Release Note History

Product:	Software GEDO Vorsys
Software-Version:	until 2.4.0
Hardware-Version:	
Date:	July 30, 2019
Author:	TS

Version: 2.4.0 (Jul 30, 2019)

- ***Feature: Visualisation of the shift and lift values at reference point***
  The direction of the measured shift and lift values is now visualized with an arrow in front of the value when measuring the nominal/as-built comparison at the reference point or measuring the chord end point with the total station trolley. The indicated direction to the left or right hand side always refers to the chainage direction.

- ***Feature: Apply target height for reference point prism and DR mode***
  The target height of the currently selected measurement mode (prism or DR) is always displayed when defining the chord resp. when measuring the reference point. This height is also applied when the instrument is automatically turned towards the reference point. If the prism height is adjusted in the shortcut menu during reference point measurement, a new option enables the user to apply this height simultaneously for point signalisation in DR and prism mode.

- ***Feature: Display cant error or measured cant value***
  As an alternative to the cant error, the measured cant of the prism trolley can now also be displayed in the measurement dialog. A click on the displayed text changes the display.

- ***Feature: Individual base length for twist calculation***
  Until now the displayed twist value in the measurement dialogue was always specified based on 1m. The base length for twist calculation can now be set individually by clicking on the measured value in the new sub menu. The calculation of the displayed value is always done by interpolation based on the previously saved measured points.

- ***Feature: Redefine total station orientation***
  A new button has been added to the General settings in the total station orientation area. This button enables the initialisation or redefinition of the total station orientation, if this option has been enabled.

- ***Feature: License handling for Win32 system via service***
  A new service has been added to handle the software licenses. This so-called Trimble Railway Permission Service is automatically installed on Win32/64 systems together with GEDO

Vorsys. Please note that the installation must run as administrator. The service enables the use of software licenses via a USB or SD card dongle.

- ***Feature: Plausibility check for gauge measurement***
  At the beginning of the measurement, the system checks whether the measured gauge value is plausible with respect to the currently defined standard track gauge and issues a warning if necessary.
  The plausibility of the measurement is also checked during gauge calibration. The user receives a corresponding message if the reference value does not match the standard gauge and/or the new calibration value deviates greatly from the previous calibration.

- ***New software icon***
  The design of the program icon has been adapted to the other GEDO applications. The previous GEDO Vorsys symbol of the tamping machine is now replaced by an orange globe with a rail positioned in front of it.

- ***Calculation with inverted height reference rail corrected***
  If the height reference is not defined during the measurement according to the design geometry, the design offsets to the reference point and the sign of the design cant are reversed. The height deviation at the reference point therefore always refers to the rail currently selected as the height reference. The displayed cant error now always corresponds to the difference between the nominal and as-built cant. In addition, the cant error is now also displayed with a negative sign if applicable. This definition is now comparable to an adjustment of the references in the GEDO Office module GEDO Tamp.

- ***Automated recalculation for Distance/Height measurement***
  If the settings of the target side, height reference or prism definition are changed in the "Extras – Distance/Height" menu, the displayed lateral distance and height measurements are automatically recalculated and updated. A new measurement is therefore no longer necessary.

- ***Height reference when turning towards reference point***
  The vertical aiming of the total station is now applied according to the design gradient regardless of the current set height reference setting when the total station is automatically turned in the direction of the reference point.

- ***Checking the height reference setting for platform measurement***
  When measuring the distance and height offset to the platform, the setting of the currently selected height reference rail is now checked and, if "automatically" selected, set according to the design alignment. If the current setting does not match the definition of the platform point, a warning will be displayed to enable easy correction.

- ***Updated instrument communication***
  The software component for total station communication has been updated. Due to this, the connection mode “USB+Radio” is no longer supported. If this mode was set during a previous software installation, the communication settings must be checked and confirmed.
  As an alternative to an integrated radio module, an external radio module Trimble Data Link Radio 2.4 GHz (TDL 2.4GHz) can now be configured for communication with the total station. For communication via Bluetooth, a connection via RS232 must be used with COM port set according to the Windows settings.

- ***CommTest for instrument communication***
  The menu “Settings – CommTest” for communication testing now also includes a button to call the instrument function panel.

- ***Revision of Active Prism Settings***
  The prism definition for active prisms has been revised. The previous prism type "MT1000" has been replaced by the type "Active". Previous settings for active prisms must therefore be redefined. When selecting the prism "Active", no target corrections are applied, but the raw measured values are used for targeting the LED(s).

Version: 2.3.1.5 (Feb 07, 2019)

- ***DR mode activates laser pointer***
  The instrument functionality has been adapted so that the laser pointer is automatically activated when the prism type "DR" is selected for direct reflex measurement.

- ***Bug fix: Measurement mode after leaving the options***
  The instrument mode may not have been correctly set to DR or Autolock when leaving the Options dialogue. This is now fixed.

- ***Bug fix: Display of prism height***
  In some cases, the prism height in the fixed point measurement dialog was not displayed correctly. However, the correct height was always applied and saved according to the setting in the options. The display has been corrected and is now consistent again.

Version: 2.3.1.4 (Nov 29, 2018)

- ***Feature: Specify chainage value for relative measurement***
  If a chainage value has been entered for a relative reference point, it can be optionally recalculated from the measurement or retained during line definition. By keeping the keyed-in value, the chainage of the measurement line is synchronised accordingly.

- ***Feature: Verification of the measurement data for post-processing***
  For the recalculation of the Vorsys measurement data sets in the GEDO Office Analysis, it is absolutely necessary that the start and end points were measured with the same total station orientation. In order to ensure this, there is a field check to ensure that the measurement at the prism trolley’s measurement position was carried out in the same session. The user is thus forced to repeat this reference point measurement if necessary.

- ***Reference point definition for measurement without an alignment***
  Previously, a reference point name could only be assigned once if measurement data was captured without an alignment. The previously measured values were overwritten if the measurement was done to the same reference point. With this software adjustment, the reference point can now be measured several times. The earlier measurement data remains assigned to the previously defined chords.

- ***Bug fix: Reference point selection list for Win10***
  On Microsoft Windows 10 operating systems, no scrollbar was displayed in the total station trolley drop-down list for reference point selection name. Therefore, the first and last points of long point lists could not be selected. This is now fixed.

- ***Bug fix: Reference point measurement with automated change of target lock mode***
  If a reference point was measured with automatic change from DR mode to Autolock mode, neither prism constant nor target height were applied to the measurement result. This happened if the laser pointer was switched on to aim the target first. After the warning message “Do you really want to measure reflectorless”, Autolock mode was enabled but the prism settings were not updated. This bug is fixed now.

Version: 2.3.1 (Sep 12, 2018)

- ***Feature: Compatibility with Trimble T10 and TSC7***
  The new software version fully supports radio communication with Trimble TSC7 and T10 controllers. The radio module port will be detected automatically after setting the correct radio cannel and network ID.
  Messages displayed within GEDO Vorsys are no longer displayed in Windows default style. The message window fits to the current program window size so that it can be read and handled more easily.

- ***Feature: Prism setting for DR mode***
  Options for defining the reference point prism now also include a setting for DR mode prism. This definition for height and longitudinal offset are applied automatically when a reference point is measured in DR mode and documented in the data base accordingly. Further, the Autolock status symbol will be coloured in yellow while DR mode is activated.

- ***Feature: Bluetooth-Port selection***
  The trolley sensor’s communication port can now also be selected via the Bluetooth ports’ name (trolleys serial number) when the software is running on a win32 or win64 operating system (e.g. YUMA, TSC7 or T10).

- ***Feature: Individual grid spacing***
  The grid width for automated point storage can be defined individually in the General Settings menu. A minimum point density of 0.5m with an accuracy of 0.1m can be set.

- ***Feature: Total station orientation without alignment***
  The functionality to position the total station perpendicular to the trolley’s pushing direction is now also available with no alignment and no reference points. When the turn to button is pressed, the instrument will turn to the perpendicular position with horizontal sighting to the left or right hand side of the alignment depending on which direction fits according to the current orientation.

- ***Feature: Cant value displayed in Distance/Height measurements***
  The menu for Distance/Height measurement is now also displaying the current cant value next to the measured as-built offsets.

- ***Feature: Reference points added to the data base***
  Absolute Coordinates are now stored in the data base when either new reference points are defined by lateral and vertical offsets keyed in the Paper Plan list, Distance/Height measurement or relative reference points are used. Importing the measurement data into GEDO Office will also include these points so that they are available in a new reference point list for further calculation in the Analysis node.

- ***Feature: User-defined sounds***
  The sound signal for point storage and tangent point information is loaded from a *.wav-file. A new menu Settings – Sound allows the selection of an individual file that has been placed in the program directory's subdirectory Sound. This enables any individual sound for signalisation.

- ***Default settings after installation***
  Pre-defined software default settings after installation are updated according to the latest standard.
  After installation on a win32 or win64 operating system the "Vorsys Data"-directory is located directly at C:\ when the first project file is created.

- ***Refined gauge file***
  The list of continuously stored gauge values now also includes the measurement values for the prism trolley's chord start point so that the gap within the data is kept to a minimum.

- ***Bug fix: Display with higher contrast***
  The setting for visualization in higher contrast (black and white instead of red and green) is now directly activated during the program start up if applicable.

Version 2.3.0 (Apr 27, 2017)

- ***Feature: Display and shortcut to adjust the height reference rail***
  If the height reference rail is not selected according to the alignment during line point measurement, the button for displaying the height reference is visualised in yellow. In this case clicking onto the symbol will adjust the reference rail instead of opening the options dialogue. If the height reference is set correctly, the software is handled as usual.

- ***Feature: Point type for GEDO Scan synchronisation***
  During line measurement the point type can always be changed to "scan synchro" to record a synchronisation point for GEDO Scan measurement analysis. A point name and code can be defined individually before storing which will be used in coordinate export as *.gtd-file from GEDO Office Analysis.

- ***Feature: Automated tribrach***
  An automated tribrach is now available for GEDO CE 2.0 measurement trolleys as an alternative to the standard manual one. The total station tribrach needs to be set in the trolley definition dialogue to apply the corresponding parameters in the measurement calculations.

- ***Feature: Display twist value***
  A twist value is displayed in addition to the cant offset and gauge during line measurement. The twist is giving the rate of cant change per meter compared to the last stored point. Further a comparison with a flexible tolerance is possible which is interpolated from a tolerance table depending on the point distance. Therefore a reference table needs to be located in \Common Files\Gedo.

- ***Feature: Display chainage offset when total station orientation is activated***
  The chainage offset between the trolley and the reference point can be calculated out of the total station orientation. In the past this deviation was only displayed if the automated correction was applied. The offset is now displayed always when total station orientation is available independent from the setting for automated correction.

- ***Feature: Sound after reference point measurement completed***
  A short beep is now conforms that the measurement is finished and ready for storing. The user no longer needs to be checking the display all the time as the sound indicator will confirm the measurement.

- ***Feature: Validity check for heights during line definition***
  In addition to the distance between both trolleys now also the height deviation is verified during line definition measurement. Possible issues in prism height settings might be detected and can be corrected.

- ***Shortcut for prism settings***
  Clicking onto the displayed prism height value opens a separate dialogue box to define the prism height. This value can now also be selected from a list similar to the Options dialogue. Further, the displayed values are maximized for easier handling. Also the longitudinal offset is now applied correctly.

- ***Modification functions are renamed***
  Symbols like "+", "-" and other for buttons to create, rename, copy and delete in the Alignment dialogue, Reference points and main point list are now replaced by clear names.

- ***Relative measurement without communication to the instrument trolley***
  If the communication between the prism trolley and the instrument trolley failed, there was a solution for typing in the total station trolley's sensor values manually when the measurement was done in standard mode. This functionality is now also available for measurements done without reference points.

- ***Point name display in nominal/as-built comparison***
  In the Nominal/as-built comparison measurement dialogue for a reference point, the chainage value is selected first and reducing the point name list according to this chainage section. At the same time, point names containing a separator are split and only the last section is displayed. This renaming operation is now only done if the names first part fits with the chainage value.

- ***Bug fix: Reconnecting to the instrument***
  The connection progress screen was not closed after connecting to the instrument if the connection was re-established after an unusual brake down. This is now fixed.

- ***Bug fix: Inclination for manually stored line point***
  If the trolley was positioned with the fix side on the right and a point was recorded manually, the raw inclination measurement was stored with the incorrect sign. This caused a doubled cant error when recalculating the measurements in GEDO Office. This is now fixed.

- ***Bug fix: Sensor values for line definition in relative mode***
  Gauge and cant sensor values for the prism trolley in the line definition were stored incorrectly into the data base if the measurement was done in relative mode. This issue only became visible during recalculation in GEDO Office and is now fixed.

Version 2.2.7.6 (Aug 31, 2016)

- ***Feature: Use tablets with integrated radio***
  GEDO Vorsys can now be used with some third party computer models if they have an internal radio module to communicate with Trimble instruments (e.g. Panasonic FZ-G1). Radio module and driver compatibility need to be checked case by case.

- ***Feature: Quick selection at alignment import***
  Alignment data import from sve-file has now an additional option to select/unselect all alignments.

- ***Feature: Unit settings in project creation dialogue***
  The dialogue box for creating a new project now includes unit settings. This allows the user to define the track geometry in any preferred unit.

- ***Bug fix: Cant alignment referring to chainage line***
  Alignments where the chainage information refers to the chainage line could not be used in GEDO Vorsys. This is now fixed.

Version 2.2.7.5 (Apr 18, 2016)

- ***Edit reference points***
  Original point information was deleted and overwritten with new information when editing the reference point list. A new entry is now keeping the original data and adds the modified information to the list.

- ***Bug fix: apply sensor calibration values***
  An internal error has happened with GEDO Vorsys 2.2.7.4 when calibrating the trolleys sensor applying the new values. This is now fixed.

Version 2.2.7.4 (Apr 04, 2016)

- ***Feature: Quick access to settings during line definition***
  Fix point measurement settings for prism height and height reference rail can now be changed without going to options dialogue. The can be changed easily just by clicking on the displayed text information.

- ***Feature: Quick access to topo point prism height***
  After selecting “Topo” point type during a line measurement, the prism height can be changed quickly by clicking on the displayed setting. Entering the options menu can therefore be avoided.

- ***Feature: Display main point names***
  If various main points have same chainage position they are listed simultaneously according their priority - horizontal alignment, ramp, gradient - during line measurement. Oversized lists will be truncated at the end.

- ***Feature: Automatic Bluetooth activation***
  Starting the software now automatically activates the controller’s Bluetooth, even if it was previously deactivate.

- ***Feature: Overwrite fix point measurements***
  An additional check for storing the fix point measurement will now need to be confirmed, if a measurement to this point was done previously. This will avoid accidental overwriting of previous measurements.

- ***Feature: Point increment for relative fix point names***
  In relative measurement mode, the fix point name will now be automatically incremented by 1.

- ***Feature: End measurement and exit measurement dialogue***
  The measurement dialogue screen can be exited directly without having to end the tracking mode first. Clicking the [<<<] button automatically stops the tracking mode.

- ***Measurement without prism trolley***
  Some measurements can also be done with instrument trolley only. Previously the software tried to communicate via the prism trolley before requesting direct Bluetooth connection to the instrument trolley. Selecting the communication port can now be done directly before the measurement within the respective menus “Measure fix point”, “Platform” or “Distance/Height”.

- ***Duplicate alignment names***
  Imported alignments with similar names to already existing alignments will automatically be renamed with an index for differentiation.

- ***Platform point definition***
  Platform points are now stored as line points during their definition. Additional storage is therefore no longer necessary.

- ***Bug fix: Relative measurement***
  Shift values were calculated incorrectly for relative measurements (with alignment and without reference points) when the cant was transitioning. This appears as a zig-zag measurement line in GEDO Tamp. Further, cant errors at reference points were always assumed to be zero. This is now fixed. The instrument trolley’s cant is compared with design cant during line definition and further calculation done correctly.

- ***Bug fix: Reference points height***
  The measured height offset was calculated incorrectly for points having a height offset of more than 5 meters to rail design level. This is now fixed so that points with large height offsets can also be used for fix point measurement and line definition.

- ***Bug fix: Import of Alignments***
  Alignments in existing project files created with GEDO Office version 2.6.0 could not be selected for alignment import. This is now fixed.

- ***Bug fix: Display main points***
  The start and end of transition curves were mixed up under certain circumstances. This is now fixed for new alignments.

- ***Bug fix: Topo point calculation***
  The trolley’s prism constant setting was wrongly used for topo point calculation. Computation is now done with prism constant defined for topo prism.

Version 2.2.7.3 (Oct 16, 2015)

- ***Bug fix: Topographic point measurement***
  Storing of points with type “Topo” was not possible. This is now fixed.

Version 2.2.7.2 (Sep 11, 2015)

- ***Feature: Option chainage correction from orientation set up***
  The orientation measurement allows the user to verify that the trolley position is perpendicular to the reference point. The calculated offset can now automatically be taken in account during the chord definition and measurement.

- ***Total station orientation enhancement***
  Orientation parameters for aiming the total stations towards the reference point have been enhanced so that the calculation of station offset is more accurate. The levelling of the total station when aiming to the trolley’s central axis and positioning at a reference point is still obligatory.

Version 2.2.7.1 (Jul 02, 2015)

- ***Feature: Additional averaging parameter for Tracking***
  The filter algorithm for the tracking measurement average has been enhanced. Additional to existing Averaging option a parameter value three is available. Using this option allows to identify anomalies quicker and still using a calculated value that is not only a unique measurement.

- ***Turn to reference point without total station orientation***
  If the orientation of an instrument was defined once in GEDO Vorsys, this value can be used to turn the instrument roughly in the direction to a reference point even if total station orientation is deactivated. In this way the user doesn’t need to define the trolley center axis after each program start. He just needs ensure that instrument is mounted in same direction.

- ***Performance improvement in the display measurement dialogue***
  Latency to show the measurement dialogue after finishing the chord definition has been reduced.

- ***Relationship between measurement file and alignment***
  A tamping run with measurements was linked to more than one alignment if alignments with the same name were available. Now the tamping run is unique for one alignment even if there are others with the same name.

- ***Bug fix: Incorrect prism settings***
  After changing the trolley file current prism setting were only set correctly if options were approved explicitly. This is now fixed.

- ***Bug fix: Alignment calculation in x-ramps***
  In some circumstances the new calculation with the help of a short alignment caused errors in the calculation of lift values in x-ramps. This is now fixed.

Version 2.2.7 (May 12, 2015)

- ***Feature: Adding alignment data to existing project***
  It is now possible to import alignment data into an already existing project. Data can be loaded from any SVE-file. The Import function is available in menu data.

- ***Alignment calculation***
  After a chord definition, a design calculation is carried out. To minimize the calculation time only the relevant part of the track will be used.

- ***Optional scale for fix point measurement***
  Some coordinate reference systems use a scale factor. In certain circumstances this is visivle when short distances are made to reference points. It is now possible to apply a scale factor in the Options menu. During chord measurements a local scale factor is still calculated based on measured distances against design distances.

- ***Measure fix point***
  Measure fix point with GEDO CE 2.0 has needed an initialization with the prism trolley. In the new software version, the menu „measure fix point“ for nominal and as build comparison allows connection only to the instrument trolley so measurement with a single trolley is possible.

- ***Omitted Bluetooth connection***
  If a Bluetooth connection cannot be established for any reason, the user can select the trolley definition file. This wasn’t possible with GEDO CE 2.0 before. With this software update XML-files will be stored on a local directory after each successful initialization with the trolleys and can be loaded if necessary. Of course cant and gauge values cannot be provided in this case and have to be typed in manually.

- ***Interruption of Bluetooth connection***
  If the Bluetooth connection breaks down during measurement, the software will try to re-establish this link. After successful reconnection measurement can be continued.

- ***Additional option for total station orientation***
  In previous versions you have to specify whether Autolock or Laserpointer is turned on after turning the instrument to reference point. Total station orientation now has the additional option “Manual” to allow the user to select which instrument mode will be activated after turn to command.

- ***Total station orientation***
  Total station orientation is only available for measurement trolley GEDO CE 2.0. This option will be deactivated for previous trolleys. Further orientation measurement will no longer be used for automated correction of non-perpendicular trolley position. It will only help to aim the prism. Consequently a perpendicular position to a reference point is still very important.

- ***Bug fix: data loss in SVE-file***
  Loading of new project had caused problems with trolley information, prism settings right up to complete damage of database. This is now fixed.

- ***Microsoft® .Net Compact Framework version 3.5***
  GEDO Vorsys software is converted to a newer version of Microsoft® .Net Compact Framework. Now installation of version 3.5 is necessary.

Version 2.2.5 (Dec 22, 2014)

- ***Bug fix: Active prism***
  Selection of active prism (MT 1000) causes software to fail to response. This is now fixed. Various change between prism type “Standard”, “MT 1000” and “User defined” is possible.

Version 2.2.4 (Nov 24, 2014)

- ***Orientation measurement***
  The dialogue box “General settings” has an additional option to as to whether switching the instrument into autolock mode or laserpointer after instrument has turned to reference point.

- ***Joystick function reworked***
  Previously joystick functionality was tricky to handle with the Tablet PC. Steering was reworked uniformly for all system. The total station turns during joystick button of keyboard is pressed. A simple click on the screen display will start a continuous movement until the stop button in the middle of the joystick cross is pressed.

- ***Unique reference points***
  To avoid inconsistent data for reference points, these points can no longer deleted from database. Editing data is only possible if a new unique name is defined.

- ***SPS-Instrument***
  If an SPS instrument was used previously, tracking mode with 10 Hz could not be used. Now the rate will be downgraded to 2,5Hz when used with a passive prism, so that tracking is possible.

- ***Bug fix: Capital letters in file extension***
  If the database had a file extension with capital letters *.SVE, it was not available as a project. Now database can have a file extension *.sve or *.SVE.

- ***Bug fix: Displayed measurement values during chord definition***
  The dialogue box “Define chord” displayed incorrect values for measured offsets. This did not affect anything else and is now adjusted.

- ***Bug fix: Internal calculation for chord line***
  In some circumstances no offset to line was displayed during measurement because calculation of line was not finished when line measurement was started. Now the calculation is always done prior to line measurement. Therefore you may see a window with information to wait a moment.

Version 2.2.3 (Aug 20, 2014)

- ***Definition of track geometry***
  Track geometry reference gauge and cant base are selected automatically from the database. These values are fixed and cannot be changed within a Vorsys project. As a result you’ll have the same settings in field as in your GEDO Office file. If a new project is created in GEDO Vorsys, the track geometry parameters have to be defined during project generation.

- ***Separate gauge recording***
  Separate measured gauge readings are now stored in the data base and can be exported at GEDO Office (v 2.3.3 or later).

- ***Total station orientation***
  The Total Station orientation option allows you to set up the instrument trolley perpendicular to your control point. To set the instrument orientation, the measurement has to be done using the laser pointer towards the trolley's movable side. To activate or de-activate this option, go to the General Settings menu and check the Total Station orientation box.

- ***Bug fix: "Create pole field"***
  Live reference values for versines were not calculated during chord definition. All values were post-calculated and after that approved for application. This could have produced the problem that no versines were calculated at the beginning of the measurement.

- ***Bug fix: Measure fix point***
  If the option "chord point" in menu "Extras – Measure fix point" was activated, then measured fix points were inadvertently deleted in the data base.

- ***Bug fix: umlauts***
  If a project name with umlauts was used, the project was not loaded automatically at next start of programme (only for Yuma 2).

- ***Bug fix: relative measurement***
  During the chord definition, the elevation for the top of rail was used at the instrument trolley position and was not adjusted to the trunnion axis height.

- ***Bug fix: General settings***
  If the distance unit setting was changed, an error message was displayed. This was due to the new unit (e.g. US Survey Feet) being used for conversion, but the old unit was still used in the text boxes like cant base (1500mm).

Version 2.2.0 (Apr 30, 2014)

- ***Turn to commands and perpendicularity assurance***
  In order to increase the reliability of an instrument trolley setup perpendicular to a reference point, the orientation of the total station can be defined when the software is started. Then the instrument will turn itself automatically perpendicular to the centre line and switch the laser pointer on to indicate the best position for the trolley. Additionally, the software shows the misplacement in chainage direction.
  As an additional feature, the total station will automatically turn itself towards the prism trolley after a successful reference point measurement.

- ***Measurement without reference points***
  The up until now strictly separated measurement modes with or without reference points can now be combined in any constellation. If there is a reference point missing in a certain area, this section can be bridged by a relative measurement and afterwards use available reference points again. The correction values of once measured reference points no longer get lost.
  In addition to that, instead of zero lift and slue values any other value can be entered when an end point to a chord is defined in relative mode.

- ***Define chord***
  To improve the working process, the “Back” button has been replaced by a “Next” button. This opens the Measurement dialog directly instead of the need to go back to the main menu first.

- ***New dialog „General settings“***
  This new dialog replaces the two dialogs Units/Geometry and Tamping run. All additional future general settings will be arranged in this dialog.

- ***Selection of tamping run***
  The name of a tamping run was defined in the dialog Tamping run up to now. To increase clarity, this has been moved into the same dialog where the alignment is selected. Depending on a selected alignment node, only the previously defined tamping runs that have this alignment assigned to it will be displayed.
  All other settings of the old Tamping run dialog can be found under General settings now.

- ***Shortcut to alignment selection dialog***
  A new button was implemented to navigate directly to the alignment selection dialog. The previous way using the menu item File > Data > Alignment files yet is still available.

- ***Autolock status display***
  As known from the chord definition dialog, a green (when locked) or red (when unlocked) panel on the screen shows the Autolock status in the dialogs for Platform measurement and Distance/Height.

- ***Input of reference points***
  If reference points need to be entered manually in the field, a button is available now to calculate the design cant value at the entered chainage. The cant value no longer needs to be taken from a cant list.

- ***Platform measurement***
  The numbering of platform point was made much more flexible. In the Options dialog a name can be defined to distinguish better between two platforms in the same project. The whole platform point name concatenated as PlatformName_PointNumber. The starting PointNumber and by how much it should be in- or decremented can also be defined.

- ***Easy access to Options dialog***
  The Options dialog was only accessible through the Chord definition dialog if total station and trolleys were connected properly. Now, you may open the dialog using the menu item Extras > Options to configure the required settings.

- ***Usage of active prisms***
  If active prisms are used as reference point prism, trolley prism or topo prism, the target ID may be selected now for all three prisms separately in the Options dialog.

- ***Calibration results log***
  If inclination or gauge sensors are calibrated the complete results are stored in the standard daily log file and therefore are available for reports if someone asks about it.

- ***Bug fixes***
  If Tracklight was enabled a tracking measurement towards the prism trolley is not possible. Tracklight is now automatically disabled as soon as the Measurement dialog is opened.

The reflectorless mode did not work with SPS930 total stations.
Win32 version: At startup it is checked whether the software is already running. If so, this instance is brought to the front of the screen as it is not allowed to have two instances running parallel.

Version 2.1.1 (Dec 17, 2013)

- ***Bug fix Topo survey***
  If a Topo point was surveyed the target height was applied with the wrong sign. This error has been fixed.
  In addition to that, Topo points can now also be stored if they were outside of a defined chord, which is not possible for points surveyed in standard mode. In this case, only the chainage but no lift and slue values will be displayed.

- ***Default language "English"***
  After first installation the default language was German for as long as no other language pack was selected. This has been changed so that the default language now is English. But it still is necessary to pick the English language pack explicitly again to get away from the default texts.

- ***Export to WinALC***
  In main menu under Extras > Export a *.ver file can be generated out of the raw measured lift and slue values. This file then can be used by the tamping machine directly if this is required. Of course, GEDO Tamp still has to be used if ramps need to be defined in order to take care of max values and constraints.

- ***Survey without vertical alignment***
  If only the horizontal alignment is known in a project but neither vertical alignment nor elevations of the control points are available, then GEDO Vorsys can be used nonetheless. In this case the uplift at the chord end points will be set to zero and in between a constant slope will be assumed.

- ***Manual input of sensor values***
  The manual input of sensor values in case of a radio malfunction between the two trolleys is now also possible for generation 2.0 trolleys. But as an inevitable requirement, the trolley had to be connected at least once since the start of the program so that the calibration values could be loaded and applied correctly.

- ***Certified language files***
  Due to quality assurance when it comes to translated language files (*.gxl) only language files that were checked by Trimble and were certified with a unique key. Unauthorized editing of these files is no longer possible. The software by default is delivered with English and German.

Version 2.1.0 (Jan 22, 2013)

- ***Data base version***
  From this version 2.1.0 on, all Vorsys projects are managed as data bases. The data base is generated in GEDO Office and contains all alignments required for the field survey. All collected measurement data is stored in that data base as well and can later be imported

into the GEDO Office project again. The data base version reduces and eases data transfer massively what reduces sources of potential errors.

- ***New look and feel for context menus***
  Due to the fact that the software now runs on Trimble Tablets as well, all context menus have been replaced by button panels as known from Trimble Access. This became necessary as the size of context menus is defined by the operating system settings and cannot be resized what made them appear very small against the rest of GEDO Vorsys dialogs.

- ***New measurement mode "Measure fix point"***
  The mode to compare the as-built against a design of a control point without the requirement to define chords is no longer possible through the "Define chord" dialog. It can now be found as a new menu entry under *Extras > Measure fix point*. For this mode, only the total station trolley needs to be linked to the control unit whereas to define a chord both trolleys need to be accessible.

- ***Increased smoothing of continuous measurements***
  The number of measurements during a continuous survey towards the prism trolley has been increased to a max of 50 measurements in order to reduce the impact of heavy weather conditions and refraction. At a measurement rate of 10Hz, the values of the past 5 seconds are collected to calculate the mean value. At that point it must be clear that auto storage of points cannot be used anymore but only manual storage creates reasonable results.

Version 2.0.0 (Jan 22, 2013)

- ***Automated height reference rail selection***
  During all measurements the height reference rail can be selected manually or automatically from the existing alignment data. If the rail changed from one side to the other a dialog pops up to indicate this to the user. If this notification is not required it can be disabled now.

- ***Changed name of installation directory***
  The installation directory changed from „VorsysCE" to "GedoVorsys" to be conform to other Gedo products. As a consequence, the license file and the file VorsysCE.ini have to be copied manually from an already existing installation to the new directory.

- ***Support for latest trolley generation GedoCE_2.0***
  The new trolley is equipped with an internal storage device which stores all relevant trolley geometry parameters on it. A trolley configuration file therefore is no longer needed. In the trolley selection dialog simply "GedoCE_2.0" has to be selected.

Version 1.6.6 (Sep 11, 2012)

- ***Manual input of sensor values***
  If the radio link between total station trolley and prism trolley does not work the as-built cant and gauge values can be measured independently and entered through a dialog in Vorsys. By doing so, the system still stays fully operatable.

- ***Separated color levels for normal measure points and geometry points***
  The change from red to yellow or green background color to distinguish how close the prism trolley is to a measurement interval point was the same for geometry points. Now it is possible to have two separate settings with different interval values.

- ***Stronger contrast setting***
  Instead of green and red background color to distinguish different distances from a relevant interval point, the user can decide wheather white and black color should be used instead. That might make sense if a user is colorblind.

- ***Vertical alignment runs at centre line***
  In some countries the vertical alignment does not run on the lower rail but in the theoretical centre of the two rails. In this case it is only necessary to check a box in the alignment parameter settings and all values are calculated correctly without the need to convert the vertical alignment in any way.

- ***Spaces in fix point names***
  If fix point names include spaces the resulting measurement file that is imported into GedoTamp could not be interpreted correctly. The spaces are now automatically replaced by '_' so that this is no longer an issue.

Version 1.6.5 (Mar 08, 2012)

- ***Autostore every 0.5 meter***
  For special applications measured values can be stored every 0.5 meter in continuous mode.

- ***Directory "Messdatei" renamed into "Meas"***
  Due to necessary internationalization the directory name has been changed.

- ***Selectable angle and distance units***
  Due to necessary internationalization the units for angle values (Gons, Degrees) and distance values (Meters, International Feet, U.S. Survey Feet) can be selected by the user.

- ***Flexible import of reference point files***
  The coordinate units of csv files are interpreted as set in the current project properties. The coordinate order can be selected from East-North-Elevation and North-East-Elevation.

- ***Versine calculation optimized***
  In certain alignment element sequences (strong curved arcs) the longitudinal scale was calculated blurred. This insufficiency has been eliminated

Version 1.6.4 (Jan 23, 2012)

- ***Profiler calibration optimized***
  From now on two offsets can be defined as calibration plate heights. This was necessary as these plates may have different heights.

- ***Profiler calibration***
  The calibration algorithm did not work properly when two severely different target heights were used for fix and movable trolley side.

- ***Support for cubic parabola Korea implemented***

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