

OPTIMOOR Diary of Principal Developments

6.1.13

19 Dec 11 Fixed error arising if large angles yaw angles occur with large longitudinal offsets between S2S vessels (S2S)

6.1.12

14 Dec 11 Fixed error if current used with S2S and both ships lock due to friction (Dynamic with S2S)

6.1.11

7 Dec 11 Fixed bug using constant tension winch in dynamic mode (Dynamic version)

28 Nov 11 Fixed bug in tracking rope hysteresis (Dynamic version)

15 Aug 11 Display of end fenders moved from AP to transom (or FP to bow)

6.1.10

5 Aug 11 Installation problem under XP fixed (only affects XP installation since version 6.1.8, not Optimoor itself)

4 Aug 11 Fixed bug in STS if the Host is starboard to berth and STS fenders not symmetrical about midship (Ship2Ship)

6.1.9

25 Jul 11 Minor improvements in display of summary of batch results (Plus version)

24 Jul 11 Fixed summary results from batch runs sometimes displaying metric when using USA units (Plus version)

6.1.8

17 Jul 11 Bug fixed when using time history to change current direction in dynamic setup (Dynamic)

18 May 11 Type of wave spectrum (if used) now displayed on wind rose (Seakeeping)

17 May 11 Corrected display of bollard limits when using Loadout option in USA units. Batch data amended for Loadouts (Plus)

16 May 11 Batch data now automatically updated when units changed (Plus)

12 May 11 Flag warning in batch data if trying to set wave data without Seakeeping (Plus)

7 Apr 11 Small improvement to convergence reliability

1 Apr 11 Directional sweep now made for the condition at the specified time (previously it always reverted to initial time)

28 Mar 11 Fixed bug using Seakeeping with collar vessel restraint (Seakeeping)

Jan/Feb 11 New batch feature introduced (Plus version)

6.0.15

17 Mar 11 Fixed bug in display of pressure in S2S fenders (S2S)

6.0.14

27 Feb 11 Rose re-initialised at every increment to help convergence in extreme conditions of wind and wave

6.0.13

29 Jan 11 Restored bight connection (lost in version 6.0.4) and fixed errors arising from not recognising bight

19 Jan 11 Line flexibility/stiffness for Seakeeping now taken as tangent at 50% strength, independent of actual tension

6.0.12

18 Jan 11 Increase roll damping coeff with wave ht to compensate for non-linearity

13 Jan 11 If compressed beyond buckling point, max fender thrust now reported as peak, not corresponding to max compression

6.0.11

15 Dec 10 Flag on longitudinal excursion now excludes OffsetX

6.0.10

20 Nov 10 Disable passing ship option with Guest ship (Dynamic with S2S)

19 Nov 10 Fixed occasional failure after sweep to report line tensions with previous winch slippage (display OK)

7 Nov 10 Fix error in report of catenary top angle, although display OK (Plus)

6.0.9

26 Oct 10 Fixed various glitches associated with sweep where brake slippage occurs

25 Oct 10 Made it clearer how to add S2S fenders (S2S)

6.0.8

30 Sep 10 Fixed bug calculating relative wave motions between Host & Guest (Seakeeping with S2S)

21 Sep 10 Data lock for Guest vessel now working properly (S2S)

6.0.7

19 Sep 10 Calculator now always displayed on top

18 Sep 10 Tension-Strain curve now correctly displays effect of changing rope diameter (bug introduced 5.6.10 on 4 May 10)

16 Sep 10 S2S fenders can now be moved graphically on Arrangement window (S2S)

15 Sep 10 Simulation plot of fender compression now reported additionally alongside thrust in csv file (Dynamic)

14 Sep 10 Fixed bug showing maximum excursions in one direction only (since introduction version 6)

13 Sep 10 Update to default strength of parallel strand polyester rope

6.0.6

12 Sep 10 Fixed convergence bug when lines run Guest to shore and Guest/Host in opposite directions (S2S)

10 Sep 10 Fixed bug calculating wave motions when initialising (Seakeeping with S2S)

9 Sep 10 Fixed error in reporting roll angle (Seakeeping with S2S)

6 Sep 10 Fixed bug causing error in load draft for Host ship when Guest present (Seakeeping with S2S)

3 Sep 10 Time sweep now working properly

6.0.5

16 Aug 10 Fixed problem with catenary not using dynamic stiffness (Plus version)

13 Aug 10 Fixed errors in display of S2S lines (Ship2Ship Module)

11 Aug 10 "Missing Kechk32.dll" error now trapped, allowing Optidata to run without crashing

20 Jul 10 Fixed problem with redundant Seakeeping motion calcs during Sweep (Seakeeping Module)

6.0.4

12 July 10 Two major unrelated changes are introduced in Version 6, affecting (1) users of the Seakeeping Module, and separately (2) users who need to model two ships moored side-by-side.

(1) Research by TTI and others shows that the cyclic loading of ropes (such as that produced by wave loading) effectively causes a temporary increase of rope stiffness compared with the rope property for more gradual load increase. Line tension variations attributable to given wave motions are typically doubled in version 6 where this effect is allowed for, as compared with the tension variations obtained in version 5 and earlier, where no allowance for the additional stiffness under cyclic loading was made. This is true for both dynamic and static mooring analyses where wave motions are present. The mean tensions due to wind, current, or other non-cyclic forces are unaffected, and if you do not have any wave motion, version 6 should give the same results as version 5.

(2) A new optional Ship2Ship module has been added which allows a "Guest" vessel to be moored alongside the primary or "Host" vessel, with mooring lines running from Host to Guest, or from Guest to Host, or from either vessel to shore/sea-bed. If you do not use the Ship2Ship Module, version 6 has required some coding changes for compatibility, but should give the same results as version 5, except with regard to the cyclic stiffness effect associated with wave loading (1) described above. In that case, you may prefer to continue using the latest version 5.6.15 for the present, as this seems to be fairly stable.

5.6.15

16 Jul 10 Pre-tension made more repeatable by automatically re-setting initial Pull-in to zero before estimating.

5.6.14

10 Jul 10 Bug fixed in display of Capability Rose after excessive brake slippage

5.6.13

22 Jun 10 Option to print catenary curve .csv file (Plus version)

21 Jun 10 Fixed bug in display of catenary when tension exceeds 10 x total wt (Plus version)

5.6.12

25 May 10 Corrected error in catenary calculation introduced 4 May 10 (Plus version)

5.6.11

7 May 10 Trap errors if catenary too short (Plus version)

5.6.10

4 May 10 Fixed bug causing occasional error in calculating % of line strength

5.6.9

5 Apr 10 Fixed bug not properly recording change of vessel type for wind drag

23 Mar 10 If tail is too long (not clear of fairlead) it is now automatically shortened, if user allows calculation to continue

5.6.8

15 Feb 10 Minor improvements made to convergence in static mode

14 Feb 10 Correction to catenary if completely slack (Plus version)

14 Feb 10 Bug corrected in hydrodynamic drag in zero current (Dynamic version)

13 Feb 10 Brakes for chain assumed to fade after slipping LBP/3 (kept at B/3 for other lines) (Dynamic version)

5.6.7

12 Feb 10 Starting simulation now forces initialisation of line pre-tensions, to avoid unintended line pull-in (Dynamic version)

11 Feb 10 Fixed bug in display of seabed slope with shape of catenary for buoy chain at pierside mooring only (Plus version)

2 Feb 10 Further minor improvements made to convergence in static mode

5.6.5

24 Jan 10 Some improvements made to convergence in static mode

5.6.4

20 Jan 10 Fixed bug in repeat cycling option in dynamic setup (Dynamic version)

20 Jan 10 Fixed bug in time varying current if wind also varies with time (Dynamic version)

5.6.3

30 Oct 09 Catenaries now allowed in wire lines at fixed pier berths (Plus version)

29 Oct 09 If case file not found, option to browse now offered

17 Oct 09 Ctrl-U shortcut for changing units now removed (to reduce keyboard error when initialising with Ctrl-I)

10 Oct 09 Fixed bug suppressing fatigue-life calculation, introduced 30 Jun 09 (Seakeeping)

5 Oct 09 Added bollard/anchor forces to simulation plot and corrected in the simulation output results (Dynamic version)

2 Oct 09 Added length of catenary line lying on seabed to the simulation output results (Dynamic version)

30 Sep 09 Trap out potential error if line strength not specified. Removed display glitch introduced 25 Aug 09

5.6.2

31 Aug 09 Dolphin/bollard allowable load now reported

25 Aug 09 Draft, trim, waterlevel and GM at intermediate time now determined from initial/final values, and not set directly

14 Aug 09 Correct speed through water after change of current or direction (Dynamic version)

6 Aug 09 Fixed bug defining wind/current/wave direction to X-axis in load-out berth (Plus version)

3 Aug 09 Fixed bug using constant tension winch (introduced 4 May 09)

2 Aug 09 Fixed bug not zeroing wave drift force for zero wave height

27 Jul 09 Pre-tension can now be set to nearest 0.1 tonne (or kip) if less than 2 tonnes (or kips)

5.6.1

10 Jul 09 Fender stiffness treated as constant, to make frequency domain motion results more stable (Seakeeping)

8 Jul 09 Fixed error in display of max/min vertical motions at target during wind/wave sweep (Seakeeping)

5 Jul 09 Fixed glitch sometimes not capturing changes on environment fields when initialising mooring window

5.6.0

2 Jul 09 Option to lock berth and vessel data with password

1 Jul 09 Drift force now varies in dynamic simulation (Dynamic version with Seakeeping)

5.5.12

29 Jun 09 Minor improvement in numerical stability and convergence with very stiff fenders

28 Jun 09 Fixed lock on shielding box on berth window

5.5.11

- 25 Jun 09 Fixed error in display of max/min excursions during sweep at loadout berth (Plus version)
- 24 Jun 09 Bugs fixed in capture of position and display of required forces in Position mode (Plus version)
- 22 Jun 09 Flag warning if Seakeeping disabled

5.5.10

- 16 Jun 09 Fixed error modelling line hysteresis when ship moored starboard to berth (Dynamic version)

5.5.9

- 12 Jun 09 Fixed bug disabling end fenders for loadout berth (Plus version)
- 11 Jun 09 Setting time (as opposed to incrementing it) now automatically interpolates trim and WL
- 10 Jun 09 Display of catenary shapes for lines no longer requires initialisation before becoming visible (Plus version)

5.5.8

- 6 Jun 09 Fixed bug suppressing display of maximum bollard force in berth window (Standard version only)

5.5.7

- 5 Jun 09 Fixed error in display of max/min excursions if large yaw angles occur during sweep
- 4 Jun 09 Fixed bug introduced version 5.5.3 causing errors in wave drift force

5.5.6

- 3 Jun 09 Fixed spurious transients in continuous dynamic simulation when moving focus between windows (Dynamic version)
- 2 Jun 09 Bug fixed which blanked out fender force display if coming out of range during a sweep
- 1 Jun 09 Password in PIN file on USB key automatically copied to clipboard when updating from website

5.5.5

- 31 May 09 RTF report file now directly printable. Print menus on all other windows removed as redundant
- 29 May 09 Improvement reporting user specified wave-induced circular motion in RTF file

5.5.4

- 24 May 09 Correction of bugs in rope hysteresis model introduced 14 Apr 09 & 4 May 09 (Dynamic version)

5.5.3

- 21 May 09 Water level cannot be set directly, only in terms of initial and final values
- 19 May 09 Standard version now can access Rope.dat file (bug from 28 Jun 07)
- 14 May 09 Old bug fixed in calculating minimum bottom clearance
- 13 May 09 Fatigue menus now hidden if no Seakeeping

5.5.2

- 6 May 09 Correction to load-extension curve for Dynamax 12-strand
- 5 May 09 Fixed bug in partial fender contact area not allowing for excursion when initialising
- 21 Apr 09 Corrected bug introduced 14 Feb 09 editing end fenders for loadout berth (Plus version)
- 15 Apr 09 Fixed bug introduced 18 Feb 09 displaying azimuth angle of spread mooring lines on berth window (Plus version)
- 14 Apr 09 New internal friction model for rope and fender hysteresis (Dynamic version)

5.5.1

- 22 Mar 09 Fixed bug reading date on non-English PC's
- 23 Feb 09 Make site plan more isotropic
- 22 Feb 09 Other Force now applied at specific point, rather than as moment
- 18 Feb 09 Fixed bug pre-tensioning loadout barges (Plus version)

5.5.0

- 19 Jan 09 Fixed bug on wind rose reporting -ve water levels as +ve above datum
- 5 Jan 09 Code implemented for new system of security key on flash memory drive
- 30 Dec 08 Bug fixed in displaying recess for loadout option after saving (Plus version)

5.4.2

- 14 Dec 08 Optidata now allows entry of sea-state statistics for fatigue analysis (Seakeeping)
- 13 Dec 08 Minor glitch fixed in display of wave motion table on mooring results window (Seakeeping)