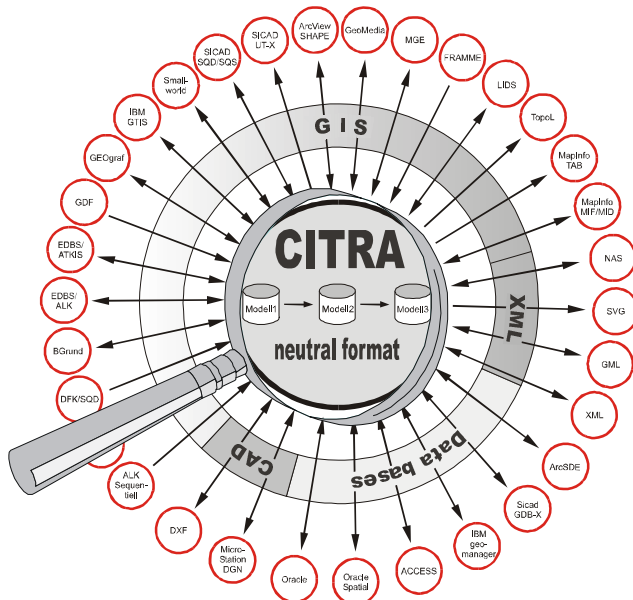




CITRA[®] basic module

Hub for a high-quality data exchange between different GIS



model in the target system. CITRA is based on an object-structured neutral format. Neutral names in the dataset classify objects as well as their attribute data component, or their individual geometries. The neutral names in the files can be chosen at liberty and reappear in the configuration files (control files) of the CITRA basic module. With the help of the neutral names these files specify the nature of the operations (modelling processes) to be performed on the respective objects or parts of them.

Due to the application of neutral names CITRA displays the essential characteristics of a data definition language. For this reason the CITRA-format transports the attribute data and the graphical primitives (geometries) in their object-connection, but not the system-specific graphic appearance, which are in turn attributed by the translator modules via neutral names.

Basic information on CITRA[®]

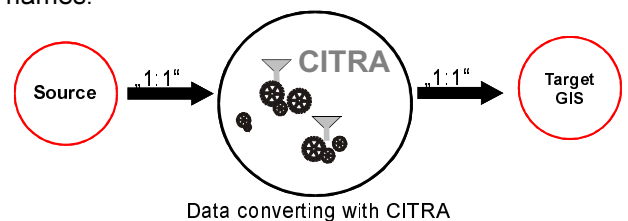
CITRA is both a neutral data format and a program system for analysis, preparation and exchange of geodatasets between different geoinformation systems. CITRA is able to transport data between more than 40 systems and formats and will model them as required, for example EDBS/ALK, EDBS/ATKIS, DFK/SQD, BGrund (special german data formats), GDF, ArcView, ArcSDE, DGN, DXF, GeoMedia, IBM GFIS, MapInfo, MicroStation, Oracle Spatial, SICAD SQD/SQS or Smallworld.

General information

The CITRA basic module is the essential tool for customised data modelling. The principle of data translation and customised preparation is a very simple one: the source data are transferred into the format CITRA via a translator - their structure remains largely unchanged. In the CITRA format the data are gradually modified to an extent, that they can eventually be delivered to the specific target system via a second translator in a customised way.

Functionality

Data modelling programs in CITRA enable an optimum mapping of the data from a data model of the source system onto the generally different data



At the start of the conversion an analysis of the existing datasets has to take place. Provided that suitable datasets are available, sophisticated analysis programs can yield first results concerning the characteristics of the data model, distinguishing between attribute data and geometry information, both on the sides of the source- and the target system. This facilitates particularly the mapping from the source onto the target. In addition, errors in attribute data structures and geometry can be discovered and documented and possibly corrected.

If the data are available in the CITRA-format, they undergo further processing with the CITRA basic module. The chapter capability features below displays a small selection of modelling possibilities of the CITRA basic module. Once the data are processed for a certain data model in the target system, data are converted from the CITRA format into the target system with the help of the corresponding translator.

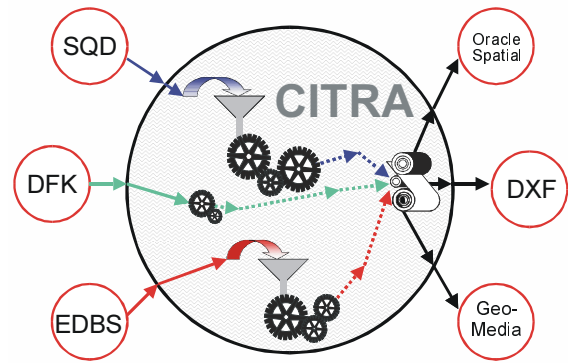
Capability features

Apart from the analysis tools mentioned, the CITRA basic module possesses sophisticated data modelling programs, which demonstrate the following capability features, to mention a few:

- **attribute data**
 - renaming of attributes
 - preparation of contents
 - generation of default values
 - mapping onto permissible values
 - separating and fitting together attribute data
 - conversion of non-standard ASCII-characters
- **geometry**
 - conversion of graphic primitives
 - translating of text primitives
 - emulation of drawing methods
 - creating presentation graphics
- **processing of closed polygons**
 - transformation between different representations of polygons or faces
 - building polygons
 - generating centroids or assigning them to the polygons/faces they represent
- **establishment of relations**
 - combining geometry and attribute data of an object stored separately in the source system
 - relations between objects
- **modifying objects**
 - separating
 - merging
 - multiplying
 - deleting
 - renaming
- **the open format enables the creation and efficient implementation of individual solutions**
- **analysis of CITRA®-files**
 - statistics
 - generation of configuration files (control files)
- **plausibility checks**
 - important contribution towards quality assurance

Fields of application and advantages

Due to the neutral format, CITRA may be used as a hub for a general data exchange and as a basis for a company-wide and system-neutral management of geometry- and attribute data. Furthermore, an increased functionality can be achieved by additional modules, such as plausibility checks in the context of quality assurance.



Data modelling with CITRA

Unlike non-configurable direct translators, whose purpose usually is a quick and easy data transfer from one system/format to another at a relatively low level, the circular functionality and the modelling possibilities offer the following advantages: CITRA is

- **efficient:** the high-quality and powerful programs of the CITRA basic module allow a transfer and import of high-quality data models.
- **individual:** the tools of the CITRA basic module enable the import of data models in a way exactly tailored to suit the requirements of the customer.
- **open and configurable:** the main features of CITRA are its openness and the configuration possibilities.
- **upgradeable:** the CITRA basic module can be upgraded any time by further translators and modelling programs.
- **integrative:** data of differing origin can be bundled into uniform data models.
- **universal:** data can be delivered to different systems in nearly the same quality (depending on the capabilities of the target system).
- **open towards all sides:** a bi-directional data exchange is possible with many formats/systems.

Technical requirements

- Windows NT, UNIX
- 64 MB RAM, recommended are 128 MB

Miscellaneous

- Usually, the CITRA basic module has to be purchased together with at least two translators (for the source and target side).
- Alternatively to purchasing the software, the data conversions can be obtained as a business service from CISS TDI.



The used brand names and software designations are registered trade marks of the companies mentioned.

Further information: www.ciiss.de or eMail: ciiss@ciiss.de.