Insomniac Games/Sony Computer Entertainment

# New FDO Data Providers and Maestro

OSGeo
Your Open Source Compass


Geoff Zeiss
Director of Technology


INTERGEO®
Conference and trade fair for geodesy, geoinformation and landmanagement
Bremen, September 30th to October 2nd, 2008

Image courtesy of Magna Steyr Design

Images created in 3ds Max®, Maya®, and AliasStudio™

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# Open Source Geospatial Foundation

## Web Mapping

deegree
Mapbender
MapBuilder
MapGuide Open Source
MapServer
OpenLayers

## Geospatial Libraries

FDO
GDAL/OGR
GEOS
GeoTools

## Desktop Applications

GRASS GIS
OSSIM
Quantum GIS
gvSIG

## Metadata Catalog

GeoNetwork

- Interoperability
- FDO Architecture
- New FDO Data Providers
- New Open Source Development Tool: Maestro

# Challenge: Interoperability

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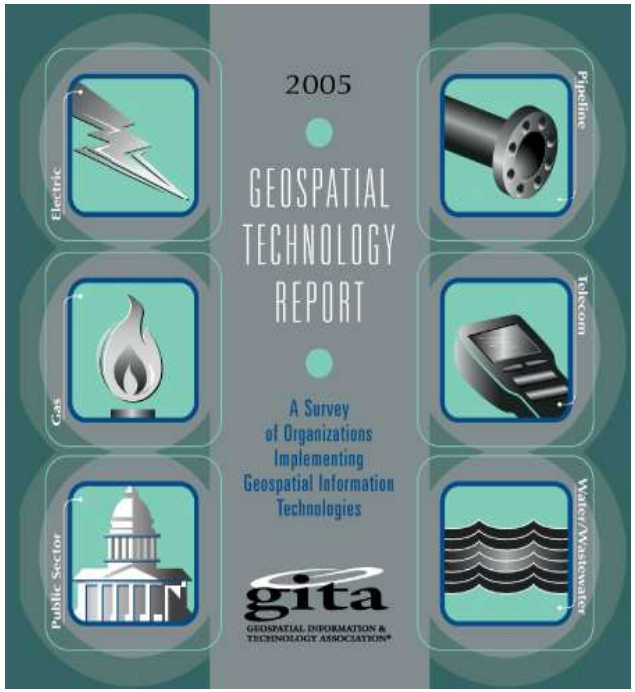
# Challenge:
# Interoperability

## *GITA Annual Technology Survey*




| Year | Number of utilities surveyed | Proportion with more than one GIS |
|---|---|---|
| 2002 | 187 | NA |
| 2003-2004 | 204 | 1/3 - 1/2 |
| 2005 | 294 | 60% |
| 2006 | 386 | 70% |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# Challenge: Interoperability

# Architectures for Interoperability

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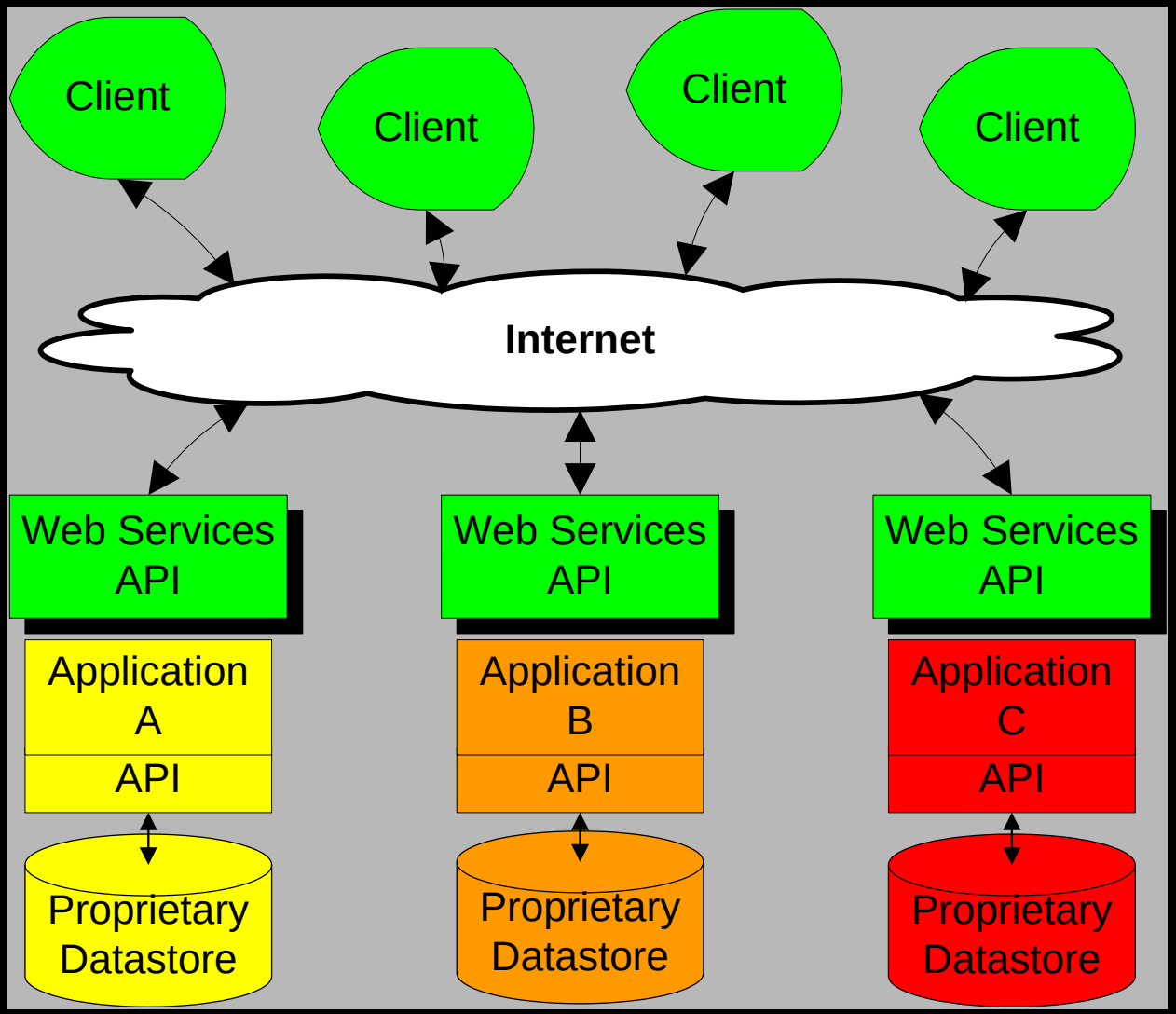
# Loosely Coupled

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# Open Web Services

Open Protocols

- HTTP, HTML, XML (W3C)
- SOAP, WSDL, UDDI (W3C)
- REST
- Javascript (ecma)

Open Spatial Web Services (OGC)

- WMS
- WFS
- GML

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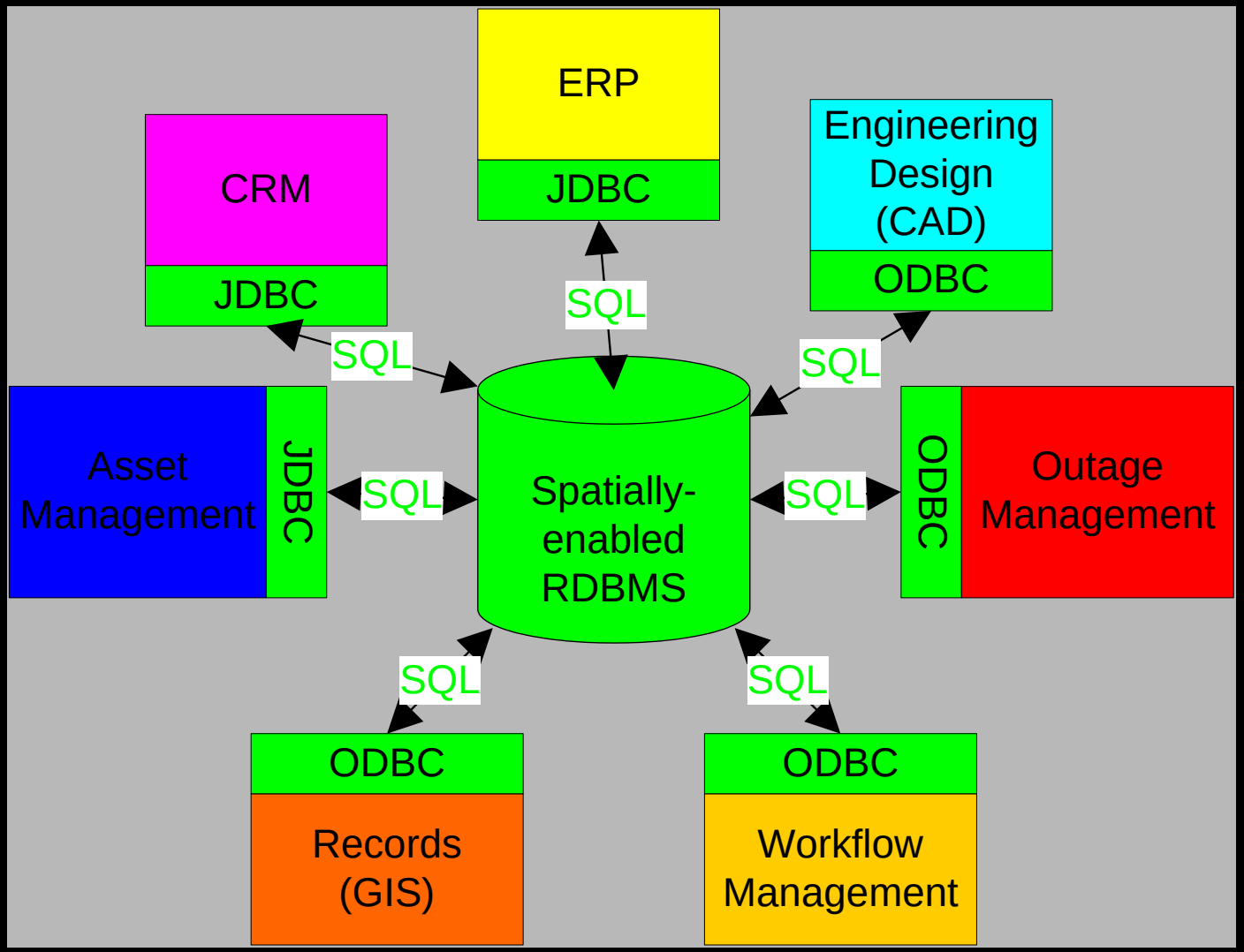
# Tightly Coupled

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# OGC Simple Feature Spec for SQL

OGC SFS

- Points, lines, closed polygons,…

OGC SFS Extensions (Adopted 2007)

- Cartographic text

Future ?

- Feature Stylization
- Metadata
- Linear topology
- Polygon topology
- Linear referencing systems
- Long transactions

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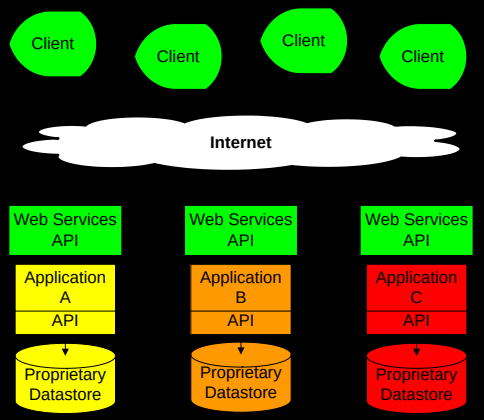
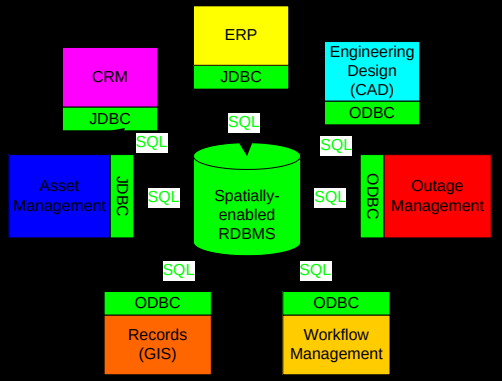
# Alternatives for Interoperability

- Loosely coupled
  - Web access to existing(legacy) data sources




- Tightly coupled
  - *Single point of truth*
  - High performance
  - Spatially-enabled RDBMS

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# Open Source Platform for Interoperability

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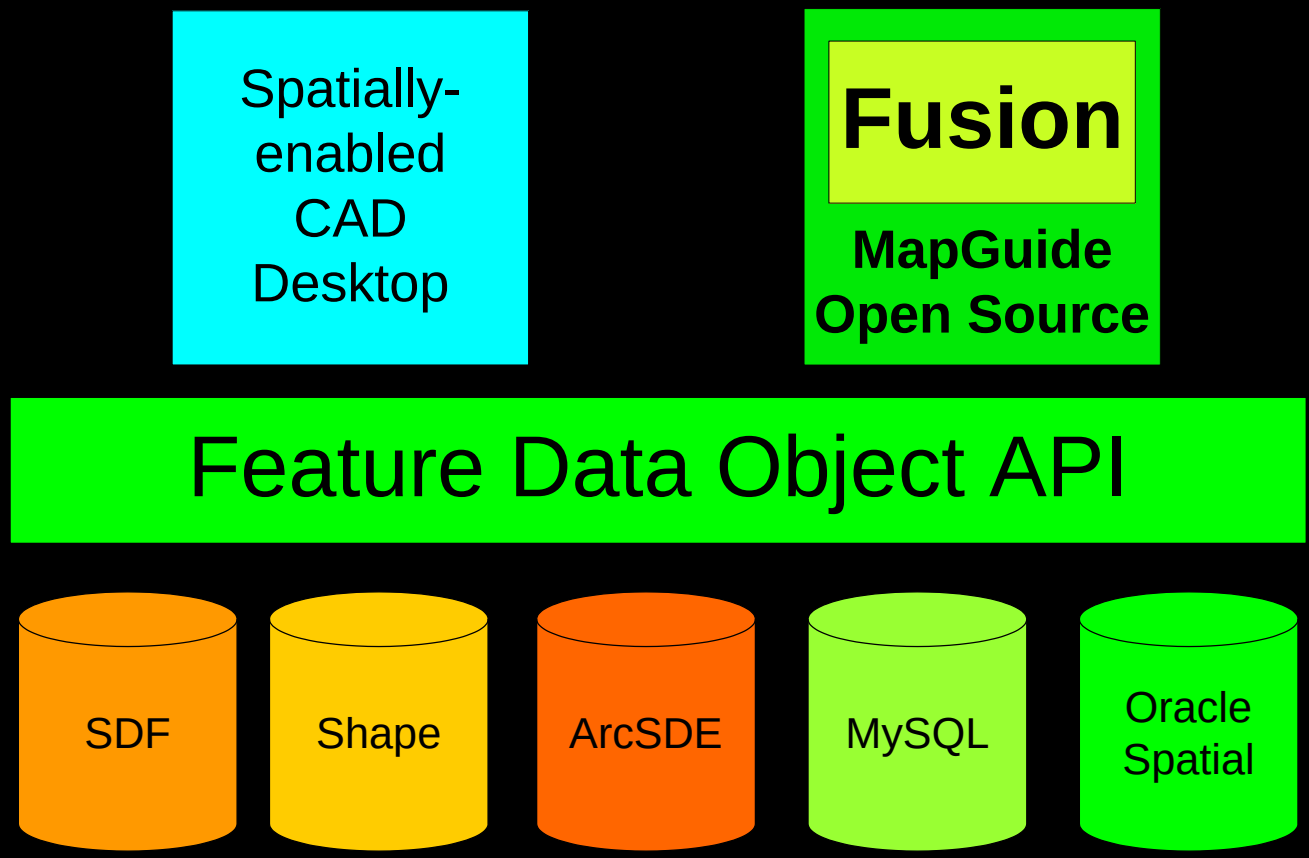
# Open Source Mapping Platform for Data Sharing



# MapGuide OS and FDO Statistics

March 2006 to June 2008

- **MapGuide OS**
  - 74,000 source code downloads
- **FDO**
  - 44,500 source code downloads
  - Many data providers developed by 3rd party contributors

# Autodesk Contributions to OSGEO

MapGuide Open Source Web Mapping Platform

mapguide.osgeo.org

FDO
Data Access Technology

fdo.osgeo.org

Coordinate System Library

metacrs.osgeo.org

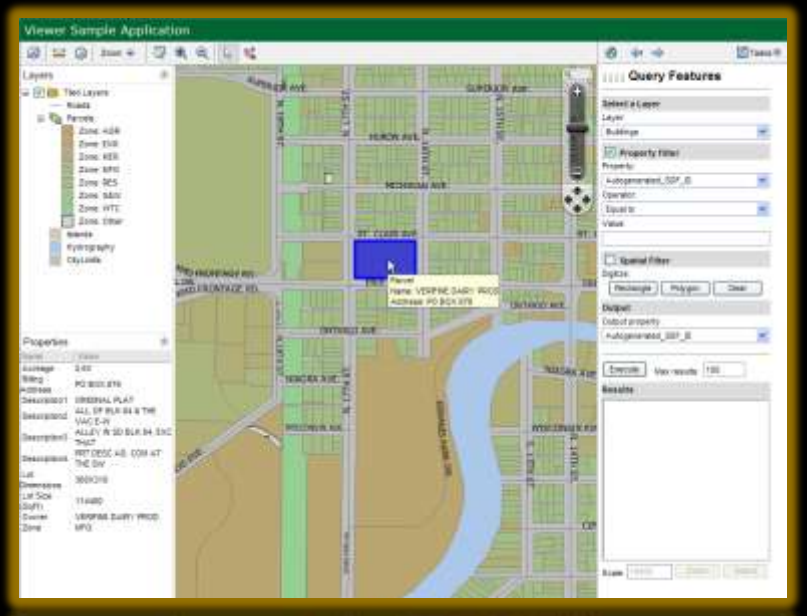
- 3 Autodesk contributions
- Community contributions
- Unlocking Spatial data access and democratizing coordinate system library

- Free Source Code
- Free Documentation
- Multiple APIs: .Net, C++, PHP, Java

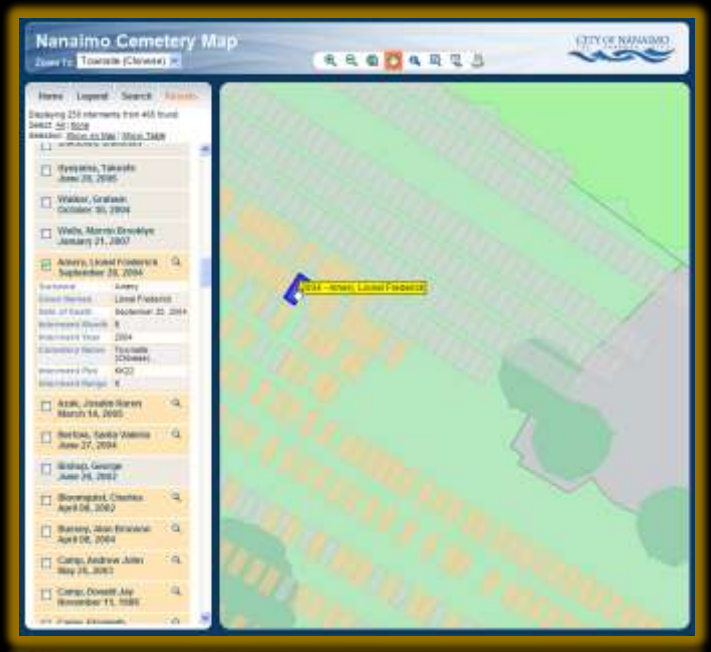
# FUSION

- Customizable library of web mapping tools and controls
- Created through open source
- Developed by DM Solutions

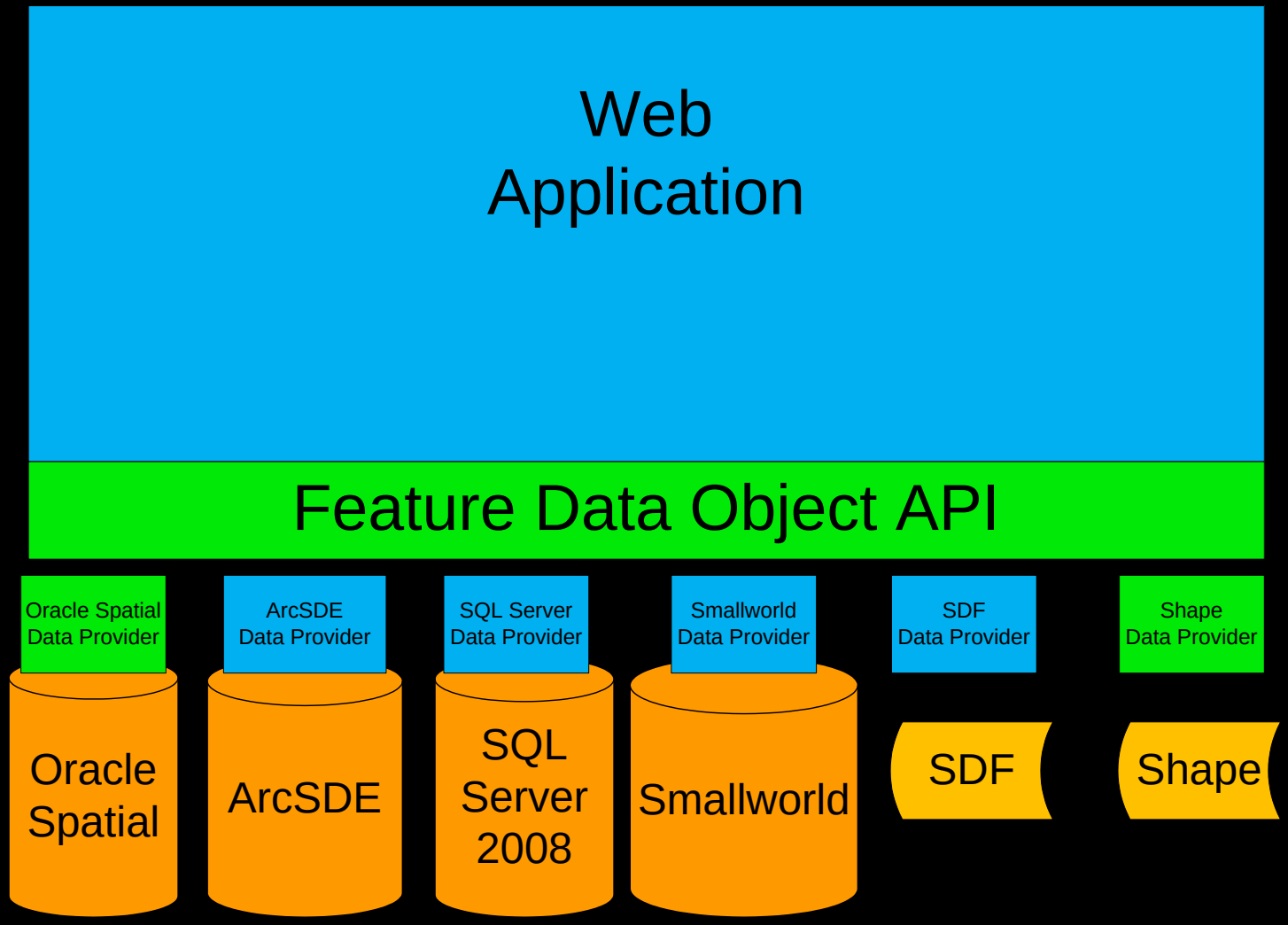
MapGuide Open Source layout…




… and with Fusion



# Feature Data Object API

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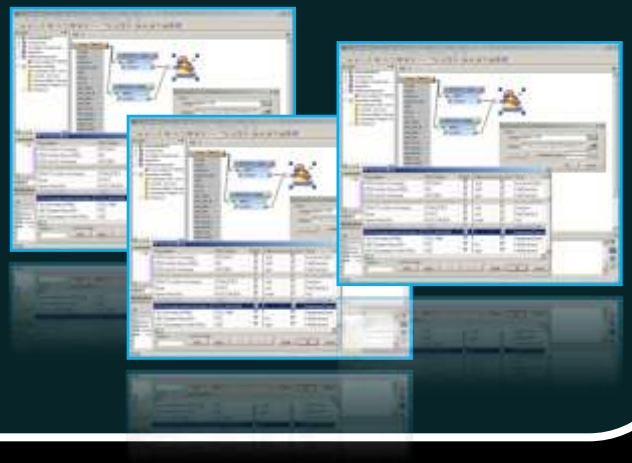
# FDO: Geospatial Data Access Technology

Autodesk Products

3rd Party Solutions



## Autodesk Certified Providers

## Providers from 3rd Party & Open Source

**Providers supporting multiple formats**

- ODBC — MS Access, Excel and Oracle
- Raster — 15+ raster formats
- ArcSDE — Oracle and SQL-Server
- 150+ vector and raster formats
- OGR — 25+ vector formats
- GDAL — 25+ raster formats

**Providers supporting single format**

- SDF
- SHP
- WMS
- WFS
- SQL Server 2005
- ORACLE
- MySQL
- SQL Server 2008
- GE Energy Smallworld
- PostGIS
- SuperMap
- ORACLE
- IBM Informix Dynamic Server
- SQL Server 2005
- KML

Autodesk Geospatial

# New FDO Data Providers

- Announced yesterday at FOSS4G Capetown
- Autodesk FDO Providers
  - FDO Data Provide for GE Smallworld
  - FDO Provider for Microsoft SQL Server 2008
    - Will be available as open source project on OSGEO
- Community FDO data providers
  - IBM Informix
  - KML
  - PostGIS

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# Web Application Development Tools

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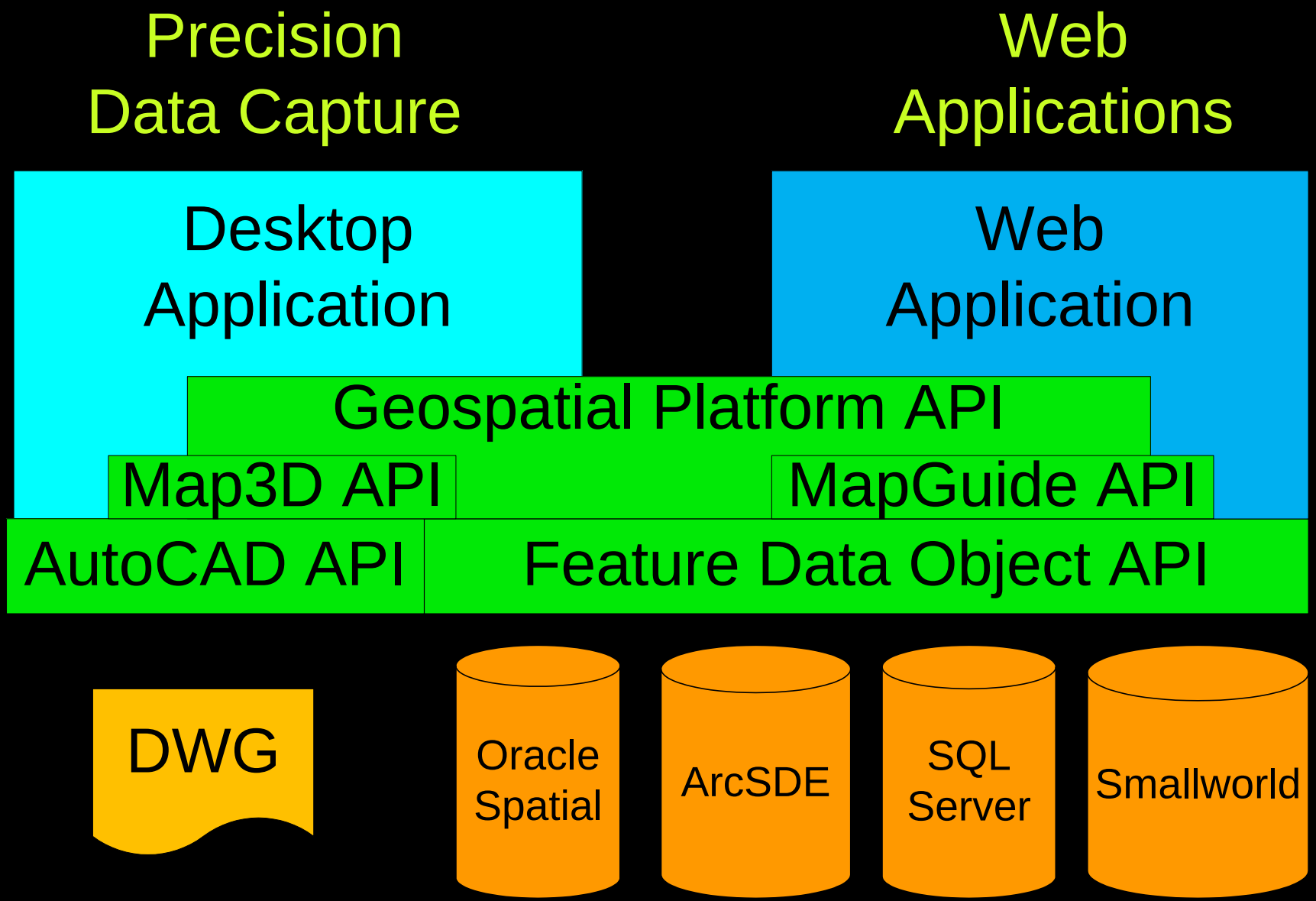
# Application Development Toolsb

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# Development Tools

- MapGuide Studio
  - Closed source commercial product developed and supported by Autodesk
  - Desktop development application
  - Supports Autodesk proprietary formats: DWG and DWF in addition to FDO data sources

- Web Studio
  - Web-based
  - Open Source
  - Developed by DM Solutions

# Maestro

- Consensus in OSGEO community that there was not longer active development for Web Studio

- Developed by Kenneth Skovhede, Geograf, Denmark
- Web-based MapGuide OS application development tool
- Written in C# for .Net, runs with Mono on Linux
- Targetted on developers
- Supports 70-80% of MapGuide Studio functionality
  - Supports FDO data sources (does not support Autodesk proprietary formats)
  - Also supports additional functionality, for example scans a directory for map tiles
- Source available at www.osgeo.org/mapguide

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# Summary

- ***MapGuide Open Source/FDO*** **– Open source platform for interoperability**
- **New FDO data providers from Autodesk and 3rd parties**
- ***Maestro*** **provides a web-based open source web application development platform.**

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# Designing for a sustainable future

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