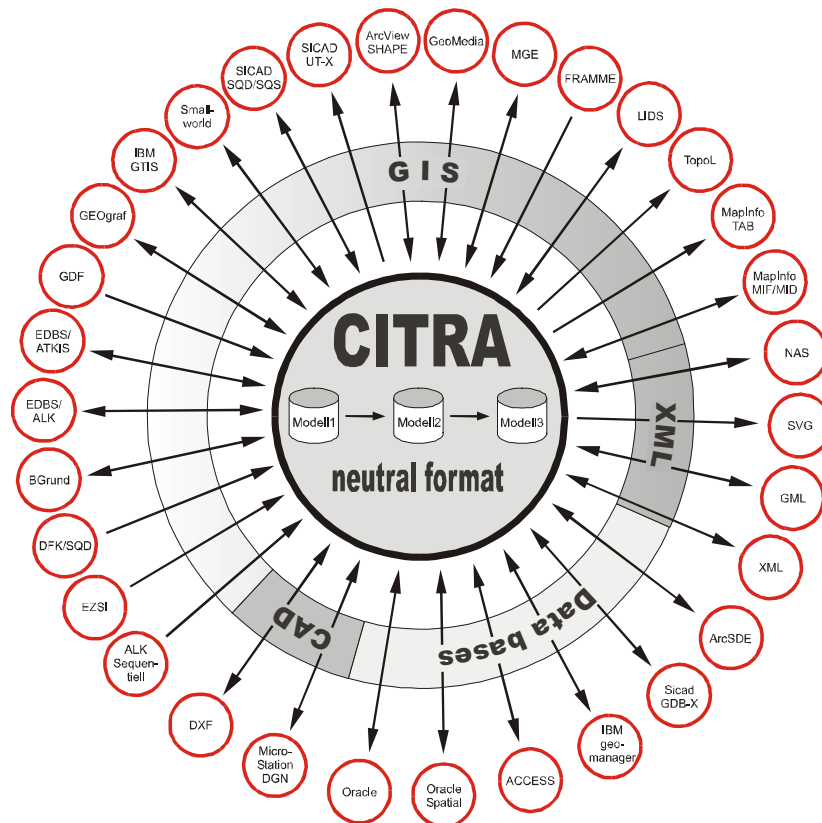


# CITRA®



CITRA is much more than a format: it is a global concept for the use of geodata in heterogeneous GIS landscapes.

## CITRA® is ...

### translator software

CITRA is used for the exchange of complex spatial information between geoinformation systems. The information is essentially made up of objects containing attribute data as well as geometry and topological details. The heterogeneous collection of available geoinformation systems accommodates a wide variety of geoinformation of varying complexity, a fact which makes data exchange difficult. Translators have been created for more than 40 systems altogether, and are currently available on the market as product- or project solutions. CITRA is a sophisticated software as it has been under development since 1987 and embraces the experience of countless projects and numerous years of program development.

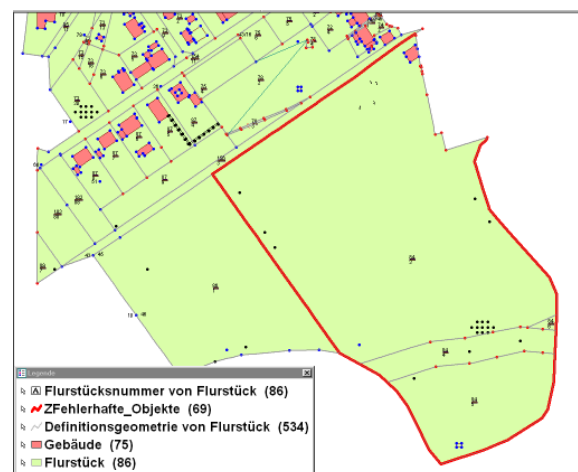
### hub

CITRA is based on a neutral format. The format carries object structures with graphic, alphanumerical and topological content. System-specific characteristics are recorded in external descriptions and therefore do not appear in the neutral format. The

link is made via tags, the "neutral names". In this way, every new translator is able to implement an exchange with all existing systems or formats.

### analysis software

CITRA analyses the source dataset and tests for correct attribute data structures and geometrical attributes. Error structures are marked and can be displayed in the target system as such.



Example for erroneous objects, which are recognized by CITRA

In addition, meta-information in the form of the attribute data structures and the geometrical attributes is created.

```

ATTSEG = F002_DEFG__      MGE = GEMFLUR_DEFGE0
1  MSLINK                 H( 1)  :
2  MAPID                  H( 1)  :
3  FOLIE                  C( 3)  :
4  OSCHL                  C( 4)  :
5  EDAT                   C( 10) :
6  TEXTINHALT            C( 33) :
7  AINFO                  C( 2)  :
8  KTYP                   C( 2)  :
9  OART                   C( 6)  :
10 LTYP                   C( 1)  :
11 NUMBEZ                 C( 8)  :

```

```

*+ NEUTRALER NAME (Character)
*! + Feature-Eintrag - FCODE - (Charac
*! ! + Identifikatio
*! ! + Level
*! ! + Far
*! ! ! ! !
*! ! ! ! !
-DL002__0232!GEMFLUR_DEFGE0 !LINE ! 2! 8!0!
-DN002__0232!GEMFLUR_DEFGE0 !LINE ! 2! 8!0!
-DR002__0232!GEMFLUR_DEFGE0 !LINE ! 2! 8!0!
-D__002__0232!GEMFLUR_DEFGE0 !LINE ! 2! 8!0!
*
-D__002__0242!ZNICHTDAR_002_LINIE!LINE !40! 8!0!

```

In this way the source data model becomes more transparent. An analogous analysis of the target system defines the objective of the generally required modelling process and the mapping of the source to the target.

## modelling software

Geoinformation systems are complex. They do not only differ in the basic systems, but also in the design of their applications and the customised modifications. A perfect mapping of the source-GIS onto the target-GIS requires data modelling. Representations of polygons need to be transferred from one geometrical-mathematical description into another. One could mention many more examples for modelling. Those modelling programs which are configurable, abstract and independent of each other and the applications, ensure an optimum mapping of the source data model onto the target data model.

## software for improved geodata quality

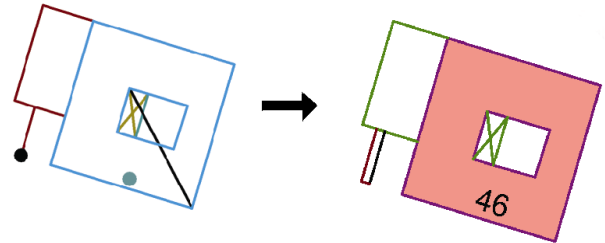
Experience has shown that all digitally collected geodata are more or less faulty. The data often contain systematic errors, which can be retrieved with the help of appropriate programs. For example, systematically faulty attribute values can be corrected, as well as gaps in poorly recorded polygon objects.

## basis for the operation of geodata servers

CITRA supports the management of geographical data in the geodatabase. The direct translator from CITRA to Oracle Spatial, for example, enables a high performance import of the database without using a commercially available GIS.

## migration software

Geodata are much more long lived than the GIS software, and therefore large datasets have to be migrated from an old to a new system. Modern GIS software uses new data models.



Data migration with CITRA

Complex mapping instructions have to be observed. The modelling programs help to achieve an optimal mapping. Analysis functions support the elimination of errors. Systematic errors can be corrected during the migration process in connection with the modelling, and the quality of the data can be further enhanced by modelling them adequately for the target data model.

## CITRA® creates ...

**connections** between all kinds of users: while the internet user is interested in quick visual information with flat structures from the (possibly complex) database, the user of desktop systems may want to use the data for analyses of a different nature. The discriminating user, however, will usually be interested in having access to the same data in a very deep (complex) structure. A skilful application of the CITRA modelling tools will thus meet the demands of all kinds of users.

**standards** by predefined data modellings of commercially available source formats, such as SQD or the german cadastral EDDBS, DFK/SQD or BGrund, into commercially available desktop systems resp. formats, such as GeoMedia, MapInfo, DXF, MicroStation or ArcView. The Standard-readers CITRA-StaRS were specifically assembled for those users requiring sophisticated and qualified background information, who do not want to concern themselves with complex data models. Configurations or adjustments are not required. Easy-to-use graphical users interfaces guarantee a comfortable application of the readers.

The data portrayed were kindly put at our disposal by [Hessian Land Surveying Office](#) for the purpose of representation.

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

Further information: [www.ciss.de](http://www.ciss.de) or eMail: [ciss@ciss.de](mailto:ciss@ciss.de).