



## History of the program *NTv2Creator*

Changes and Supplements

### Modeling of NTv2 files from Identical Points

Detailed Information about the program NTv2Creator: [https://www.killetsoft.de/p\\_ntca\\_e.htm](https://www.killetsoft.de/p_ntca_e.htm)

Deutsche Version dieser Historie: [https://www.killetsoft.de/pdf/hist\\_ntc\\_d.pdf](https://www.killetsoft.de/pdf/hist_ntc_d.pdf)

Translation of the history to other languages: <https://translate.google.com/>

#### Program release NTv2Creator 5.xx

##### Changes and Supplements during the version NTv2Creator 5.xx:

- 5.14: New menu option "Save log file" can be switched on and off.
- 5.14: The log file can be saved when exiting the program.
- 5.14: Save dialog for selecting a file to save the log file added.
- 5.13: Changed the order of the longitudes of the boundaries in the log file.
- 5.12: New help button for calling the help chapter on the log file.
- 5.11: New help button for calling the help chapter on quality analysis.
- 5.10: New help button to call the help chapter for manually adjusting the limits.
- 5.10: New help chapter "Adjusting boundaries manually" added.
- 5.09: Irregularity when manually setting the boundaries and grid widths fixed.
- 5.08: Tooltips for the round help buttons added.
- 5.07: The 20 points with the highest quality are displayed in the quality analysis.
- 5.06: Column for help buttons next to the function areas implemented.
- 5.05: New help button to call the help chapter with the description of the point file formats.
- 5.05: Help chapter "Format of identical points" considerably supplemented.
- 5.04: Help chapter "Program description" considerably supplemented.
- 5.03: Attention: When updating a version 4.xx or 5.xx with a version newer than 5.02, the program must be unlocked again!
- 5.03: Verification of unlocking for network mode has been made secure.
- 5.02: Poorly matching identical points are determined more precisely.
- 5.02: Poorly matching identical points are suggested for correction.
- 5.01: Further increase in accuracy by improving the formula.
- 5.00: New main version number.

#### Program release NTv2Creator 4.xx

##### Changes and Supplements during the version NTv2Creator 4.xx:

- 4.33: Increased accuracy by improving the mathematical formulas.
- 4.32: Link to the new work sheet adopted as a menu item.
- 4.32: New work sheet "Modeling an NTv2 file with economic geodetic software".
- 4.31: Boundaries and mesh widths are loaded exactly from configuration files.
- 4.31: Boundaries and mesh widths are loaded exactly from the Ini file.
- 4.30: Limits and mesh sizes are rounded to 1/1000 of a second.
- 4.29: Quality analysis supplemented by calculation of the Mean Position Error.
- 4.28: The number of clusters in the quality analysis has been doubled.
- 4.27: Three chapters of the help file revised and adapted to program changes.
- 4.26: The results of the quality analysis are entered in millimeters instead of seconds.
- 4.26: The quality analysis is performed with the Vincenty Inverse formula.
- 4.25: Note Residual Gaps Distribution with Natural Neighbour Interpolation inserted in the log file.
- 4.24: After aborting the analysis, the settings of the previous analysis are retained.
- 4.23: The program remembers the file path of the configuration files.
- 4.22: The processing messages are displayed for a minimum time.
- 4.21: Bug in the quality analysis of the model "Polygonal validity areas" removed.
- 4.20: Terms on the program interface and in the manual unified.
- 4.20: The occurrence of a large number of non-calculable points explained.
- 4.19: New menu item to call the help chapter with the description of the NTv2 models.

- 4.19: New help button to call the help chapter with the description of the NTV2 models.
- 4.18: Separate help chapter with the description of the NTV2 models.
- 4.17: More individual processing steps with high time intensity are displayed.
- 4.16: Test with very large point files (> 400,000 points) performed and passed.
- 4.15: Processing progress notes are displayed more frequently.
- 4.14: Run stability improved by optimization.
- 4.14: Sporadic error messages that could be ignored do not occur anymore.
- 4.13: When reading points from files, a processing progress is displayed.
- 4.12: Higher processing speed due to optimization.
- 4.11: New menu item "Printable order form" in the "Offline" menu.
- 4.10: New menus "WWW" and "Offline" in the menu bar.
- 4.09: Calculations of boundaries and mesh widths have 10 instead of 8 decimal places.
- 4.08: Mesh widths are displayed in the log file as seconds instead of degrees.
- 4.08: Mesh widths are entered in the main window as seconds instead of degrees.
- 4.07: Boundaries and mesh width are written to the INI file.
- 4.06: Boundaries and mesh width are written to configuration files.
- 4.05: Help file chapter "Help" improved and completed.
- 4.05: New help chapter "Map services".
- 4.04: Button for testing the Google Earth installation in the info window.
- 4.04: Info window to agree to Google Earth terms.
- 4.03: New menu entry "Display NTV2 area in Google-Earth".
- 4.03: New buttons "Google Earth" and corresponding round info button.
- 4.02: Display of the adjusted NTV2 area in Google Earth.
- 4.01: Log file name changed to avoid concurrent use by other programs.
- 4.00: New main version number.

#### **Program release NTV2Creator 3.xx**

##### **Changes and Supplements during the version NTV2Creator 3.xx:**

- 3.06: Certification of the program and the installer renewed.
- 3.06: Entering the unlocking parameters improved.
- 3.04: Empty message when removing outliers from more than 2<sup>16</sup> points removed.
- 3.03: Program abort when removing a large number of outliers fixed.
- 3.02: Very rare error messages during coordinate transformations fixed.
- 3.02: Slightly higher execution speed due to improved memory model.
- 3.01: During installation warnings are given about risks from illegal cracks.
- 3.00: New main version number.

#### **Program release NTV2Creator 2.xx**

##### **Changes and Supplements during the version NTV2Creator 2.xx:**

- 2.11: Calculation method for the deviations described in the help file.
- 2.10: Automatic language detection at the first program call adjusted.
- 2.09: Increased stability and speed with a new development system.
- 2.09: Delivered with new Dynamic Link Libraries (DLLs).
- 2.08: Error handling improved.
- 2.07: Clickable graphic links to the KilletSoft web site of the program NTV2Creator.
- 2.07: Clickable graphic linked to the KilletSoft web site of the program NTV2Tools.
- 2.06: The user interface of the program has been adjusted.
- 2.06: All settings have been combined in the group "Settings".
- 2.05: Ellipsoid data can be additionally written into the external files.
- 2.04: Calculated geographic coordinates can be written into an external file.
- 2.04: Original coordinates can be written into an external file.
- 2.03: Outliers can be excluded from the calculation.
- 2.02: New chapter about structure and format of NTV2 grids in the help file.
- 2.01: Language file for Bosnia, Croatia and Serbia added.
- 2.00: New main version number.

#### **Program release NTV2Creator 1.xx**

##### **Changes and Supplements during the version NTV2Creator 1.xx:**

- 1.16: Formats in the log file adapted.
- 1.16: Formatting in the header of the NTV2 ASCII file improved.
- 1.15: Number of grid meshes calculated during the analysis are adjusted to the number of identical points.
- 1.14: Explanations in the log file completed and improved.

1.13: Chapter "Modelling of NTv2 files" and "Identical Points" of the help file supplemented.  
1.13: UTM coordinates of the southern hemisphere are supported.  
1.12: Separators for separating alphanumeric point numbers are considered.  
1.11: Link to a paper about the creation of NTv2 grid files.  
1.10: Geodetic terms unified on the user interface and in the help.  
1.09: The model "Grid-wide transformation" uses more precise Helmert-Parameters.  
1.08: Incorrect addition of missing heights in the target file removed.  
1.07: Help chapter "Examples" extended with evaluations of the quality analysis.  
1.06: Bad matching identical points are determined and suggested for rectification.  
1.05: The quality check displays the deviations in clusters.  
1.05: Quality check by recalculation of the identical points.  
1.05: New checkbox "Determine the quality of NTv2 file".  
1.04: A UTF8 BOM at the beginning of the point files is skipped.  
1.03: Correction of grid points by Residual Gaps Distribution with Natural Neighbour Interpolation.  
1.03: Increase of accuracy by Residual Gaps Distribution with Natural Neighbour Interpolation.  
1.03: The Residual Gaps Distribution can be switched on or off.  
1.02: Help chapter "Ellipsoidal Heights" with an explanation of the ellipsoidal heights added.  
1.02: Help chapter "Identical Points" with the description of the required identical points added.  
1.01: Help chapter "Examples" with detailed calculations added.  
1.00: Verified first edition.

**Outlook:**

Who can translate the language files used by the program NTv2Creator for the user interface into another language? Please report!

**Hint:**

The author would be happy to receive information and suggestions from users for further development of future versions of the program. Please send your experiences and suggestions to:

**Killet GeoSoftware Ing.-GbR**  
**Escheln 28a**  
**47906 Kempen**  
**Germany**

**Phone: +49 (0)2152 961127**  
**Fax: +49 (0)2152 961128**

**Email: <https://www.killetsoft.de/email.htm>**  
**Internet: <https://www.killetsoft.de>**