

*Geographic Information Technology Training Alliance (GITTA) presents:*

# **Into the GIS market**

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# 1. Into the GIS market

## Introduction



In this lesson, we want to give an overview of the many different GIS applications and software vendors on the Swiss market. Although there already exists a survey of the GIS market for the German speaking part of Europe, which is available from [www.gis-report.de](http://www.gis-report.de), we want to give our own for two reasons. First, this report is mainly for Germany and second, the information provided is written by the companies themselves and therefore not independent and self-critical. Of course, software is not the only important issue, when looking at the GIS market. If you are interested in other aspects such as the Swiss National Spatial Data Infrastructure, please have a look at [www.e-geo.ch](http://www.e-geo.ch) and [www.kogis.ch](http://www.kogis.ch).

*Mobile mapping for navigation support (GPS receiver included)*

## Learning Objectives

- Get an impression of what are the most common GIS products and learn about their strengths and weaknesses.
- Know who are the key players in the Swiss GIS market.

# 1.1. GIS software on the market

## Introduction

This unit gives an overview of the most widely used GIS software packages in Swiss academia and private companies. The GIS software is categorised according to the "*GIS Report*" (Bill et al.) into Professional, Desktop, CAD and Internet GIS with an additional section of open source and freeware GIS. For every category, you will find a table giving an overview for each category, including product name, manufacturer, marketshare in D.A.CH. and the supported data type and operating systems. For the most common products, detailed **technical information** is available including a short description of the product, its common field of use, the kind of data the program is designed to process, compatible databases and more. This information comes not only from product specifications found on the producer's website or info brochure, but also from GITTA network researchers' experience with the listed products. This should make this information more reliable and independent. The idea is to help you to find the product, that is suited for your needs and also to show you what other products there are on the market. Browse the table or use CTRL+F to find a certain product and investigate which software product you can choose for a certain application. Investigate the different software categories and try to find out, what their differences are and why there are so many products fulfilling the different user needs.

### 1.1.1. Software list

#### Professional GIS

Produktname	MS [%]*	Company	Dataformat	OS	Technical Info
GeoMedia Professional	25	<b>INTERGRAPH</b>	Vector (Raster)	Windows	<b>Link</b>
ArcGIS	18	<b>ESRI</b>	Vector (Raster)	Windows	<b>Link</b>
SICAD/open	15	<b>AED SICAD</b>	Raster, Vector	Unix, Windows	<b>Link</b>
SMALLWORLD CST	12	<b>GE Network Solutions</b>	Raster, Vector	Unix, Windows	<b>Link</b>
ERDAS IMAGINE	5	<b>Leica Geosystems</b>	Raster, Vector	Windows	<b>Link</b>
TOPOBASE, TOPODAT	4	<b>C-Plan</b>	Raster, Vector	Windows	<b>Link</b>
AED-GIS	-	<b>AED SICAD</b>	Vector	Windows	<b>Link</b>

\* Marketshare D.A.CH. 2003

**CAD GIS**

Produktname	MS [%]*	Company	Dataformat	OS	Technical Info
AutoCAD, Autodesk (Map 3D, Raster Designer, Land Desktop)	-	<b>Autodesk GmbH</b>	Vector / CAD / Raster	Windows	<b>Link</b>
CADdy++ GeoMedia	-	Ziegler Informatics	Vector / CAD / Raster	Windows	-

\* Marketshare D.A.CH. 2003

**Desktop GIS**

Produktname	MS [%]*	Company	Dataformat	OS	Technical Info
ArcView / ArcGIS	19	<b>ESRI</b>	Vector (Raster)	Windows	<b>Link</b>
GeoMedia	15	<b>INTERGRAPH</b>	Vector (Raster)	Windows	<b>Link</b>
GAUSZ	11	RWE Systems Applications	Raster, Vector	Windows	<b>Link</b>
MapInfo Professional	9	MapInfo	Vector, Raster	Windows	<b>Link</b>
Terra GIS	6	Wenninger Systems GmbH	Vector, Raster	Windows	-
SICAD Spatial Desktop	3	<b>AED SICAD</b>	Vector, Raster	-	-
TNT	-	<b>Microimages</b>	Vector (Raster)	Windows, Unix, MacOS	-

\* Marketshare D.A.CH. 2003

**Internet GIS**

Produktname	Company	Dataformat	OS	Technical Info
ArcIMS	<b>ESRI</b>	Vector	Server	-
Autodesk MapGuide	<b>Autodesk GmbH</b>	Vector, (CAD)	Server	-
Geomedia WebMap	<b>INTERGRAPH</b>	Vector	Server	-
SAGIS web MapGuide	<b>CWSM GmbH</b>	Vector	Server	-

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SICAD Suite	Internet	AED SICAD	Vector	Server	-
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### Open GIS / Free GIS

Produktname	Company	Dataformat	OS	Technical Info
GRASS	<a href="#">Open Public</a>	Raster, Vector	Unix, Linux (Windows)	<a href="#">Link</a>
Landserf	<a href="#">Jo Wood</a>	Raster (Vector)	JAVA based (all OS)	<a href="#">Link</a>
Manifold	<a href="#">Manifold Net</a>	Vector, Raster,	Windows	-
PostGIS	Refractions Research	Vector	Linux, Windows, Unix	<a href="#">Link</a>
TNTlite, TNTatlas, TNTsim3d	<a href="#">Microimages</a>	Vector (Raster)	Unix, Linux, Windows	<a href="#">Link</a>

### 1.1.2. Technical Info

#### Technical Information: Professional GIS

Product	Dataformat	Area of use	Database
<b>ArcGIS</b>	Vector (Raster)	All GIS areas, industrial and administration use	Geodatabase (GDB) based on Oracle, Oracle Spatial, MS SQL, DB2, Informix, MS Access or file based GDB
	<i>Description: Full feature GIS that can be scaled and adapted to any needs: can serve as standalone Desktop GIS (ArcGIS), Professional GIS (ArcInfo) up to exhaustive server-client architecture GIS using ArcIMS or web map servers.</i>		
	<i>Comment: Extension supporting raster data, CAD, WFS, WMS, 3D visualisation, scripting...</i>		
<b>ERDAS IMAGINE</b>	Raster, Vector	Mainly data capture and processing	-
	<i>Description: Product to support the data capture chain of capturing, referencing, mapping, analyzing and presenting geospatial information.</i>		
	<i>Comment: Tailored to Leica remote sensors...</i>		
<b>GeoMedia Professional</b>	Vector (Raster)	Oracle; MS SQL Server, Access	All GIS areas, industrial use
	<i>Description: Full feature GIS that can be scaled and adapted to any needs.</i>		

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	<i>Comments: Extension supporting raster data, CAD, WFS, WMS, 3D visualisation, scripting. Development environment, internetserver, database server, thinclients...</i>		
<b>SICAD/open</b>	Raster, Vector	All GIS areas, industrial use	Oracle, Informix, ESRI, AEDIDB, ...
	<i>Description: GIS that can be tailored for special tasks like land management, infrastructure and communal use</i>		
	<i>Comment: Applications for internet server extensions, landuse evaluation. Now AED-SICAD.</i>		
<b>SMALLWORLD CST</b>	Raster, Vector	Industrial use, energy sector	Oracle, MS SQL Server, internal format
	<i>Description: GIS system mainly for industrial application of any sector, such as water and power line management</i>		
	<i>Comment: Customizable using extensions</i>		
<b>TOPOBASE, TOPODAT</b>	Raster, Vector	Industrial and communal administration...	Oracle Spatial, OpenGIS Standard
	-		
	-		

### Technical Information: CAD GIS

Product	Dataformat	Area of use	Database
<b>AutoCAD, Autodesk</b>	Vector / CAD / Raster	Planning, Construction, Custom GIS applications	N/A
	<i>Description: Custom GIS for planning and engineering tasks.</i>		
	<i>Comment: Also used for 3D multimedia and entertainment applications.</i>		

### Technical Information: Desktop GIS

Product	Dataformat	Area of use	Database
<b>ArcGIS</b>	Vector (Raster)	All common Desktop GIS tasks	Geodatabase (GDB) based on Oracle, Oracle Spatial, MS SQL, DB2, Informix, MS Access or file based GDB
	<i>Description: Desktop GIS that can be adapted to any personal needs using extensions such as Spatial Analyst to support raster data, Network Analysis tools, etc. Desktop version supports (limited size) personal geodatabase (ESRI format).</i>		

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	<i>Comment: Extension supporting raster data, CAD, WFS, WMS, 3D visualisation, scripting...</i>		
<b>GeoMedia</b>	Vector (Raster)	Focus on cartographic and logistic tasks	Oracle, MS SQL, DB2, ...
	<i>Description: Desktop GIS for data integration, analysis and visualisation from heterogenous sources.</i>		
	<i>Comment:</i>		
<b>GAUSZ</b>	Vector, Raster	Predominantly used as information system	Oracle, MS SQL
	<i>Description: Information system that includes data integration and additional drawing extension.</i>		
	<i>Comment: Commonly used for displaying and visualising information for clients, less for data manipulation.</i>		
<b>MapInfo Professional</b>	Vector, Raster	All common Desktop GIS tasks	Internal format, Oracle, MS SQL, DB2, others
	<i>Description: GIS to capture, manipulate, analyse and visualize data in a desktop as well as server-client environment.</i>		
	<i>Comment: Can be integrated with a large suite of applications such as map server, development frameworks, route planning software etc.</i>		

### Technical Information: Open GIS / Free GIS

Product	Dataformat	Area of use	Database
<b>GRASS</b>	Raster, Vector	Any typical GIS use	-
	<i>Description: Open GIS under the GNU public license, including freely available GIS libraries</i>		
	<i>Comment: Original developed under Unix, ported to run under MacOS and Windows (cygwin)</i>		
<b>Landserf</b>	Raster, Vector	Data visualisation and analysis, feature extraction, format conversion,...	none
	<i>Description: Java-based, platform independant GIS, supporting multiple surface models, 3D fly-throughs, etc</i>		
	<i>Comment: Most common raster and vector formats supported. API available for adaptation and development.</i>		
<b>Manifold</b>	Vector, Raster	Desktop GIS (Mapserver)	Many

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		<i>Description: professional GIS, mainly for Desktop use, supporting all standard data formats.</i>	
		<i>Comment: For Windows OS only, Desktop version sells for about 250 US\$</i>	
<b>TNTlite, TNTsim3d</b>	<b>TNTatlas,</b>	Raster, Vector	Any typical GIS use
		<i>Description: Personal desktop GIS, freely available.</i>	
		<i>Comment: Limited functionality of TNTlite version compared to professional line.</i>	

## 1.2. GIS software suppliers

### Introduction

In this unit, you will find a list with information about well known companies distributing GIS software in Switzerland. These companies do also offer additional services such as consulting and training. Since it is hard to keep this information up-to-date, we advise the reader to follow the provided links to the respective company's web server and look for the newest information on products and support. Our information is intended to provide only basic information of who is on the Swiss market and how to contact them.

For more information on the software, consult the **software overview** and technical info tables.

All information provided taken from the "GIS Report 2004" (Buhmann et al. 2004) .

#### 1.2.1. Contact information



**Company:** AED SICAD AG

**Software:** SICAD/open, SICAD InternetSuite, SICAD/SD, SICAD-RBS, SICAD-PLOT, AED-GIS, GeoServer and @GIS-Komponenten

**Other distributed products:** SICAD extensions for ArcGIS, LM/ArcFM/Kommunal on ArcGIS

**Services:** Project management, consulting, training, system integration, migration, application development

**Digital data:** —



**Company:** Autodesk

**Software:** AutoCAD, Autodesk product line

**Other distributed products:** Volo viewer, OnSite Viewer, DWF tools

**Services:** -

**Digital data:** —



**Company:** c-plan AG

**Software:** TOPOBASE/TOPODAT

**Other distributed products:** ATLAS DGM, CADRaster, Strassenbau, SAP-Kopplung

**Services:** training, coaching

**Digital data:** —



**Company:** ESRI Geoinformatik AG

**Software:** ArcGIS, ArcView, ArcInfo, ArcPad, ArcSDE, ArcIMS, ArcGIS Server, ArcGIS Engine, MapObjects

Distribution of data from many data providers such as ArcWeb Services, GfK Geomarketing, Infas Geodaten, Tele Atlas, GeoPost, AZ Bertelsmann, DDS, GfK, Infas, MicroGIS, Tele Atlas

**Services:** Application Application development, implementation, services, consulting, training, support

**Digital data:** ArcWeb Services, ESRI Data & Maps

**Company:** GE Network Solutions

## GE Network Solutions

**Software:** Smallworld Core Spatial Technology, Smallworld Fachschalen, Smallworld Internet Application Server

**Services:** Consulting, implementation, training, service, support

**Digital data:** —

 Switzerland : Schweiz



**Company:** Intergraph (Schweiz) AG

**Software:** GeoMedia, IntelliWhere, Dynamo

**Services:** Training, service, support

**Digital data:** —



**Company:** Leica Geosystems AG

**Software:** Infocam, Interlis Studio, ERDAS IMAGINE

**Other distributed products:** GPS, Tachymeter, GIS-GPS

**Services:** Training, support

**Digital data:** —



**Company:** GfK Geomarketing

**Software:** RegioGraph, DISTRICT, MapKit

**Other distributed products:** demographic and economical data

**Services:** Consulting, training, coaching

**Digital data:** Archive of maps, specially of Europe in common GIS formats

### 1.3. Summary

In this lesson, an overview of the current GIS software in the categories Professional GIS, Desktop, CAD and Internet GIS, as well as open source / freeware GIS has been given. Besides manufacturers and marketshares, an overview of technical information like supported data formats, databases and operation systems is given along with short descriptions on the typical area of use. Additionally, software distributors for the Swiss market are also listed.

## 1.4. Recommended Reading

- **Buhmann, E., Wiesel, J.** (2004). *GIS Report* [online]. B. Harzer Verlag, Karlsruhe. Available from: <http://www.harzer.de/gr04web.pdf> [Accessed 18-05-2016].  
Exhaustive, unfortunately infrequently updated overview of GIS software and add-ons including technical informatioe etc. German.

## 1.5. Bibliography

- **Bill, R., et al.** *Geoinformatik Service Uni Rostock* [online]. Available from: <http://www.geoinformatik.uni-rostock.de/produkte.asp> [Accessed 18-05-2016].
- **Buhmann, E., Wiesel, J.** (2004). *GIS Report* [online]. B. Harzer Verlag, Karlsruhe. Available from: <http://www.harzer.de/gr04web.pdf> [Accessed 18-05-2016].