



FGPS International

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SeisPos Release Notes

Date: 13/12/2018

Version: 21.93

| No. | Module | Description |
|------------|--|---|
| 1 | Project | Provide a warning message if some directories could not be deleted during project/line deletion. |
| 2 | Input | Many more CRS now identified and given EPSG codes. |
| 3 | Input | Improved handling of line names with duplicate lines. |
| 4 | Network Adjust, QC, Report Plots, Trend Analysis | Added gun-array category to plots. |
| 5 | Output | Improved handling of concatenated operations in P111. |
| 6 | Output | Tide value, if available, is written to P1/11 P1 record additional field for echosounder records. |
| 7 | Output | P1/11 depths now output to 3dp. |
| 8 | Output | Echosounder records now have their own depth. Other records have depth from first selected echosounder. |
| 9 | Output | At least one echosounder record must be selected for depths to be output. |
| 10 | Output | SPS records available are now limited to Source and Echosounder (used only for depth & tide for S record). |
| 11 | Output | Tide file settings are now saved with the project (were global). These will have to be re-set when upgrading. |



Date: 29/11/2018

Version: 21.92

| No. | Module | Description |
|------------|---------------|---|
| 1 | Input | When using NADCON transformations, EPSG CRSs NAD27 and NAD83 will be created (and only one of each). |
| 2 | Input | NADCON transformations now have an EPSG concatenated operation automatically created for convenience. |
| 3 | Database | Improved checking for changes when closing the module or saving defaults. |



Date: 27/11/2018

Version: 21.91

| No. | Module | Description |
|-----|----------------|--|
| 1 | IMPORTANT | Starting from version 21.91, the way CRS codes are allocated has been changed, particularly with regard to WGS 84, NAD27 and NAD83. |
| 2 | IMPORTANT | After upgrading to version 21.91, if CRS defaults have been saved, it will be necessary to input the next line manually and save them again. |
| 3 | Project/Input | Added new option to ignore duplicate shots. |
| 4 | Network Adjust | Replay now works on saved data. |
| 5 | QC | Bugfix: Sometimes crashed when opening vessel plot in project with hires timestamp obs. |
| 6 | Output | Updated SPS header records for which semi-colon terminator is required. |
| 7 | Output | Added new option to ignore duplicate shots. |
| 8 | Report plots | Bugfix: Corrected CSV column titles. |
| 9 | General | Improved matching of shot to time when two shots occur within one second. |

Date: 07/11/2018

Version: 21.90

| No. | Module | Description |
|-----|--------|--|
| 1 | Output | P190/SPS can now be output using hires times from P2/11 shot events. |



Date: 05/11/2018

Version: 21.89

| No. | Module | Description |
|-----|--------------|---|
| 1 | Report Plots | Bugfix: some plots created in previous version not correctly plotted. |

Date: 03/11/2018

Version: 21.88

| No. | Module | Description |
|-----|----------------|---|
| 1 | Network Adjust | Bugfix: was failing when Interpolate Unsolved Nodes option used and sub-array separations present. |
| 2 | Report Plots | Improved error handling when CSV file cannot be written due to it being open in another application. |
| 3 | Report Plots | Auto-configuration of sub-array separations now compare only adjacent sub-array centre nodes. |
| 4 | Output | Bugfix: P1/11 additional field for water depth referenced incorrect vertical CRS when depths reduced. |

Date: 26/10/2018

Version: 21.87

| No. | Module | Description |
|-----|----------------|--|
| 1 | Network Adjust | Bugfix: dynamic gun offsets was adjusting sub-array separation node offsets. |



Date: 26/10/2018

Version: 21.86

| No. | Module | Description |
|-----|----------|--|
| 1 | Database | Utilities Create sub-array nodes & obs: Sub-array centre comparison nodes now created. |
| 2 | Project | Added option to automatically create sub-array separations nodes. |

Date: 25/10/2018

Version: 21.85

| No. | Module | Description |
|-----|-----------------|---|
| 1 | All | Enhancements for GATOR ROV networks. |
| 2 | Database | Added node attributes for USBL alignment flags. |
| 3 | Network Adjust | Added Network menu items for choice of ROV network. |
| 4 | Report Plots | Corrected naming of FPD and comparison plots. |
| 5 | EPSG | Line database file now simply called line.gpf instead of having the same name as the directory. |
| 6 | Network Display | Improvements to node list, node dialog and obs dialog interactions. |
| 7 | Utilities | Added main menu utility to edit P2 in ascii or .zip file. |



Date: 25/09/2018

Version: 21.84

| No. | Module | Description |
|-----|--------------|--|
| 1 | Precon | Improved handling of overlay plots. |
| 2 | Output | Added option to use hires timestamp from obs for P190. |
| 3 | QC | Vessel shot time plot will now use hires timestamp if available. |
| 4 | Shot reports | time increment check will now use hires timestamp if available. |

Date: 14/09/2018

Version: 21.83

| No. | Module | Description |
|-----|---------------------|---|
| 1 | Compass Calibration | Gracefully handle streamers with no compasses. |
| 2 | Adjustment | Save grid data as soon as computed so that P1 output can be checked while adjustment still in progress. |
| 3 | Output | Added option to use hires timestamp from obs for P111. |
| 4 | Report Plots | Shot time report will now use hires timestamp if available. |



Date: 29/06/2018

Version: 21.82

| No. | Module | Description |
|-----|------------------|---|
| 1 | Final Report | "Exclude obs not used" and "Exclude nodes not used" options now checked by default. |
| 2 | Database, Output | New option for SPS for shot by shot user defined point codes. |

Date: 12/06/2018

Version: 21.81

| No. | Module | Description |
|-----|--------|--|
| 1 | Output | Bugfix: Corrected depth interpolation when output CRS different from survey CRS. |

Date: 11/06/2018

Version: 21.80

| No. | Module | Description |
|-----|--------|---|
| 1 | Output | Bugfix: Corrected depth interpolation when using depth origin at record position. |



Date: 04/06/2018

Version: 21.79

| No. | Module | Description |
|-----|--------------|---|
| 1 | Database | Gun Fired Event data can now be viewed and edited (available for P2/11 input only). |
| 2 | Precondition | Corrected logging of parameters during processing. |

Date: 14/05/2018

Version: 21.78

| No. | Module | Description |
|-----|--------|--|
| 1 | Input | P2/11 input now creates source fired events from T2,3,3,1 records if no corresponding T2,3,3,0 record available. |
| 2 | Precon | Bugfix: access violation sometimes when creating comparison plots. |
| 3 | Report | Bugfix: trend analysis comparison plot data was not correctly stored. |

Date: 02/05/2018

Version: 21.77

| No. | Module | Description |
|-----|----------------|---|
| 1 | Network Adjust | Bugfix: access violation handling dynamic gun-arrays when missing data. |



Date: 01/05/2018

Version: 21.76

| No. | Module | Description |
|-----|----------|---|
| 1 | Database | CRS Manager: Can now import ".geo" files. |

Date: 24/04/2018

Version: 21.75

| No. | Module | Description |
|-----|----------|---|
| 1 | Database | Source fired and general events can now be deleted. |

Date: 23/04/2018

Version: 21.74

| No. | Module | Description |
|-----|----------------|--|
| 1 | Network Adjust | Improved handling for very dynamic sub-arrays. |
| 2 | Network Adjust | Bugfix: was assigning incorrect azimuth to some gun-array nodes. |



Date: 17/04/2018

Version: 21.73

| No. | Module | Description |
|-----|--------------|--|
| 1 | Precondition | Bugfix: Obs unassigned to a group causing crash when plot by group option is used. |

Date: 11/04/2018

Version: 21.72

| No. | Module | Description |
|-----|----------------|---|
| 1 | Network Adjust | Bugfix: Was failing when gaps in certain RGPS gun observations. |

Date: 10/04/2018

Version: 21.71

| No. | Module | Description |
|-----|-----------|--|
| 1 | Output | P111 now gives choice of reduced or unreduced depth in additional field. |
| 2 | TA Report | Bugfix: Was using same data for some plots. |



Date: 04/04/2018

Version: 21.70

| No. | Module | Description |
|-----|--------|---|
| 1 | Output | Bugfix: Further corrections to handling of streamer depth sensors when not directly attached to streamer. |

Date: 23/04/2018

Version: 21.69

| No. | Module | Description |
|-----|----------------|--|
| 1 | Network Adjust | Now handles situation where only one of a lat/lon pair has been edited. |
| 2 | Output | Now reports invalid date/time in tide file. |
| 3 | Output | Bugfix: Corrected output of transformation coefficient parameters in P111. |
| 4 | Output | Bugfix: Corrected handling of streamer depth sensors when not directly attached to streamer. |

Date: 13/11/2017

Version: 21.68

| No. | Module | Description |
|-----|---------|---|
| 1 | Reports | Bugfix: Corrected shot report when source id of FSP different to source id of FGSP. |



Date: 04/11/2017

Version: 21.67

| No. | Module | Description |
|-----|--------|--|
| 1 | Precon | Bugfix: Crashed when creating plot for obs with no data. |

Date: 04/11/2017

Version: 21.66

| No. | Module | Description |
|-----|--------|--------------------------------------|
| 1 | Precon | Bugfix: Duplicate hi-res shot times. |

Date: 04/11/2017

Version: 21.65

| No. | Module | Description |
|-----|--------|---|
| 1 | Output | Bugfix: Handling of non-metric CRS when not the survey CRS. |



Date: 02/11/2017

Version: 21.64

| No. | Module | Description |
|-----|----------|--|
| 1 | Database | Bugfix: Line name was not being correctly saved when editing general header table. |
| 2 | Input | Observation with name DDDHHMMSS.ssssss now assigned as type TIME STAMP. |

Date: 26/10/2017

Version: 21.63

| No. | Module | Description |
|-----|---------|---|
| 1 | Project | New option "circle line", affects reporting and QC modules. |
| 2 | Reports | Improved CSV file generation for plot reports. |



Date: 24/10/2017

Version: 21.62

| No. | Module | Description |
|-----|---------|---|
| 1 | Import | Minor bugfixes to P2/11 import. |
| 2 | Import | Significant improvement in speed for P2/11. |
| 3 | Import | Now automatically creates streamer nodes at end of active streamer if needed. |
| 4 | Reports | Bugfix: Some reports with crossline series contained bad data at the last shot. |

Date: 14/09/2017

Version: 21.61

| No. | Module | Description |
|-----|--------------|--|
| 1 | Precondition | Bugfix: occasional incorrect conversion of hi res observation time data from time domain to shot domain. |

Date: 11/09/2017

Version: 21.60

| No. | Module | Description |
|-----|---------|---|
| 1 | Reports | Bugfix: was unable to read derived obs results. |



Date: 08/09/2017

Version: 21.59

| No. | Module | Description |
|-----|----------------|---|
| 1 | Network Adjust | Bugfix: was not correctly handling case when first four gyros on a vessel are rejected. |

Date: 08/09/2017

Version: 21.58

| No. | Module | Description |
|-----|--------|---|
| 1 | Export | New P111 option "Use node id for OBJREF". |

Date: 30/08/2017

Version: 21.57

| No. | Module | Description |
|-----|--------------|--|
| 1 | Database | The Shot table has been superseded by the General Event and Source Fired Event tables. |
| 2 | Precondition | Bugfix: Data editing controls were always disabled. |
| 3 | Report | Bugfix: was not auto-configuring gun depths referenced to string not fixed to gun-array. |
| 4 | Report | Plot auto-configuration defaults now check for existence of data availability. |



Date: 15/08/2017

Version: 21.56

| No. | Module | Description |
|-----|----------------|--|
| 1 | Network Adjust | Improved handling of compassless networks. |
| 2 | Output | Improved handling of compassless networks. |

Date: 10/08/2017

Version: 21.55

| No. | Module | Description |
|-----|----------------|--|
| 1 | Network Adjust | Improved assignment of substitute obs for mag bearing manual obs with bad source data. |
| 2 | Network Adjust | Improved handling of compassless networks. |

Date: 08/08/2017

Version: 21.54

| No. | Module | Description |
|-----|----------------|--|
| 1 | P2/11 Input | Bugfix: Corrected saving of single position waypoints. |
| 2 | Network Adjust | Bugfix: Corrected handling of manual mag bearing obs whose source data is bad. |



Date: 03/08/2017

Version: 21.53

| No. | Module | Description |
|-----|-------------|---|
| 1 | Main window | Bugfix: Sometimes crashed on startup if licence due to expire soon. |

Date: 02/08/2017

Version: 21.52

| No. | Module | Description |
|-----|----------------|--|
| 1 | Network Adjust | Click Stop button second time to force immediate stop. |
| 2 | Network Adjust | Improved substitution of bad source obs for manual magnetic bearing obs. |



Date: 28/07/2017

Version: 21.51

| No. | Module | Description |
|-----|--------------|--|
| 1 | Input | Deprecated check for colocated depth sensor and compass. |
| 2 | Compass Bias | Improved performance for large datasets. |
| 3 | Output | P1/11 now includes geographic extent. |
| 4 | Output | For P1/90 improved handling of high coordinate values $\geq 10,000,000$. |
| 5 | Output | P1/11 now includes gun depths in gun P1 records if available. |
| 6 | EPSG | Added support for coordinate operation method 1037 "Position Vector transformation (geog3D domain)". |

Date: 26/06/2017

Version: 21.50

| No. | Module | Description |
|-----|-----------|--|
| 1 | Main Menu | Added option to open project folder. |
| 2 | Database | Bugfix: Was incorrectly computed node coordinates when changing CRS. |
| 3 | Reports | Bugfix: Was not using correct paths to read database. |
| 4 | Project | Line List now saves edits to status/FGSP/LGSP. |



Date: 22/06/2017

Version: 21.49

| No. | Module | Description |
|-----|------------|---------------------------|
| 1 | Adjustment | Corrected logging in GUI. |

Date: 20/06/2017

Version: 21.48

| No. | Module | Description |
|-----|----------------|---|
| 1 | General | Improved log file handling. |
| 2 | Main Menu | Opening of project folders moved to "Project" menu. |
| 3 | Main Menu | Added new "Line List" in the "Project" menu, this replaces the list in the "Project Edit" window. |
| 4 | Input | Improved handling of duplicate node IDs from H51@0 records. |
| 5 | Multiplot form | Precondition, QC and TA Report modules now all save their own window positions. |



Date: 10/06/2017

Version: 21.47

| No. | Module | Description |
|------------|---------------|--|
| 1 | Output | Bugfix: Sometimes got error in receiver coordinates when $N \geq 10000000$. |



Date: 09/06/2017

Version: 21.46

| No. | Module | Description |
|-----|----------------|---|
| 1 | Input | Default SD for DGPS observations now set to 1.0. |
| 2 | Database | Now checks for node reference integrity when changing node type from vessel. |
| 3 | Database | Bugfix: was not able to change a node's reference node. |
| 4 | Precon | Bugfix: Wrapping problem caused by corrupt data in bearing obs. |
| 5 | Output | P1/11 now includes H1,0,2,0 record with sequence number, and WGS84 coordinates in CRS C. |
| 6 | Output | Bugfix: rounding error causing last receiver to not be output under certain circumstances. |
| 7 | Output | Geographic coordinates for first Rx in P1/11 now output to 6dp. |
| 8 | Report | Bugfix: In some cases streamer depth plots were not correct. |
| 9 | Report | Bugfix: Incorrect plot data when comparing to Vessel plots. |
| 10 | Projects | All files and project folders now deleted when a project is deleted. |
| 11 | Network | Zooming with mouse wheel was not working correctly on Windows 10. |
| 12 | Network Adjust | Now ensures a valid network configuration exists when saving adjustment parameter set. |
| 13 | General | Recent project lists now show only project name; max number of recent projects increased to 12. |
| 14 | General | Multi Plot form: Now saves current palette file and plot list window position. |
| 15 | General | Improved detection of format for UKOOA files. |



Date: 03/04/2017

Version: 21.45

| No. | Module | Description |
|-----|--------------------|--|
| 1 | General | Increased maximum number of vessels to 50. |
| 2 | Input | Many improvements to P2/11 format checking. |
| 3 | Database | SD for observations whose units are ms are now displayed in ms. |
| 4 | Precon | Bugfix: Could crash if no waypoints read from P2 file. |
| 5 | Precon | Bugfix: Corrected zooming operation in plots. |
| 6 | Network Adjust | Bugfix: Was losing gun-array orientation when nodes removed during adjustment for not solving. |
| 7 | Observation Dialog | SD for observations whose units are ms are now displayed in ms. |

Date: 14/03/2017

Version: 21.44

| No. | Module | Description |
|-----|-------------|--|
| 1 | User Manual | Updated. |
| 2 | Precon | Bugfix: Corrected saving of streamer depth stats mean. |



Date: 10/03/2017

Version: 21.43

| No. | Module | Description |
|-----|--------|--|
| 1 | Input | P2/11 records now have escape sequences replaced in text fields. |
| 2 | Input | Many improvements to format and integrity checking of P2/11 files. |
| 3 | Precon | Bugfix: Corrected saving of streamer depth stats. |
| 4 | Output | Improvements to generation of P1/11 files. |

Date: 11/02/2017

Version: 21.42

| No. | Module | Description |
|-----|--------|--|
| 1 | Output | Bugfix: Hires observation list sometimes caused crash. |



Date: 10/02/2017

Version: 21.41

| No. | Module | Description |
|-----|--------|--|
| 1 | All | New observation type "TIMESTAMP JJJHHMMSS.ssss". |
| 2 | Precon | Timestamp observation no longer interpolated. |
| 3 | Output | For SPS hires time, only allow use of obs with the above new TIMESTAMP type. |
| 4 | Output | Bugfix: Set of records for output was not saved correctly if buoy ordering had been changed. |

Date: 27/01/2017

Version: 21.40

| No. | Module | Description |
|-----|----------|---|
| 1 | Database | New utility to export Field Positioning Data to SPS file. |



Date: 24/01/2017

Version: 21.39

| No. | Module | Description |
|-----|--------|--|
| 1 | Output | When copying header file, source text is wrapped to 80 chars and blank lines removed. |
| 2 | Output | When copying header file, new option available to copy the header file verbatim without trying to format it to 80 chars. |
| 3 | Report | Bugfix: Unwrapping angular observation values was using bad data samples causing incorrect standard deviation. |

Date: 23/01/2017

Version: 21.38

| No. | Module | Description |
|-----|-------------|---|
| 1 | P190 Output | Improved rounding of seconds in data records. |

Date: 19/01/2017

Version: 21.37

| No. | Module | Description |
|-----|--------------|---|
| 1 | Network form | Bugfix: Ensure log file is closed (prevents warning about being unable to open log file). |
| 2 | Precon | Bugfix: Sometimes crashed when increasing number of plots per screen. |



Date: 08/01/2017

Version: 21.36

| No. | Module | Description |
|-----|--------|---|
| 1 | Input | P2/11 shot point increment now derived from first two shot numbers. |
| 2 | Input | P2/11 preplot line segment no longer create duplicate waypoints. |
| 3 | Output | Bugfix: Source depths were not written in some cases. |

Date: 04/01/2017

Version: 21.35

| No. | Module | Description |
|-----|----------------|---|
| 1 | Database | Bugfix: Loading obs defaults sometimes failed. |
| 2 | Network Adjust | Bugfix: dynamic gun-array incorrectly initialised after changing network configuration. |



Date: 30/12/2016

Version: 21.34

| No. | Module | Description |
|-----|------------------|---|
| 1 | P2/11 Input | 3D to 2D transformation for non-EPG WGS84 CRS now auto-created if missing. |
| 2 | P1/11 Output | All string fields now have reserved chars escaped and non-ansi chars removed. |
| 3 | Database, Output | Bugfix: bug decoding time for lines spanning one day. |

Date: 04/12/2016

Version: 21.33

| No. | Module | Description |
|-----|--------------|--|
| 1 | Precondition | Bugfix: crash on exit interactive Precondition on newly input line. |
| 2 | Precondition | Bugfix: was not setting line status to "Preconditioned" on newly input line. |
| 3 | Multiplot | Bugfix: page up and page down swapped. |



Date: 30/11/2016

Version: 21.32

| No. | Module | Description |
|-----|----------------|---|
| 1 | Input P2/11 | Now handles time up to microsecond precision. |
| 2 | Database | Bugfix: satellite obs datum was not always being saved after edit. |
| 3 | Precondition | Improved handling of very large datasets (addresses out of memory problem). |
| 4 | Precondition | Network display no longer supports shot-by-shot display or observation status colour. |
| 5 | Network Adjust | For multi-vessel now uses waypoints from another vessel if none defined for a vessel. |
| 6 | Network Adjust | Bugfix: hangup when selecting lines. |
| 7 | Output P1/90 | Bugfix: output failed when vessel name was longer than 17 characters. |
| 8 | Output P1/11 | Now written with time up to microsecond precision. |
| 9 | Output P1/11 | Bugfix: CRS references corrected for the case where WGS84 is the projected base geographic CRS. |
| 10 | Output P1/11 | Bugfix: Coordinate transformations now only created if both CRS are also being output. |
| 11 | Output P1/11 | Bugfix: All CRS used in coordinate transformations are now output. |



Date: 10/11/2016

Version: 21.31

| No. | Module | Description |
|-----|----------------|--|
| 1 | Input P2/11 | Improved checking of references for compound CRS. |
| 2 | Input P2/11 | Allow TEXT data type for preplot and acquisition point numbers (will still be converted to a number internally). |
| 3 | Input P2/11 | Improved some reference checks and warnings. |
| 4 | Input P2/11 | If the EPSG code for a coordinate system is missing, it will be derived from the axis codes. |
| 5 | Network Adjust | Bugfix: Derived observations not correctly updated when turning off dynamic gun offsets. |
| 6 | Output | Added year to bathy database records. |
| 7 | Report | Bugfix: Corrected output of precondition parameters in final report. |
| 8 | Report | Bugfix: Applying absolute flag to comparison plots was producing incorrect results. |
| 9 | Report | Sub-array separation plots auto-configuration now does not include diagonal ranges. |
| 10 | Report | Display message on plot when plotting rejected observation data. |
| 11 | Report | Updated UI for automatic plot configuration and moved to Configuration menu. |
| 12 | P2 Header Diff | Added option to ignore GPS ephemeris data. |



Date: 03/11/2016

Version: 21.30

| No. | Module | Description |
|-----|------------------|-------------|
| 1 | Internal release | No changes. |

Date: 12/10/2016

Version: 21.29

| No. | Module | Description |
|-----|----------------|---|
| 1 | P2/86 Import | Now performs post processing such as creating GPS comparison nodes. |
| 2 | P2/94 Import | Improved logging of format violations when records are the wrong length. |
| 3 | P2/11 Import | Bugfix: User specified shot range was not being handled correctly for decrementing SP number. |
| 4 | Database | Bugfix: Node ID for existing gun arrays was incremented when creating a new one (affected P2/11 data only). |
| 5 | Network Adjust | Bugfix: crash under certain circumstances after doing repeated adjustments with different parameters. |
| 6 | Network Adjust | Increased maximum allowable observation weight to handle TB bearings for very long streamers. |
| 7 | QC | Bugfix: Corrected display of node data. |
| 8 | QC | Bugfix: Occasional crash if some vessels have no waypoints. |



Date: 15/09/2016

Version: 21.28

| No. | Module | Description |
|-----|----------------|---|
| 1 | Precondition | Bugfix: Raw vs. processed plot was causing causing access violation when trying to plot obs with no data. |
| 2 | Network Adjust | Bugfix: The saved parameter set was not always read correctly. |
| 3 | Output | Bugfix: Parameter file path was incorrect. |
| 4 | Output | CTRL-A can now be used for selecting multiple items in most lists. |
| 5 | Output | Bugfix: Coordinates were not correct if only CMP record was output. |

Date: 28/08/2016

Version: 21.27

| No. | Module | Description |
|-----|----------------------|--|
| 1 | Input | Improved logging of warnings and format violations for P2/94. |
| 2 | Input | Improved identification of WGS 84 CRS for P2/94. |
| 3 | P2 Header Difference | Now handles P2/11 files. |
| 4 | Network Adjust | Bugfix: was not correctly handling grid north oriented USBL observations for streamer network. |



Date: 23/08/2016

Version: 21.26

| No. | Module | Description |
|-----|-----------------|--|
| 1 | User manual | Fully updated. |
| 2 | All modules | Various improvements to the EPSG GUI. |
| 3 | Network Display | Bugfix: plot would disappear after re-orientation and zooming in. |
| 4 | Network Adjust | Adjustment results table now includes number of observations for each observation. |

Date: 06/08/2016

Version: 21.25

| No. | Module | Description |
|-----|-----------------|---|
| 1 | All Modules | Old UKOOA concept of datums and single projection now replaced by EPSG CRS based model. |
| 2 | Network Adjust | Added check for invalid gyro data. |
| 3 | Network Adjust | Improvements to network refinement for handling redundant nodes. |
| 4 | Network Display | Bugfix: was displaying incorrect dE, dN and bearing when network rotated. |



Date: 28/07/2016

Version: 21.24

| No. | Module | Description |
|-----|----------------|---|
| 1 | Project Setup | New option to specify only the root folder and use default subfolder names. |
| 2 | Network Adjust | Various bug fixes and enhancements for processing Q marine data. |
| 3 | Network Adjust | Source data for manual mag bearing obs defaults to CMG with increased SD if no source data available. |
| 4 | Database | Bugfix: some Q Marine manual observations were not being created. |



Date: 17/07/2016

Version: 21.23

| No. | Module | Description |
|-----|----------------|---|
| 1 | Startup | Bugfix: Application sometimes crashed if license had only a few days left. |
| 2 | Input | Ensure new lines are always input to a clean directory. |
| 3 | Database | Modifications to better handle Q Marine P2/94 and P2/11. |
| 4 | Network Adjust | Added popup menu to derived observations table. |
| 5 | Network Adjust | Added popup menu to adjustment results table. |
| 6 | Network Adjust | Bugfix: horizontal range observations were being corrected for slope. |
| 7 | Network Adjust | Now allows rotation solution for sub-set of streamers. |
| 8 | Network Adjust | Modifications to better handle Q Marine P2/94 and P2/11. |
| 9 | Network Adjust | Allow no solve rotation for individual streamers. |
| 10 | Output | Tidal reduction port can now be noted when loading tidal reductions from file (will be output in comment record). |
| 11 | Output | Bugfix: access violation when not outputting all streamers using polynomial shape. |
| 12 | Output | Changed default record selection for some Q Marine surveys. |
| 13 | Utilities | Bugfix: FSP for extracting P2 was not appearing in file name when this option is specified. |



Date: 28/06/2016

Version: 21.22

| No. | Module | Description |
|------------|---------------------|--|
| 1 | P2/11 Input | Now correctly identifies compass nodes even if they are not referenced directly to the streamer. |
| 2 | Compass calibration | Can now handle compasses that are not referenced directly to the streamer. |
| 3 | Network Adjust | Added optimisations for handling Orca P2/11. |



Date: 26/06/2016

Version: 21.21

| No. | Module | Description |
|-----|----------------|---|
| 1 | Project | Increased maximum number of lines in a project to 1000. |
| 2 | Project | When deleting lines from the project the line database folder and all its contents are now deleted. |
| 3 | Input | Bugfix: Fixed occasional crashes during input and output when processing P2/86 files. |
| 4 | Input | Improved obs decimation for P2/94 QMarine files. |
| 5 | Input | For P2/11 satellite datum was sometimes assigned incorrectly. |
| 6 | Precondition | Improved observation group names and assignment. |
| 7 | Precondition | Bugfix: various minor bugs in observation group handling. |
| 8 | Precondition | Bugfix: when navigating groups with cursor keys observation list was not updating. |
| 9 | Precondition | Option to remove bad data is now saved. |
| 10 | Network Adjust | Q Marine head floats were being excluded from the network at initialisation. |
| 11 | Network Adjust | Adjustment report now excludes rejected observations. |
| 12 | QC | Plots for FPD data now show correct sequence number. |



Date: 19/04/2016

Version: 21.20

| No. | Module | Description |
|------------|-----------------|--|
| 1 | Input | During automatic processing, it is no longer regarded as an error if some tables do not have defaults. |
| 2 | Input | Automatic processing can now be done without prior establishment of individual module parameters. |
| 3 | Network Adjust | New reporting feature in Report menu. |
| 4 | Network Adjust | Revised report highlighting options. |
| 5 | Report | Plot configuration: new Tools menu items to automatically create various plot configurations. |
| 6 | Utilities | Extract can now use the specified FSP-LSP in the extracted line name. |
| 7 | Online Services | FTP database upload now supported. |



Date: 22/03/2016

Version: 21.19

| No. | Module | Description |
|-----|---------|--|
| 1 | Various | Minor user interface tweaks. |
| 2 | Output | Automatic header generation for P1/11 is now mandatory. |
| 3 | Output | Default parameter set now automatically saved the first time output is run in a project. |
| 4 | Output | Now prompts to save parameters if any have been changed. |
| 5 | Output | Waypoints now optional for P1/90 and SPS files. |

Date: 25/02/2016

Version: 21.18

| No. | Module | Description |
|-----|-------------|--|
| 1 | P2/11 Input | Bugfix: Vessel offsets were incorrect. |
| 2 | P2/11 Input | Bugfix: The source id was not saved correctly, this precluded S1 records from being output to the P1/11. |
| 3 | Precon | Improved drag and drop handling of groups. |
| 4 | Output | Bugfix: outputting more than 40 buoys crashed the output process. |



Date: 13/02/2016

Version: 21.17

| No. | Module | Description |
|-----|----------------|---|
| 1 | Input | Now detects tailbuoys without acoustics and creates manual obs to join tailbuoys to streamers. |
| 2 | Network Adjust | Exclusion of co-located nodes now considers streamer referenced nodes within 0.5m to be co-located. |
| 3 | Database | Bugfix: could not edit node relation type. |

Date: 13/02/2016

Version: 21.16

| No. | Module | Description |
|-----|--------------|---|
| 1 | Input | Bugfix: waypoints and shot data from some P2/11 files were not processed correctly. |
| 2 | Database | Extract acoustic data has new option to apply pitch heave and roll to USBL data. |
| 3 | Precondition | Revised default precondition parameters for pitch, heave and roll observations. |



Date: 24/01/2016

Version: 21.15

| No. | Module | Description |
|-----|--------|---|
| 1 | Input | Bugfix: Corrected E/N calculation of waypoints. |

Date: 23/01/2016

Version: 21.14

| No. | Module | Description |
|-----|-----------------|---|
| 1 | Input | Bugfix: Now correctly inputs gun string objects. |
| 2 | Precondition | Bugfix: Parameters were not being saved correctly. |
| 3 | Database | Bugfix: Observation attributes in grid rows 21 onwards (Datum etc.) were not being saved. |
| 4 | Network Display | Bugfix: node relation was not appearing in node info hint. |
| 5 | Network Adjust | Bugfix: exclude colocated nodes was removing radionav stations. |
| 6 | Output | Waypoints now always output to P1/90 even if header option "Generate from file" selected. |
| 7 | Project | WISDOM projects automatically exclude negative run-in shots from FGSP-LGSP range when updating project. |