

FIG COMMISSION 7 - Annual Meeting 2004

Clermont-Ferrand, France
8 - 14 September 2003

Industry Trends and Innovation

Presenters: Pierre le Roux
Bruce Hall



International Federation of Surveyors
Fédération Internationale des Géomètres
Internationale Vereinigung der Vermessungsingenieure
FIG COMMISSION 7
Cadastre & Land Management

INTERGRAPH

Who is Intergraph ?



- § *Since 1969, Intergraph has been a pioneer of end-to-end computer graphics, mapping technology and geospatial information management solutions.*
- § Solutions enable customers to organize complex data into understandable visual representations.
- § Publicly Traded Company: NASDAQ Symbol: INGR
- § *Our solutions are a combination of software products, specialized Z/I hardware and professional services.*
- § *We have successfully transitioned from being a vendor of proprietary GIS systems to open geospatially enabled solutions.*

Intergraph Overview



Intergraph has four divisions and each is recognized as a leader in their respective industries.

Operations in more than 60 countries



Public Safety



Solutions Group



Process, Power & Marine



Mapping & Geospatial Solutions





Stock Price Appreciation Since January 1, 2001: 242%^[1]

**Strategy to
improve operating
margins within
core operations**

+ Strong balance sheet

+ Diversified revenue streams

+ Litigation upside potential

**= Solid Investment
Opportunity**

[1] As of February 26, 2004

Land Information Management Solutions



Citizens / Customers / Consumers / Service Providers / Industry

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Regional & Local Government

- Assets
- Property

National & Federal Government

- Land
- Cartography

Intergraph technology has been selected by:

- § 30 of the top 35 Fortune Global 500 chemical, petroleum & pharmaceutical companies
- § Public safety agencies protecting hundreds of millions of the world's population
- § 39 of the 50 state departments of transportation in the United States
- § National, regional and local governments in 80% of the world's largest countries

- Management
- Distribution

Commercial Remote Sensing & Photogrammetry

- Assets
- Mobile
- Rail and Airports

Transportation

Citizens / Customers / Consumers / Service Providers / Industry

Trends...

– Sustainable Land Administration Infrastructures & Policy Frameworks

- Technical & Political
- Formal/Informal
- Rural / Urban
- Resistance against “Imported” Solutions

– Business Process & Organizational Reengineering driving:

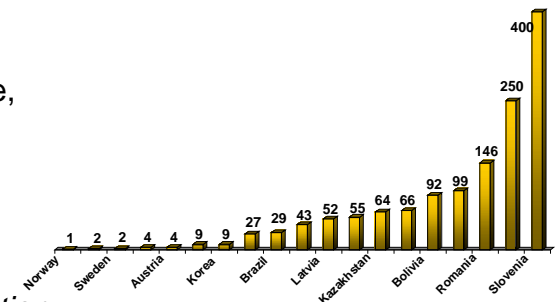
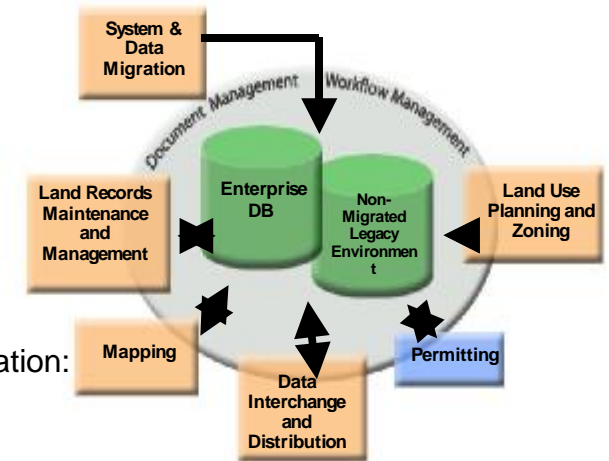
- Inter-organizational cooperation, workflow integration & process automation:
 - State – Province - Municipality
- Data warehousing and integration with other databases/systems.
- Data and Application Interoperability
- Flexible multipurpose LIM Infrastructures
- Recognition that certain legacy aspects are here to stay (paper documents)
- Utilization of Industry Templates and Data Models

– Customer Service and Satisfaction

- Service Provision: Integrated information delivery and availability anywhere, anytime
- “Single Agency” and One-Stop eGovernment Models

– Public Sector ROI

- Inter-country & Regional Competition for Foreign Investment
- Stovepipe Solutions and re-engineering projects : Disconnects & Coordination



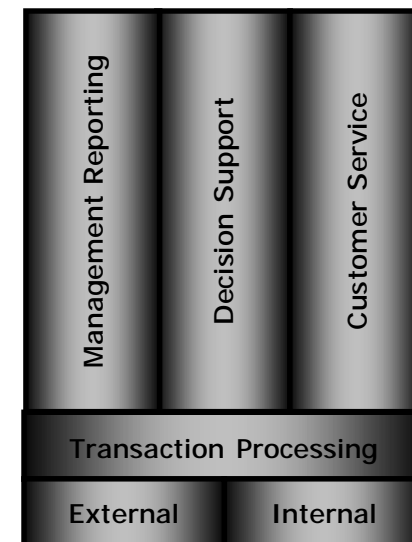
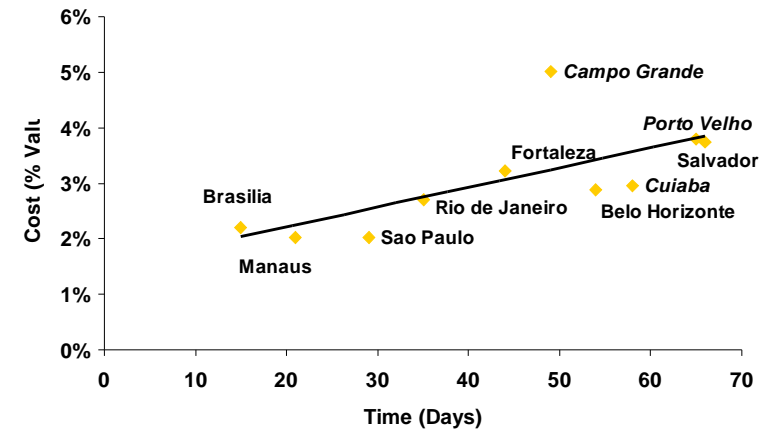
Land Information & Administration Today



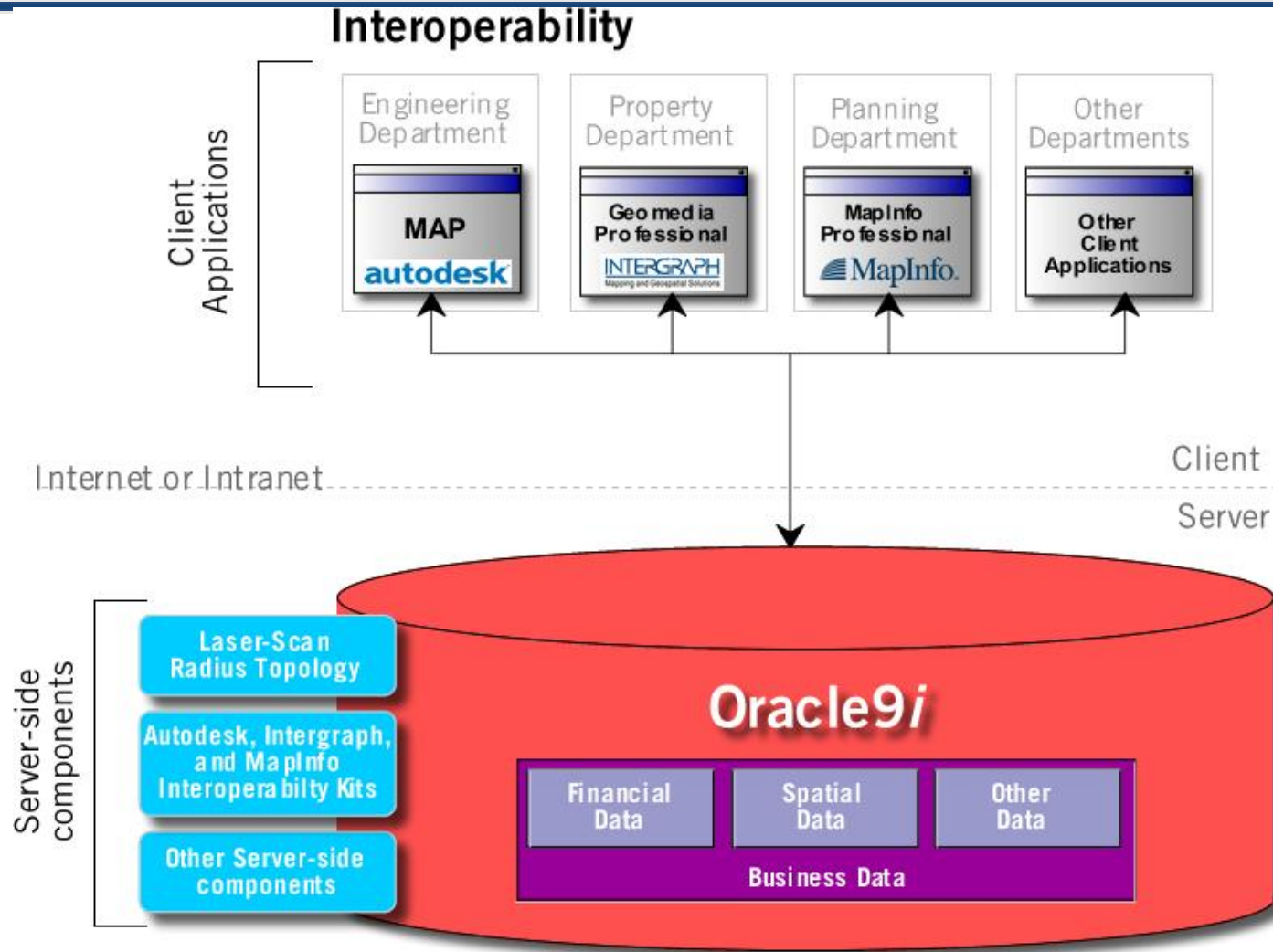
Innovation



- § Open Interoperable Systems
- § Mainstream Information Technology
- § Sustainable Solutions
 - Easy-to-use: Adapted to user sophistication levels
 - GeoMedia Parcel Manager
 - Minimize Cost of Ownership
 - Expanded Benefits and ROI
- § Intelligent Enterprise Access
- § Focus on Distributed Enterprise Operations
 - Spatial Integration with Enterprise Applications
 - Focused & Robust Industry Solutions
- § Extensible Standardization
 - Industry Templates & Data Models
- § Benchmarking



Oracle Interoperability Initiative



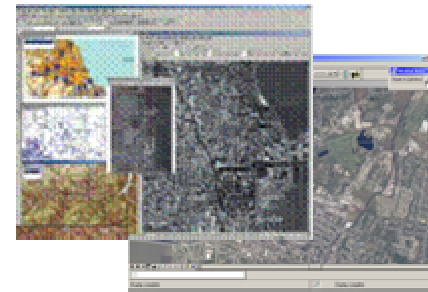
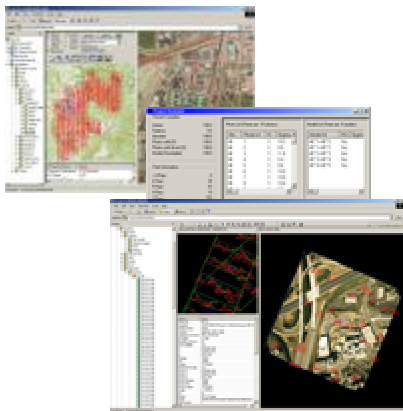
Terrashare – Image Management & Distribution on multiple systems



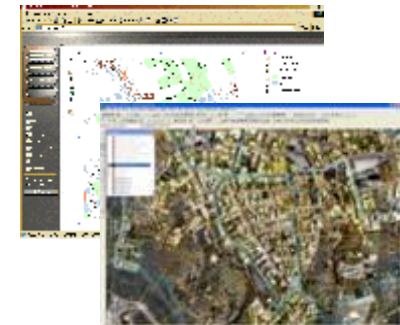
Geospatial Intelligence
Geospatial Data Management

Enterprise
Image
Management

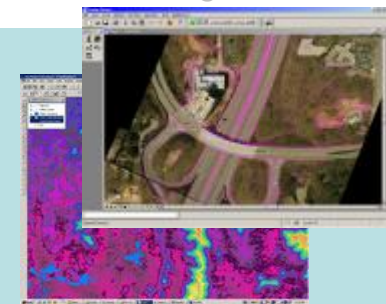
Photogrammetry
Production



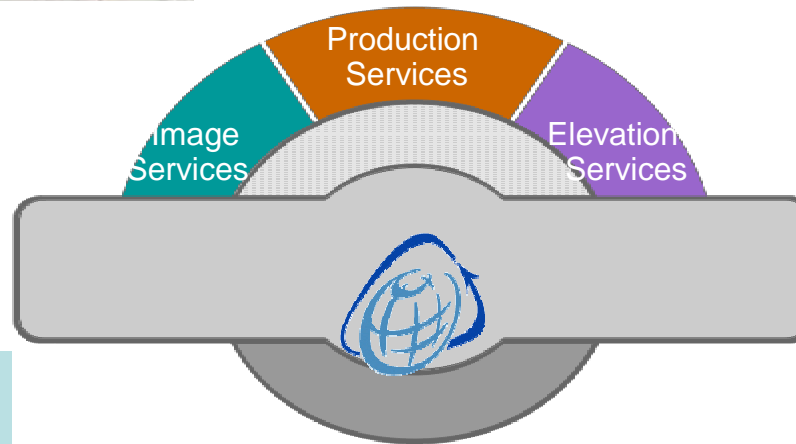
Land Information
Management



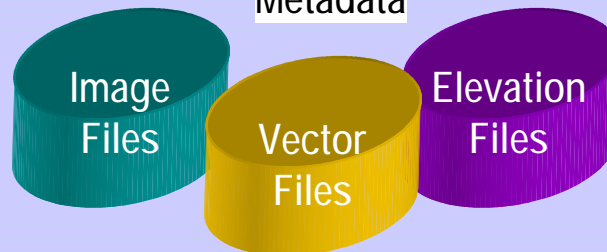
Geospatial
Infrastructure
Management



Acquisition



Metadata



GeoMedia Web Services



§ GeoMedia WebMap – *Making Standards a reality*

- Includes set of Web Services
 - Web Map Service (WMS) - implementing OGC Standards
 - Web Feature Service (WFS) - implementing OGC Standards
 - Spatial Analysis, Routing, Geocoding
- Ready to be integrated with customer applications and data
 - Desktop, web or mobile devices



Transaction Management, Effective Dating and Lineage



- § Systems Integration
 - Appraisal and Assessment
 - Land Administration
 - Other
- § History
 - Past
 - Present
 - Future

The screenshot displays a GIS application interface. At the top, there is a 'MapWindow1' window showing a map of a residential area with various colored polygons and lines. A legend on the left lists several layers, including 'Lineage Tree (5)', 'PPD.TAX_LINK_CPT (63)', 'PPD.TAX_BOUNDARY (222)', 'PPD.TAX_AREA (81)', and various 'LTT' (Lineage Tree Table) layers. A 'Lineage Tree' window is open on the right, showing a tree structure for a specific parcel (2004122) with child nodes 2004078 and 49328. Below the map is a 'DataWindow1' window titled 'Lineage Tree Query' containing a table with the following data:

EFFECTIVEDATE	MAINTENANCESTATE	GMD_TABLE	PID	TOTAL_ASMT	OWNER	ADDRESS
12/01/8999 12:00:00 AM	A	407	8007072800	176200	DENNING ROBERT h	4033 GREYSTONE C
5/1/2003 12:00:00 AM	I					
5/1/2003 12:00:00 AM	I	209	8008339000	142800	ALTEC INDUSTRIES	210 INVERNESS CEI
5/1/2003 12:00:00 AM	I					
5/1/2003 12:00:00 AM	I	209	8008339000	142800	ALTEC INDUSTRIES	210 INVERNESS CEI

Post-Conflict Land Reform

- Solution
 - Location-enabled, real-time mobile solution maximizes organizational access to geospatial data to streamline demining activities.
 - OGC Compliant to interfaces geospatial databases.
 - Interfaces with internationally respected National Defence Mine/countermine Information Centre (NDMIC) database.
- Information can be integrated with Land Information Management Systems.
- DND/CF Canada
 - Intergraph
 - GeoPatrol



Conclusion: Coordination and Pragmatic Approaches towards LIM

