', 'Abbey Gate', 'CATH', 'Works', 'Cottonmill Bridge', and 'Vestminster'.

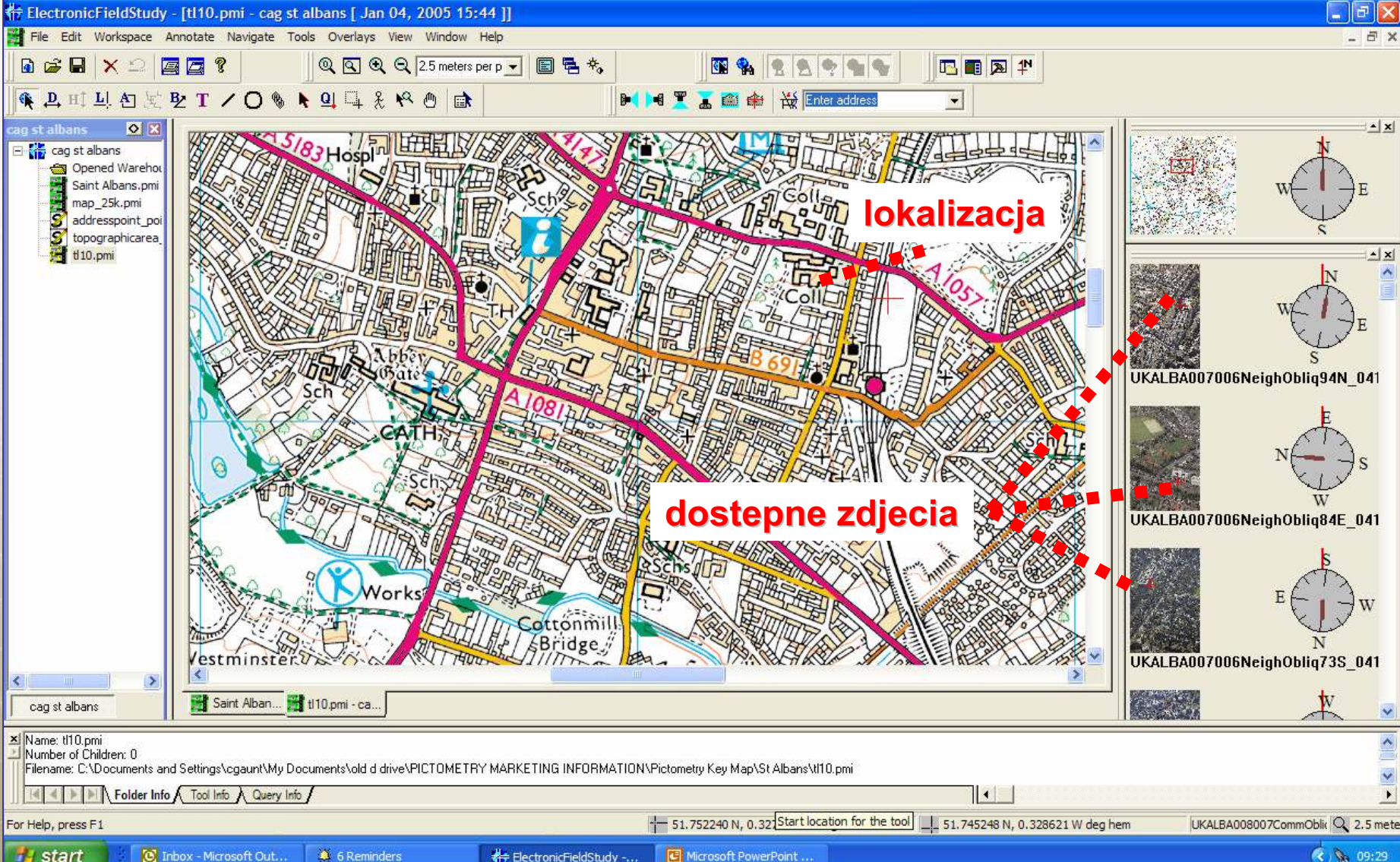
Right Panel: Features a small overview map, a compass rose with cardinal directions (N, E, S, W), and a vertical scroll bar.

Bottom Panel: Displays metadata for the selected layer 't110.pmi':
Name: t110.pmi
Number of Children: 0
Filename: C:\Documents and Settings\cgaunt\My Documents\old d drive\PICOTOMETRY MARKETING INFORMATION\Pictometry Key Map\St Albans\t110.pmi
Buttons for 'Folder Info', 'Tool Info', and 'Query Info' are visible.

Status Bar: Shows 'Start position' and coordinates '51.747106 N, 0.332790 W deg hem'. A 'Distance' field and a search icon are also present.

Windows Taskbar: At the bottom, the Windows taskbar shows the 'start' button, open applications like 'Inbox - Microsoft Out...', '6 Reminders', and 'ElectronicFieldStudy ~...', along with the system clock showing '09:28'.

zdjęcia z bazy danych



ElectronicFieldStudy - [t110.pmi - cag st albans [Jan 04, 2005 15:44]]

File Edit Workspace Annotate Navigate Tools Overlays View Window Help

2.5 meters per p

Enter address

cag st albans

- cag st albans
- Opened Warehouse
- Saint Albans.pmi
- map_25k.pmi
- addresspoint_poi
- topographicarea
- t110.pmi

lokalizacja

dostępne zdjęcia

- UKALBA007006NeighObliq94N_041
- UKALBA007006NeighObliq84E_041
- UKALBA007006NeighObliq73S_041

Name: t110.pmi
Number of Children: 0
Filename: C:\Documents and Settings\cgaunt\My Documents\old d drive\PICOMETRY MARKETING INFORMATION\Pictometry Key Map\St Albans\t110.pmi

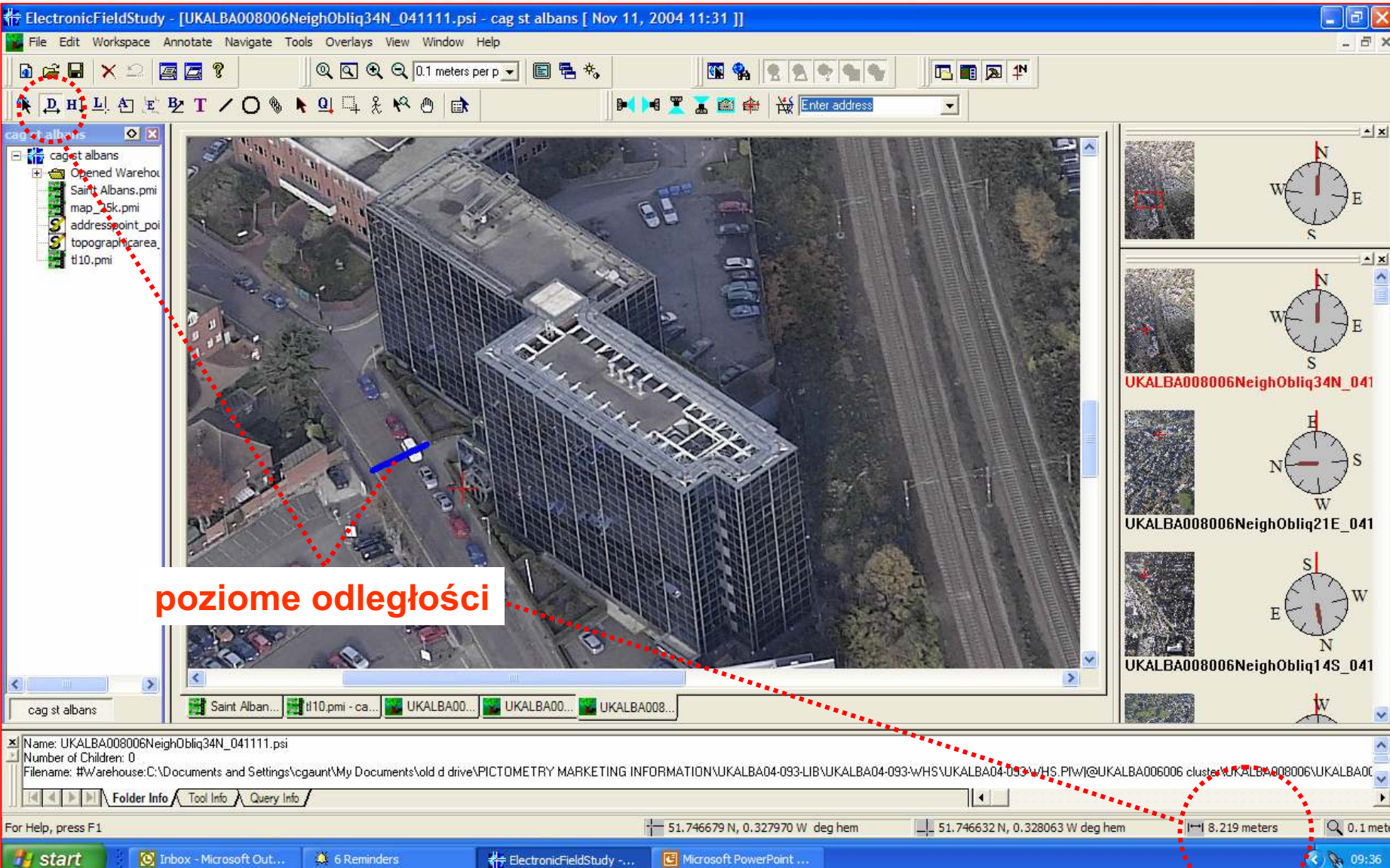
Folder Info Tool Info Query Info

For Help, press F1

51.752240 N, 0.32 Start location for the tool 51.745248 N, 0.328621 W deg hem UKALBA008007CommObliq 2.5 mete

start | Inbox - Microsoft Out... | 6 Reminders | ElectronicFieldStudy -... | Microsoft PowerPoint ... | 09:29

poziome odległości



The screenshot displays the ElectronicFieldStudy software interface. The main window shows an aerial photograph of a large building complex. A blue line is drawn across the image, representing a horizontal distance measurement. A red dotted line highlights the text 'poziome odległości' (horizontal distances) overlaid on the image. The interface includes a toolbar with various tools, a file explorer on the left, and a panel on the right with four orientation diagrams and their corresponding image thumbnails. The status bar at the bottom shows coordinates and a scale of 0.1 meters per pixel.

poziome odległości

UKALBA008006NeighObliq34N_041

UKALBA008006NeighObliq21E_041

UKALBA008006NeighObliq14S_041

Name: UKALBA008006NeighObliq34N_041111.psi
Number of Children: 0
Filename: #Warehouse:C:\Documents and Settings\cgaunt\My Documents\old d drive\PICTOMETRY MARKETING INFORMATION\UKALBA04-093-LIB\UKALBA04-093-WHS\UKALBA04-093-WHS.PIW\@UKALBA006006 cluster\UKALBA008006\UKALBA008006NeighObliq34N_041111.psi

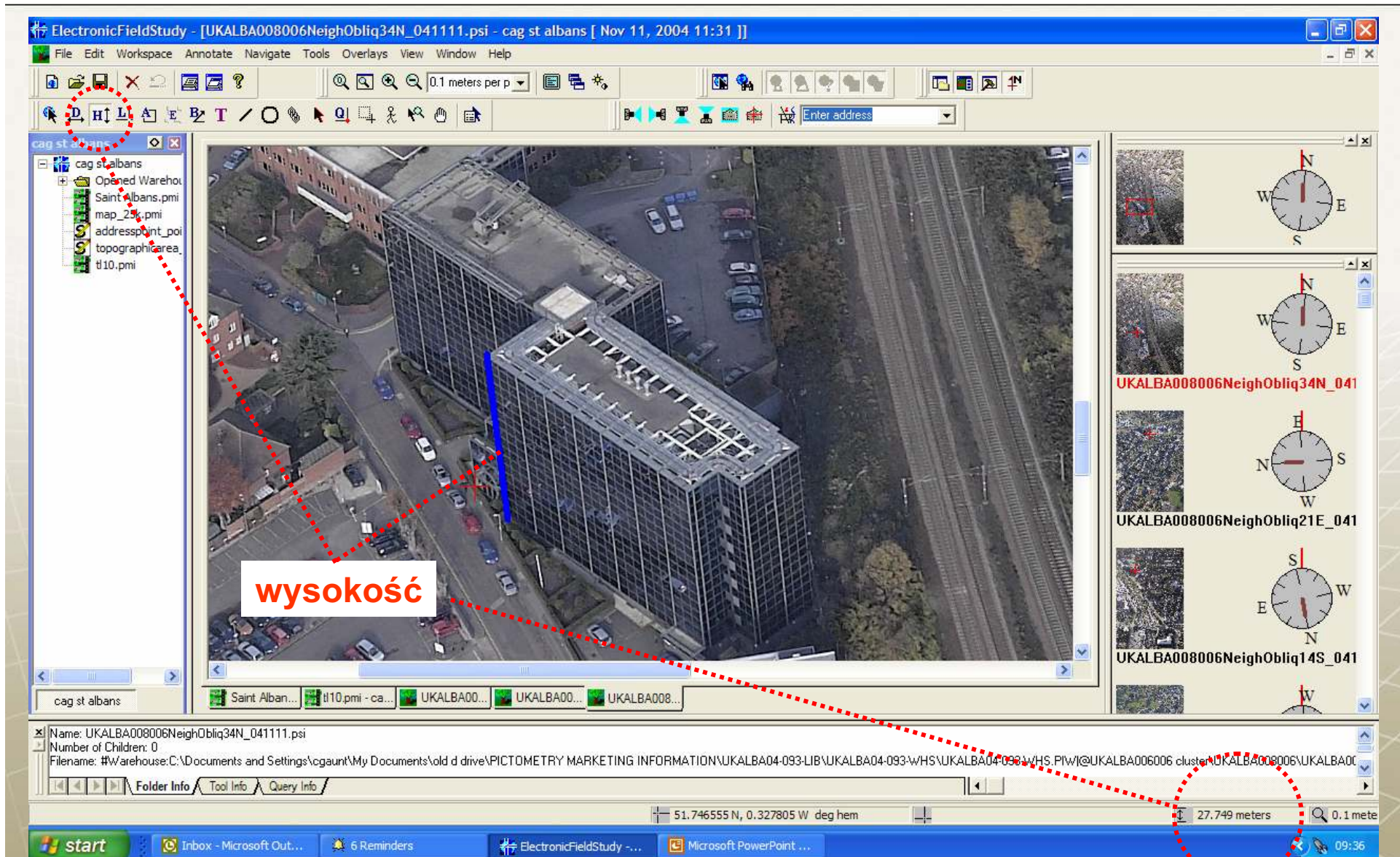
Folder Info Tool Info Query Info

For Help, press F1

51.746679 N, 0.327970 W deg hem 51.746632 N, 0.328063 W deg hem 8.219 meters 0.1 mete

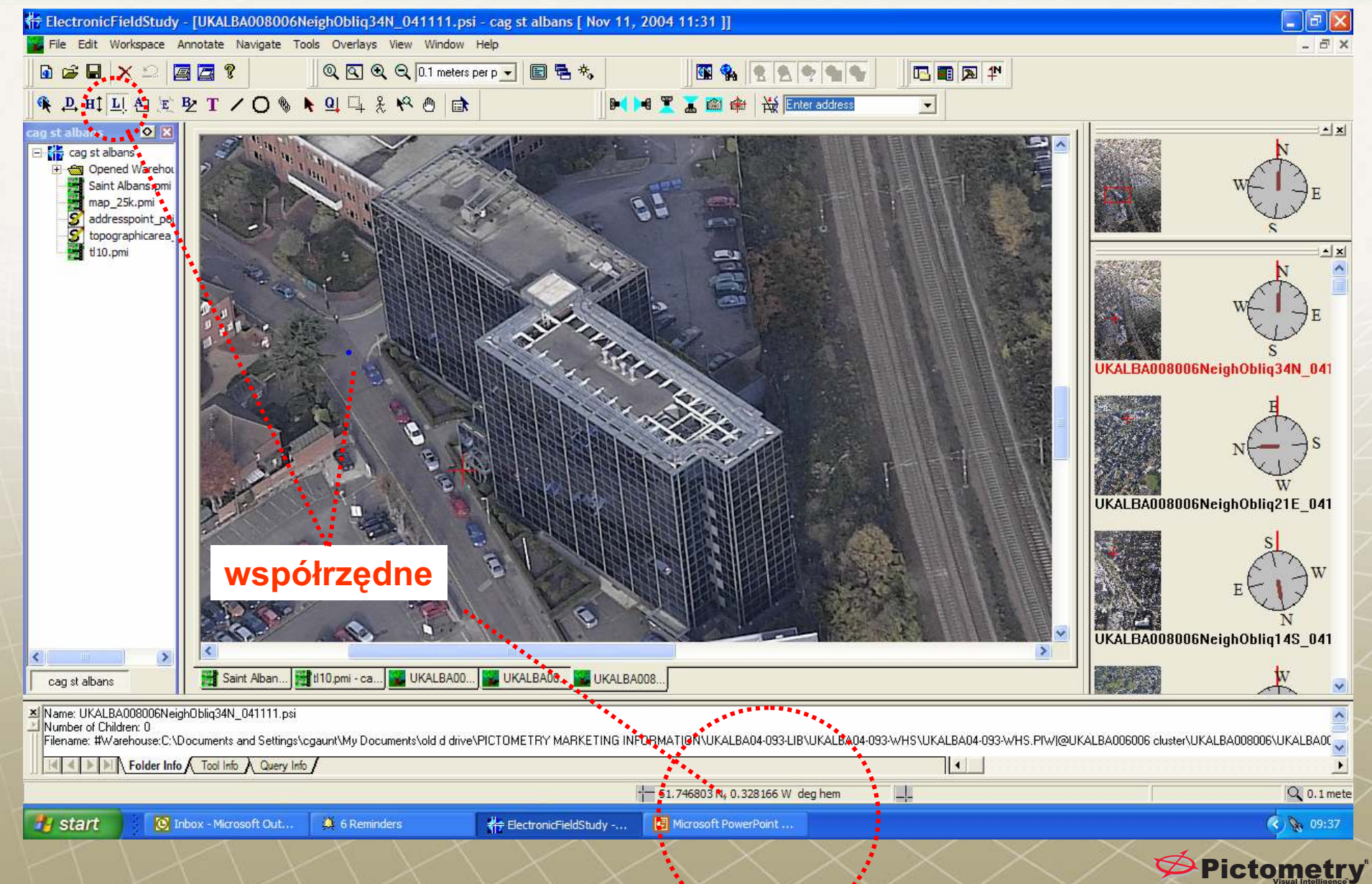
start Inbox - Microsoft Out... 6 Reminders ElectronicFieldStudy -... Microsoft PowerPoint ... 09:36

wysokości



The screenshot displays the ElectronicFieldStudy software interface. The main window shows an aerial view of a large building complex. A blue vertical line is drawn on the building's facade, with a red dashed line indicating its height. A white box with the text "wysokość" (height) is positioned below the line. The software's menu bar includes File, Edit, Workspace, Annotate, Navigate, Tools, Overlays, View, Window, and Help. The toolbar contains various navigation and measurement tools. On the left, a file explorer shows the project structure for "cag st albans". On the right, a vertical list of oblique images is displayed, each with a corresponding compass rose. The images are labeled with IDs such as "UKALBA008006NeighObliq34N_041". The status bar at the bottom shows the current location coordinates (51.746555 N, 0.327805 W) and a distance of 27.749 meters. The Windows taskbar at the bottom shows the Start button and several open applications, including Microsoft Outlook, Reminders, ElectronicFieldStudy, and Microsoft PowerPoint.

współrzędne punktu



The screenshot displays the ElectronicFieldStudy software interface. The main window shows a 3D aerial view of a building complex. A red crosshair is positioned on the building, and a white box with the text "współrzędne" (coordinates) is overlaid on it. The software interface includes a menu bar (File, Edit, Workspace, Annotate, Navigate, Tools, Overlays, View, Window, Help), a toolbar, and a status bar at the bottom showing the current location: 51.746803 N, 0.328166 W deg hem. The status bar also displays the scale: 0.1 meters per p. The software is running on a Windows operating system, as indicated by the taskbar at the bottom.

UKALBA008006NeighObliq34N_041111.psi - cag st albans [Nov 11, 2004 11:31]

File Edit Workspace Annotate Navigate Tools Overlays View Window Help

0.1 meters per p

Enter address

cag st albans

- Opened Warehouse
- Saint Albans.pmi
- map_25k.pmi
- addresspoint.pmi
- topographicarea.pmi
- tl10.pmi

współrzędne

UKALBA008006NeighObliq34N_041

UKALBA008006NeighObliq21E_041

UKALBA008006NeighObliq14S_041

Name: UKALBA008006NeighObliq34N_041111.psi
Number of Children: 0
Filename: #Warehouse:C:\Documents and Settings\cgaunt\My Documents\old d drive\PICTOMETRY MARKETING INFORMATION\UKALBA04-093-LIB\UKALBA04-093-WHS\UKALBA04-093-WHS.PIW\@UKALBA006006 cluster\UKALBA008006\UKALBA008006NeighObliq34N_041111.psi

Folder Info Tool Info Query Info

51.746803 N, 0.328166 W deg hem

0.1 meters per p

start

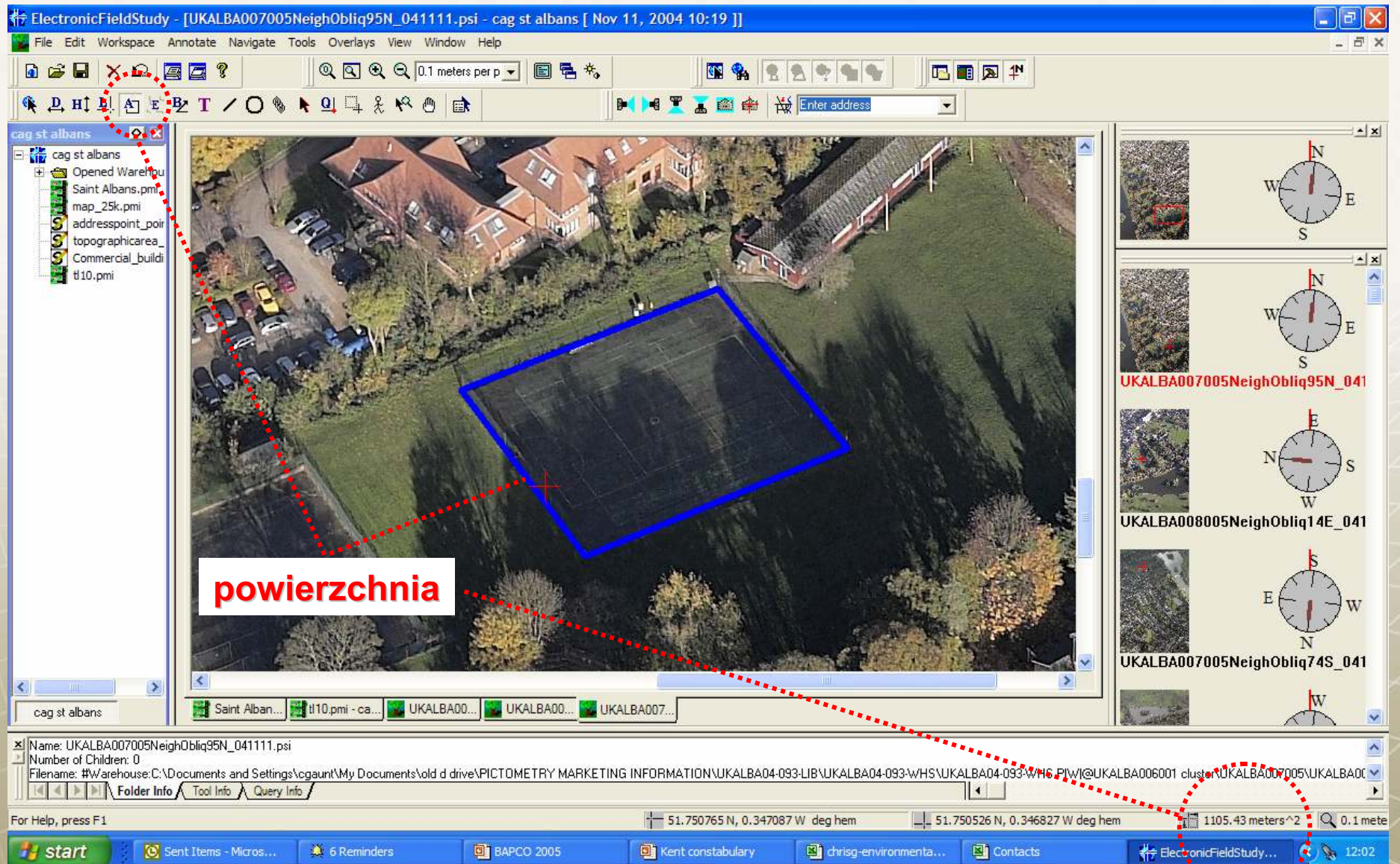
Inbox - Microsoft Out... 6 Reminders

ElectronicFieldStudy - ... Microsoft PowerPoint ...

09:37

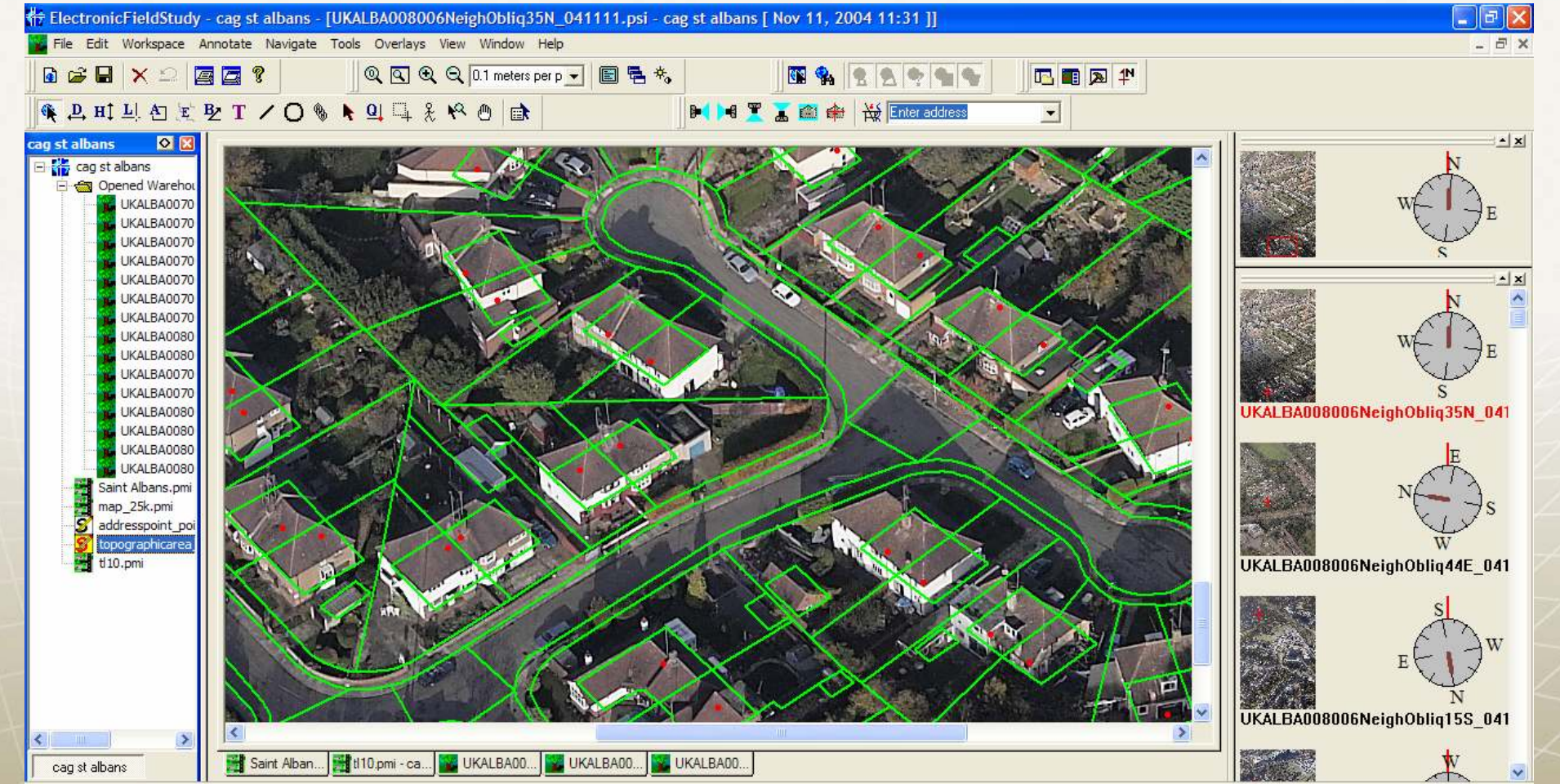
Pictometry[®]
Visual Intelligence

rozmiar powierzchni



The screenshot displays the ElectronicFieldStudy software interface. The main window shows an aerial photograph of a tennis court, which is outlined in blue. A red dotted line highlights a specific area on the court, and a white box with the text "powierzchnia" (area) is placed over this region. The software interface includes a menu bar (File, Edit, Workspace, Annotate, Navigate, Tools, Overlays, View, Window, Help), a toolbar with various icons, and a left-hand panel with a file tree. The right-hand panel contains several small images and compasses, each labeled with a unique identifier such as "UKALBA007005NeighObliq95N_041". The bottom status bar shows coordinates (51.750765 N, 0.347087 W) and a scale of 0.1 meters per pixel. The Windows taskbar at the bottom shows the start button, several open applications, and the system clock (12:02).

jako podkład danych z GIS'u



The screenshot displays the ElectronicFieldStudy GIS application interface. The main window shows an aerial photograph of a residential area with green polygon overlays representing property boundaries or measurement areas. The interface includes a menu bar (File, Edit, Workspace, Annotate, Navigate, Tools, Overlays, View, Window, Help), a toolbar with various navigation and editing tools, and a status bar at the bottom showing coordinates and scale.

On the left side, a panel titled "cag st albans" lists several data layers, including "UKALBA0070", "UKALBA0080", "Saint Albans.pmi", "map_25k.pmi", "addresspoint_poi", "topographicarea", and "tl10.pmi".

On the right side, there are four small inset windows, each showing a compass rose and a small aerial view. The windows are labeled with IDs: "UKALBA008006NeighObliq35N_041", "UKALBA008006NeighObliq44E_041", and "UKALBA008006NeighObliq15S_041".

At the bottom, a status bar displays the following information: "Name: topographicarea_area", "Number of Children: 0", "Filename: C:\Documents and Settings\cgaunt\My Documents\old d drive\PICTOMETRY MARKETING INFORMATION\DemoMoved\OS St Albans\topographicarea_area.shp", "Folder Info", "Tool Info", "Query Info", "51.745599 N, 0.324842 W deg hem", "51.746134 N, 0.323815 W deg hem", "UKALBA009007CommObliq", "0.1 mete", and "09:50".

Jak skorzystać z danych Pictometry?

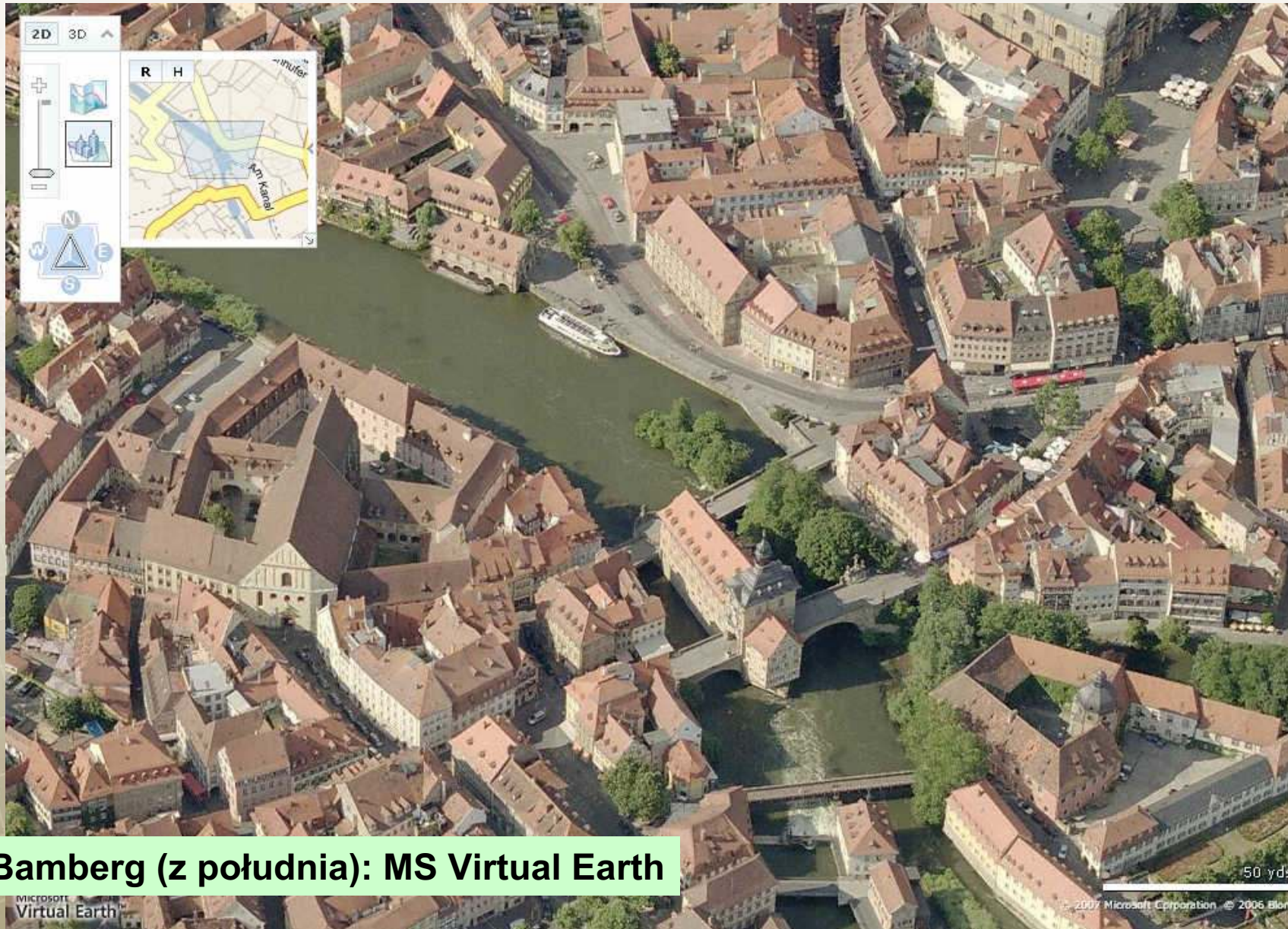


1. Przy zakupie bazy danych: bezpłatny Viewer EFS
2. Instalacja PlugIn do wielu systemów GIS (bezpłatna):
 - ArcGIS
 - Intergraph Geomedia
 - MapInfo
 - AutoCAD
 - ???
3. Microsoft Virtual Earth
4. WebProvider (Yellow Pages), Web reseller
5. na PND
6. ???????

Juz istniejące rozwiązania

(Czemu to wogóle służy ???)

Bamberg, MS VE



Bamberg (z południa): MS Virtual Earth

Firma Geocontent: Map Server



GeoTools by GeoContent @ Pictometryservice - Microsoft Internet Explorer

Adresse <http://www.gis4web.de/geotools/pictometry.php>

GeoContent GmbH
DATA | SYSTEMS | SOLUTIONS

PICTOMETRY VIEWER
Die hier dargestellten Bild-
daten sind urheberrechtlich
geschützt. Jedwedes Kopieren
und speichern ist untersagt.

Coordinate Input
X / Lon: Y / Lat:

Address Geocoding
Straße: Hnr. /
PLZ: Ort:

Aerial Overview

Pictometry Status
Next Image

Point of view
W N O
S
Current scale

100%

MapServer partnera
Geocontent
w Magdeburgu

patrz:
www.mypictometry.de

Type: Oblique from South
SOUTH

Type: Oblique from East
EAST

Type: Oblique from North
NORTH

Type: Oblique from West
WEST

Navigation and Location Based Service NLS



PND firmy BLOM:
3D Photonav



Yellow Pages



GULE SIDER Gule Sider@ Telefonkatalogen™ Nettsøk **Kart** Produktsøk [Flere tjenester](#) [Min Side](#) | [Logg inn](#)

Sted/Kjørerute Firma Person

Finn sted eller adresse:

Dronning Mauds Gate 3
0250 Oslo

Kjørerute

Start
Adresse, sted eller tlf [Opp](#) [Ned](#) [Slett](#)

Stopp
Adresse, sted eller tlf [Opp](#) [Ned](#) [Slett](#)

+ [Legg til via punkt](#) ↻ [Snu kjørerute](#)

[Rettingheter](#) | [Kartsymboler](#) | [Utenlandske karttjenester](#) | [Oversikt over områder med flyfoto](#) | [Historiske flyfoto](#)

3D modele miast



Lipsk w technologii LandExplorer



Sluzby specjalne:
już istniejące zastosowania
i
idee

straż pożarna, szybka pomoc



- Jak dojechać na miejsce wypadku czy pożaru?
- Jaki jest dostęp do budynku?
- Jaka jest wysokość?
- Jaki ma dach, w jakim jest stanie?

milicja



1. Śledzenie lub zrekonstruowanie drogi którą przebył przestępca
2. Dokumentacja miejsca wypadku lub akcji

centrale Command & Control milicji



Image 9: Steuben County, NY 9-1-1 Center's oblique aerial imaging and mapping systems. (Image courtesy of Steuben County and Russ Russell, 2005)

er. (Image courtesy of Steuben County and Russ Russell, 2005)

- organizacja i prowadzenie akcji milicji
- telefony pomocy „911“

istnieje kilka kompleksowych rozwiązań:

- Intergraph/Dispatcher (milicja Krakowska!)
- firmy ESRI

Serdecznie dziękuję za uwagę!

Dr. Klaus-Dieter Hanemann

Blom Deutschland GmbH

Sales & Marketing

Fr.-Engels-Ring 48A

17033 Neubrandenburg

k.hanemann@blom-deutschland.de

+49 / 173 / 70 85 753