



The Geospatial Managed Environment

Oscar Custers



What will we do?

- Market Position Bentley Geospatial
- Vision Bentley Geospatial Management
 - What is the vision?
- Demonstration
 - As per illustration



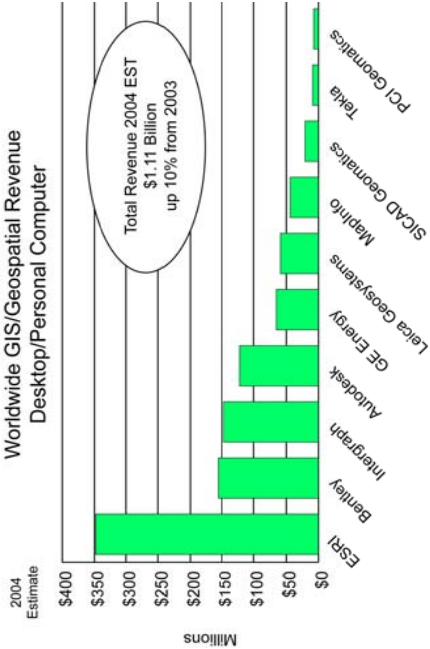
Daratech Report Leadership in GIS

- Bentley has reported revenue to Daratech for the years 2004 and 2005...
- Daratech reports...

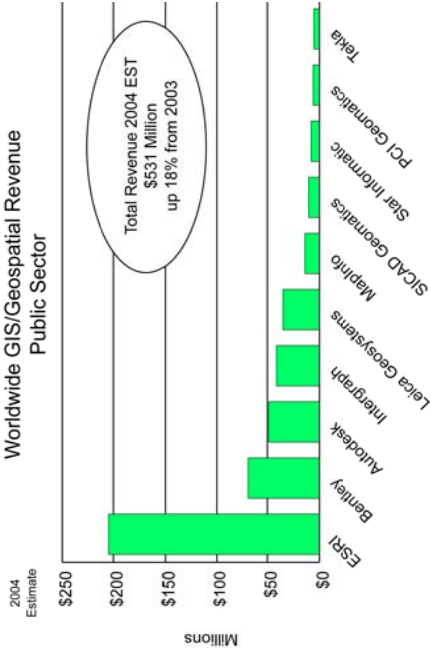
Software comprised over one-half of total revenue, with revenues from GIS software vendors reaching \$1.5 billion. **Leading the market in software revenues** were Environmental Systems Research Institute, Inc. (ESRI), Bentley Systems, Incorporated and Intergraph Corporation. Together, the **three companies accounted for about half** of the industry's total software revenues. Other software leaders included Autodesk, Inc., Leica Geosystems, GE Energy, MapInfo, MacDonald Dettwiler, SICAD Geomatics, and LogicaCMG.



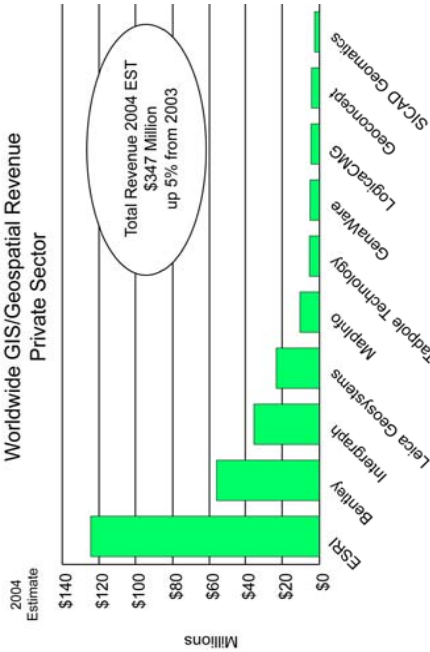
Software Revenue
Worldwide GIS/Geospatial Revenue
Desktop/Personal Computer



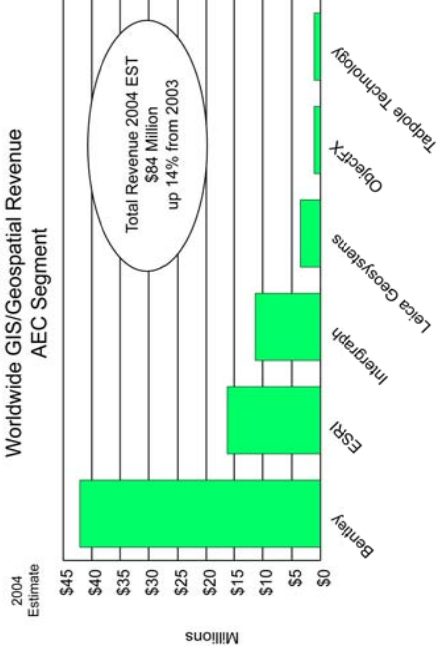
Software Revenue
Worldwide GIS/Geospatial Revenue
Public Sector



Software Revenue
Worldwide GIS/Geospatial Revenue
Private Sector



Software Revenue
Worldwide GIS/Geospatial Revenue
AEC Segment



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GIS 2004.41.0606.0



Vision & Interpretation



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Bentley's vision and interpretation

Four pillars for Bentley Geospatial

1. Federated Data Management
2. Geospatial Managed Environment
3. Interoperability
4. Scalable architecture



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Federated Data Management

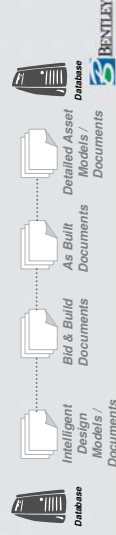
- Infrastructure assets are particularly difficult to manage
 - Because of long lifecycles (50 - 75 years). The assets are constantly being worked and re-worked with increasingly smaller budgets.
 - Disaster Management and Terrorism Prevention have put increased requirements on infrastructure asset management.
- The most detailed information on the asset lives in the Design Documentation that was used to build it.
- Design Documentation is still overwhelmingly "document" based - Maps, Models, Drawings, Specifications, Schedules - and often dispersed.



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Federated Data Management

- One holistic lifecycle for Integrated Data Management
 - Control over workprocesses
 - Management and spatial indexing of (geo-) file formats
 - Storage of data in (enterprise) data stores



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Geospatial Managed Environment

- Supporting the entire Lifecycle
 - Editing Data
 - › Technically advanced, high precision 'engineering' solution for all departments in 2D and 3D (create, modify, analyse, plot, mobile management)
 - Management of Data & Applications
 - › Geospatial data management to support the cooperation between departments (manage, archive, exchange, integrate, datastores, workflow management)
 - Publishing/Use of Data
 - › Share (internal) and distribute (extern) of information by map plotserver- and webtechnology



Geospatial Managed Environment



Interoperability

- In general
 - Support of (open) standards and technology
 - > PDF: integration in 2D, 3D and animations
- At several levels
 - Between various (technical) disciplines
 - Within the entire organisation
 - > Integration with enterprise systems as SAP, ESRI ArcSDE, Oracle 9i and 10g
 - Between organisations
 - > Exchange between open and closed formats (DGN XFM, DWG, MXD, GML)
 - > Access to 'Open' Geospatial content by web-services (WMS, WFS, SOAP) and i.e. Google Earth (KML)

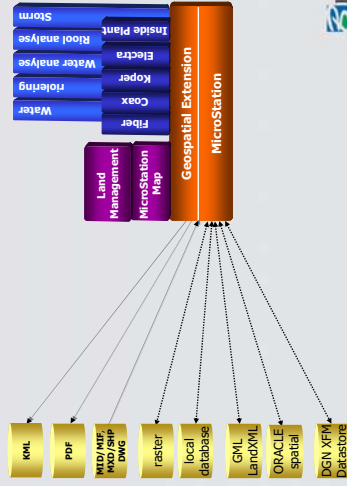


Scalable architecture (SDI)

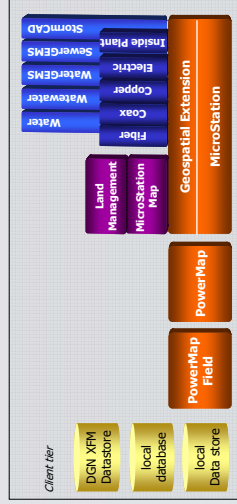
- Solutions from 'small to large'
 - Windows client (desktop)
 - > Technically advanced, high precision design and GIS solutions (2D and 3D) for use at desktop and tablet PCs
 - Database centric (two tier)
 - > Direct integration with data stores
 - Client/server (file based)
 - > 'Geospatial' data and workflow management at the server (Enterprise GIS)
 - Multi-tier
 - > Integration with enterprise systems, data stores, plotterservices, and web publishing applications (E-GIS)



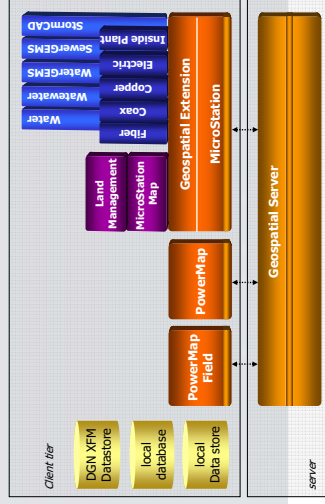
Desktop Applications



Desktop Applications

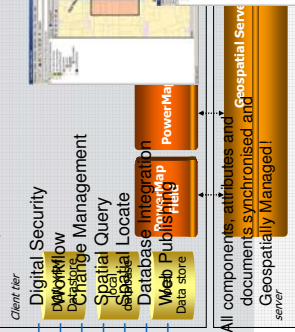


Client / server

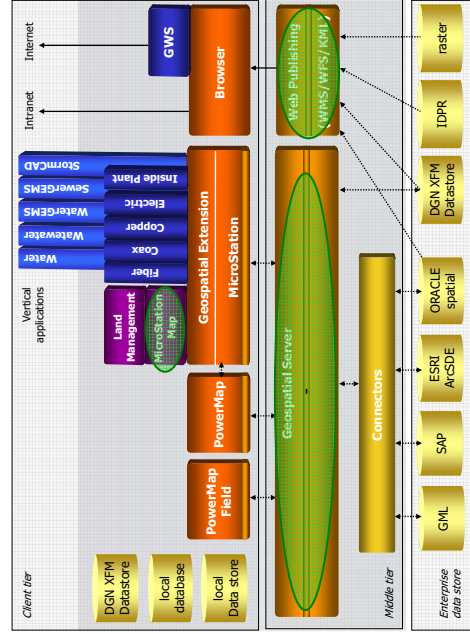
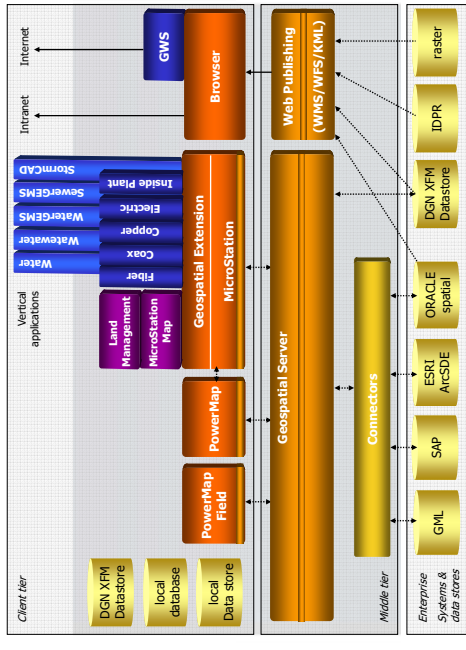


Client / server

The Geospatial Server...



All components, attributes and documents synchronised and Geospatially Managed!



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Any questions?

• Contact: Oscar.Custers@Bentley.com

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Thank You

