

## **Language / Sprache**

If you prefer to read in German language, please use the **Liesmich.doc** file!

Wenn Sie lieber in Deutscher Sprache lesen möchten, benutzen Sie bitte die Datei **Liesmich.doc**!

## **Content:**

Program description

Installation at workplace and on network

## **TRANSDAT**

### **Geodetic Coordinate Transformations**

TRANSDAT performs Coordinate Transformations fast and with high accuracy. It supports worldwide thousands of Coordinate Systems, geodetic Reference Systems and Reference System Transitions (datum shifts), user-defined systems, 2D/3D transformations, INSPIRE, NTV2, BeTA2007, GPS, continental drift and more. It reads and writes the file systems Text, CSV, SDF, dBase, Arc-Shape, Arc-Generate, KML and others.

Besides the usual Geographic Information Systems (GIS), there is a wide variety of geodetic applications and data collections that are used for the acquisition, processing and presentation of spatial data. The thereby used spatial data are available in many different coordinate systems and reference systems. Here the program TRANSDAT is needed to transform the spatial data of different data sources and data structures from one coordinate reference system (CRS) to another.

### **Coordinate and Reference systems (datum shifts) supported by TRANSDAT**

An actual list of all coordinate and reference systems supported by TRANSDAT in English language you find on KilletSoft's website [http://www.killetsoft.de/p\\_trdl\\_e.htm](http://www.killetsoft.de/p_trdl_e.htm) or after installation in the TRANSDAT help file.

### **Coordinate Transformations**

TRANSDAT is a professional computer program for worldwide Coordinate Transformations between national and country-specific Coordinate and Reference Systems with high precision and good performance:

- The current and historical Systems of all countries of the European Union (EU)
- The Coordinate Reference Systems of the European non-EU countries
- The European ETRS89 systems forced by INSPIRE
- The US and Canadian NTV2, HARN and SPCS Coordinate Reference Systems
- The Coordinate Reference Systems of most countries of all continents
- The Coordinate Reference Systems of Austria and Switzerland incl. NTV2
- The Coordinate Reference Systems of the old and new German Federal States
- The German 'Lagestatus' Coordinate Reference Systems
- The special Reference Systems of the German Federal States
- The German BeTA2007 and the NTV2 Reference Systems of the Federal States
- The 40 Soldner Coordinate Systems of the Prussian Land Registers
- The Geographic coordinates in different notations and Cartesian coordinates
- Worldwide NTV2 grid file supported Coordinate Transformations
- Worldwide used numeric and alphanumeric Coordinate Systems
- ITRS annual realizations or WGS84 epochs for GPS measurements
- WGS84 Coordinate Transformations in consideration of the continental drift
- User defined Coordinate Systems, Reference Systems and earth ellipsoids

A detailed list of the supported coordinate and reference systems you can find below.

## **Data input, data output and file formats**

- Keyboard Mode for direct input of coordinates
- File Mode for data input from files and data output to files
- Batch Mode for batch processing of multiple files using a control file
- File formats Text, CSV, SDF, dBase, ArcShape and ArcGenerate for data input
- File formats Text, CSV, SDF, dBase, KLM, ArcShape and ArcGenerate for data output
- Conversion from one file format to another
- Very flexible file configuration
- Various filters for the input file
- Control of the notation of coordinates
- Copy function for Text, CSV, and dBase files
- Finding scattered coordinates in Text files
- Processing of text files without line orientation
- Shape to Shape function
- Shape to KLM function
- Support of the ArcGenerate GIS exchange format for geometries
- Log file with the results of the current session
- Export and import to / from configuration files
- One-click copy and paste of all coordinate components simultaneously

## **Quality**

- Strict formulas of Schatz, Schuhr, Klotz and Hooijberg
- Transformation parameters of the Surveying Authorities of the respective countries
- Consideration of the EPSG specifications
- Helmert 7-parameter Bursa-Wolf and Molodensky Reference System Transitions
- Exact NTV2 transformations for many countries
- Support of Polygonal Validity Scopes in NTV2 files
- High-precision NTV2 transformations for the German Federal States
- HARN grid files of the U.S. supported as equivalent NTV2 grid files

## **Source and target Coordinate Reference Systems**

- Worldwide and country-specific Coordinate Reference Systems
- Current and historical Coordinate Reference Systems
- Numeric and alphanumeric Coordinate Systems
- UTMRef, GEOREF, QTH, BNG und ING with different grid mesh sizes
- INSPIRE systems, ITRS annual realizations, WGS84 epochs, GPS coordinates
- 2D and 3D Coordinate Transformations
- Option for automatic selection of the required NTV2 files
- Use of EPSG codes of the Coordinate Reference Systems
- Hierarchical structure by continent, country, Coordinate System, Reference System, Measurement Unit
- Selection of the meridian strip with UTM and Gauss-Krueger coordinates
- UTM and Gauss-Krueger coordinates with and without meridian strip number
- Use of measurement units
- Use of summands and multipliers for the coordinate components
- Monitoring of range limits
- Option for automatic assignment of a Reference System to the Coordinate System
- Option for automatic assignment of a NTV2 files to the Reference System

## **Visualization**

- Viewer for the input and output files
- Display of shape files in a Shape Viewer

- Display of KML files in Google Earth
- Display of the last calculated coordinates in Google Maps / Earth and OpenStreetMap
- Screenshots of all program windows in BMP and GIF files
- Print of all program window with the corresponding settings
- View of the NTV2 parameters in a NTV2 Viewer
- View of the actual Coordinate Transformation parameters in a System Viewer
- Adjustable color design with color gradients

### **GPS reception**

- Reception of GPS coordinates with external GPS device
- GPS device or GPS-mouse by serial or USB interface
- Direct transformation of GPS coordinates
- Triggered and manual GPS reception
- Generating of a GSP file
- Display of the received GPS coordinates in a GPS Viewer

### **Help System**

- Detailed electronic manual
- Case-related assistance in all program windows
- Focused Info buttons for workspaces which need to be explained
- Uniformly geodetic terms on the program interface and in the electronic manual
- Explanation of geodetic terms in the glossary
- Online FAQ section for common questions
- Helpful online information

### **Multilingualism**

- Language choice for the user interface
- User interface in multiple languages
- Option to include new languages by the users
- User manual in English and German

### **More features**

- Possibility to download NTV2 files from the KilletSoft website
- Configuration of user defined coordinate systems
- Configuration of user defined reference systems and ellipsoids
- Network capability
- CITRIX support
- Possibility of a service contract for phone and email support
- Possibility to use the automated information service via email
- Transfer of transformation parameter sets from the SEVENPAR program
- Display of electronically generated fractals for relaxation

### **Working with files**

It is very important to be able to perform fast calculations on large amounts of coordinate data stored in files of different file formats. TRANSDAT allows loading data from Text, CSV, SDF, dBase, ArcShape and ArcGenerate input files. A large number of Setup options allow the adjusting to different input file data structures. Calculated coordinates can be stored in Text, CSV, SDF, dBase, KLM, ArcShape and ArcGenerate output files. Here again TRANSDAT offers a large number of program Setup options for the output file structure.

During the file handling the unrestricted conversion between the data formats named above is possible with or without coordinate transformations. Geometries saved as ArcShape files can be

viewed in the programs internal shape viewer. Geometries saved as KML files can be viewed in Google Earth directly.

The conversion of the data formats for example makes possible the transfer of geometries contained in ArcView and ARC/INFO Shape files and in ARC/INFO Generate files to KML-Files, which can be used in Google Maps / Earth and OpenStreetMap. A further interesting example is the transformation of the geometries contained in ArcShape files and ArcGenerate files to other coordinate systems. TRANSDAT is able to convert between ArcGenerate files, ArcShape files and KML files, taking account of point, line and polygon shapes.

Line by line copying from Text files is particularly efficient, whereby the transformed coordinates are inserted in place of the original coordinates inside the text. The search for coordinates scattered arranged in the text and their conversion is possible. The flexibility of the program TRANSDAT opens a large count of further conversion possibilities, e.g. the use of filters.

The batch processing allows the automatic execution of one or more files using a batch file. Thus makes the program TRANSDAT controllable from other programs or it can transform large amounts of coordinates unsupervised.

### **Basic and Professional version**

The characteristics specified here describe the professional expenditure of the program TRANSDAT. A economical basic expenditure, in which most coordinate transformations can be accomplished, excludes only for the specialists reserved definitions of own coordinate systems, reference systems and earth ellipsoids and NTv2 support, the batch processing and the GPS interface.

### **Installer program transdat\_setup.exe**

The program TRANSDAT is stored in a directory of a CD ROM or on an other data carrier or is downloadable from the internet. In order to be able to use the program, it must be installed first.

The installation can be executed under Microsoft Windows 2000, NT, XP, VISTA, 7, 8, 10 and compatible operating systems. The program runs with 32 bit and 64 bit operating systems.

Installation from CD-ROM: Insert the CD-ROM in the CD-ROM drive. Start the WINDOWS Explorer. Navigate to the TRANSDAT directory on the CD-ROM. Click on the installer program transdat\_setup.exe. The installation will start. Follow the instructions of the installer.

Installation from a ZIP file: After the download from the Internet or after copied from an email attachment use a ZIP decompression utility to decompress the ZIP file in a folder of your choice. In that folder locate the installer program transdat\_setup.exe and click it. The installation will start. Follow the instructions of the installer

### **Local installation on a workstation**

The local installation on a workstation should be performed by a user, who must have write, read and execute rights for the installation directory. The installation directory should be a local directory on the workstation.

Examples:

c:\applications\transdat  
c:\programs\transdat

In the installation directory automatically three subdirectories with then names "ProgData", "UserData" and "Info" will be created.

Example:

c:\applications\transdat\ProgData  
c:\applications\transdat\UserData

c:\applications\transdat\Info

The directories have the following contents:

transdat: Executables and DLLs  
transdat\ProgData: Program data files for which reading access is necessary.  
transdat\UserData: Test data for which reading access is necessary.  
transdat\Info: ReadMe, history and info files and order form.

After finishing the installation on the workstation desktop a program icon as shortcut to the program TRANSDAT is available. The program can also be started directly from the installation directory by clicking on the program entry in WINDOWS Explorer.

Automatic creation of the data directory

The first time TRANSDAT is started, it will create a subdirectory "transdat" under the directory referred to the systems environment variable "APPDATA". In this directory the user specific data will be written by the program. In a subdirectory "UserData" the user-generated files are stored as default. Here the supplied test data and a test batch file can be found.

Example:

c:\Users\fred\AppData\Roaming\transdat  
c:\Users\fred\AppData\Roaming\transdat\UserData

with the content of the environment variable APPDATA:

c:\Users\fred\AppData\Roaming

The directories on the workstation have the following contents:

transdat: From the program needed files with user-relevant data, for which write access is required.  
transdat\UserData: Test data and user-generated files, for which write access is required.

### Network installation

Network installation should be performed by a network administrator, who must have write, read and execute rights for the installation directory. The network installation differs from the local installation only in that way, that the installation directory is on a network drive instead of a local drive.

Examples:

h:\applications\transdat

or in network syntax:

\\allusers\applications\transdat

In the installation directory automatically three subdirectories with then names "ProgData", "UserData" and "Info" will be created.

Examples:

h:\applications\transdat\ProgData  
h:\applications\transdat\UserData  
h:\applications\transdat\Info

or in network syntax:

\\allusers\applications\transdat\ProgData  
\\allusers\applications\transdat\UserData  
\\allusers\applications\transdat\Info

The directories have the following contents:

transdat: Executables and DLLs  
transdat\ProgData: Program data files for which reading and writing access is necessary.  
transdat\UserData: Test data for which reading access is necessary.  
transdat\Info: ReadMe, history and Info files and order form.

After the network installation is finished the network administrator must start the TRANSDAT program from a workstation for the first time, so that the program performs the necessary initializations. An additional installation on the workstations is not necessary!

Now it is possible to paste the TRANSDAT program icon as shortcuts to the workstation desktops for starting the program. The program can also be started directly from the network installation directory by clicking on the program entry in WINDOWS Explorer.

#### Automatic client installation

When the network installation of the TRANSDAT program is complete, the users can start it from their workstations. The first time TRANSDAT is started from a workstation, it will create a subdirectory "transdat" under the directory referred to the systems environment variable "APPDATA". In this directory subdirectories will be created and the user specific data will be written to it. This behavior makes possible to use Terminal Services on WINDOWS Servers like e.g. "Citrix Terminal Server". In a subdirectory "UserData" the user-generated files are stored as default. Here the supplied test data and a test batch file can be found.

Example:

c:\Users\fred\AppData\Roaming\transdat

c:\Users\fred\AppData\Roaming\transdat\UserData

with the content of the environment variable APPDATA:

c:\Users\fred\AppData\Roaming

The directories on the workstation have the following contents:

transdat: From the program needed files with user-relevant data, for which write access is required.

transdat\UserData: Test data and user-generated files, for which write access is required.

#### Unlocking

Please read information for the use of the free, but restricted test version and for the transfer of the test version into the unrestricted full version in the electronic manual.

#### Price list

Prices and a purchase order form for the order of the unrestricted full version of the program you will find in the TRANSDAT start menu or during the program is running under the menu item "help".

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