SWIVT
RELEASE NOTES

NOVEMBER 28TH 2022   VERSION 2.1   XI ADVIES

General Remarks

FEATURE/REMARK	SOLUTION/COMMENT
I can enter nonsensical Local Cases.	The user has to define his/her local case with the same properties as a server case. The correctness of these is the responsibility of the user. A first version of a case validator is implemented.
Case overview list does not show the associated case directory.	There is no room for this information in the Case list. Use the HTML−list button in the toolbar for this.
Not all graphs and tables show the correct results.	This can have three possible causes: 1. The default template is not tailored towards the selected case. 2. The pre−selected Parameter in the template is not available in the dataset. 3. Matlab features, eg surface plots. Ad 3. The surface plots generator uses the screen capture option to generate the output files. This means that this process cannot run in the background as other information may be displayed on the screen at the moment of capture. Case−specific templates are now available for each case stored on the server. Case−specific templates for the aggregated nests plots are not yet available; the default template will be used instead.
Matlab generates error message when writing to png file	This behaviour *may* occur in some cases. This feature is probably due to a certain combination of Matlab and your local system settings, and beyond the scope of SWIVT.
How can I stop SWIVT or SWAN during running.	Use the Windows taskmanager (CTRL−ALT−DEL) to kill the required application. Session information will be lost!

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FEATURE/REMARK	SOLUTION/COMMENT	FIXED IN
Units are not displayed on the surface plots.	These are not stored in the SWAN output *.mat file. This needs to be addressed by SWAN.	in future
It is not possible to select a wind or current vector.	Currently only the x or the y direction can be selected. This needs to be addressed. Plots can be generated by editing the template by hand. The case−specific templates contain the correct code to generate the plots.	in future
It is not possible to alter the colour of the observed line in plot type 5, nor the colour of the case 2 line (or indeed change their markers) in plot_all type.	Distinguishable colours have been chosen (black and red respectively; and for two cases blue has been added).	Not planned

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CHANGES	COMMENT	VERSION
calculation of wave parameters	Wave parameters can now be calculated based on integration over the frequency domain [`fmin, fmax`].	1.1
aggregation of results	Statistical scores can be calculated for a set of more than one validation run.	1.1
editing `GEN3` parameter	It is now possible to select either `KOM` (SWAN default) or `WESTH` as `GEN3` parameter.	1.1
editing convergence criterion	It is possible to edit the parameters for the convergence criterion, or to use the SWAN default values by switching the numerics section off.	1.1
extra presentation parameter: `Hsig/Depth` [–]	SWIVT calculates the `Hsig/Depth` parameter [–] based on the given/calculated `Hsig` [m] and calculated `Depth` [m].	1.1
session selector	A session selector was added to the code, allowing easy access to previously generated and stored sessions.	1.1
location names	If required, location names can be added to the *.loc file. These will then be printed in graphs where appropriate.	1.1
export field data and data	An option of exporting the field data and other internal data in Matlab format for use outside SWIVT has been added.	1.1
documentation	Updated where required as a result of changes between version 1.0 and version 1.1. New url SWAN website added (swan.tudelft.nl)	1.1
FMIN from 0.01 to 0.0521 for f03harin[001–004] SWAN version 4072A.	See Issues site – Issue 1; SWIVT documentation will be upgraded with next SWIVT main release. Associated information can be found on the issues site (click on Bugs and features on the downloadsite swivt.deltares.nl).	1.1.1
presentation of all nests in a case by means of one action, including aggregated results	Note that aggregated spectra are not included in this version (type 5), aggregated results are available for type 3,10 and 12. A new window was added to accommodate this and the other presentation enhancements. Furthermore a default_all_nest presentation template has been created.	1.2

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CHANGES	COMMENT	VERSION
presentation of results of two SWAN calculations and observed data in one graph/table	This option is limited to related cases for which the observed information is the same (although this is not tested in SWIVT). The codename of the cases need to be identical. This option is available for the following plot types: 3, 5, 10, 12, 13, 14 and 15. A default_link presentation template has been created. A new window has been added to accommodate this and the other presentation enhancements. The option of including/excluding measured data has been provided, this meant an additional tag (<observed>) in the xml files, these have been adapted, as well as the xsd scheme (now version 1.2). In templates without this tag it is automatically added and set to 'on'.	1.2
presentation of more than one case at the time	This option is available for the following plot types 10 and 12. A default_compare_set presentation template has been created. A new window was added to accommodate this and the other presentation enhancements.	1.2
additional option of saving results in pdf format	default setting is png	1.2
additional graph for k (wave number) in type 15 graph	Including implementation of some calculations provided by Deltares	1.2
additional data for type 15 Energy graph (Young & Babanin)	new pdf description files were added to the server to reflect these changes	1.2
additional SETUP command in certain server cases.	Included in f031harin, f071delil, f081norde and l021triad (for SWAN versions 4041A, 4051A and 4072A)	1.2
inclusion of software to produce output for the Calibration Instrument	This software generates a new output directory **swivt_ci_pres_set** and stores the results there. The software was provided by Deltares	1.2
addition of new cases to the server for SWAN version 4072A	`f100am04z001 ... 003` `f101am05z001 ... 003` `f102am07z001 ... 015` `f110oostr001 ... 003` `f130ijsse001 ... 007` `f140slote001 ... 005` `l100suast001 ... 002`	1.2
addition of new statistics module to aid aggregation of plot results	Provided by Deltares	1.2
OFF WCAP	This string is now omitted from the swn file	1.2

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CHANGES	COMMENT	VERSION
addition of legend for type 14 and 15	The legend text was added on the fourth line of the associated measured data files.	1.2
intermediate files also on server	To aid testing the intermediate files are now included with the cases on the server. This is only done for cases that need to be rerun.	1.2
documentation	The documentation is updated to reflect the changes between version 1.1 and 1.2. The installation manual is now also available from the server as a separate document.	1.2
observ/meas* files replaced with new ones	`f100am04z` `f101am05z` `f102am07z`	1.3
addition of new cases to the server for SWAN4072A	`f150ow07[001-011]`	1.3
addition of associated presentation templates	`f150ow07[001-011]`	1.3
changes to *.swn files	`replace <#GEN3#> with <#model#>` `replace <#NUM#> with <#NUMON#> and add line with <#NUMOFF#>$` Note: - this means that the code is not backwards compatible! 4041A does not contain placeholder for GEN3	1.3
addition of betaserver	swivt.deltares.nl/betaserver ; for use by deltares and xi only	1.3
addition of new executable : SWAN4072ABCDE	this also involves changes to associated input files ; this version of SWAN requires *libiomp5md.dll* to be stored in the map with the executable	1.3

new physical process parameter keywords for *.swn for SWAN4072ABCDE for all cases	`WCAP1`
	`ON: (WCAP WESTH cds2= br= p0= powst= powk= nldisp= cds3= powfsh=)`
	`OFF: OFF WCAP` `BREA1`
	`ON:(BREA WESTH alpha= pown= bref= shfac=)`
	`OFF: OFF BREA` `NUMREFRL`
	`ON: (NUM REFRL frlim= power=)`
	`OFF: $` The order is changed such that all OFF lines precede all associated ON lines (eg WCAPOFF, WCPA1OFF< WCAPON, WCAP1ON)
		1.3

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CHANGES	COMMENT	VERSION
new physical process parameter keywords for *.xml for SWAN4072ABCDE for all cases	add default settings for SWAN4072ABCDE; need new keywords in user block, and new SWAN4072ABCDE default block • WCAP, QUAD, FRIC and TRIAD: same settings as before • BREA: used BREA WESTH as default (unlike before when it was BREA CON) • NUM REFRL: by default off. default values: • `WCAP WESTH : cds2=5.0E-5, br=1.75E-3, p0=4.0, powst=0.0, powk=0.0, nldisp=-, cds3=1.5, powfsh=1.0` • `BREA WESTH : alpha=0.9, pown=2.5, bref=1.3963, shfac=500` • `NUM REFRL : frlim=0.2, power=2` ranges : lower limit =0 ; upper limit= 3*default value **Please note** : SWAN4072ABCDE settings cannot be chosen for 4041A, 4051A, 4072A cases as processes may be different ; similarly 4072A settings cannot be chosen for 4041A and 4051A. (this is defined through the xml file)	1.3
new xsd file	*swivt_v1_3.xsd* to reflect changes to *.xml for SWAN4072ABCDE	1.3
code changes to allow use of new *.swn and *.xml files	remarks : • WCAP is dependent on GEN3 ; other are not • edit screen has been adapted • descriptions of new parameters still need to be added to *default_parameters.m*	1.3
add : set(gcf,'Renderer','zbuffer')	ensure that part of surface plots do not disappear	1.3
new code to facilitate changes to Calibration Instrument	swivt_plot_nest_ci.m, swivt_ci_postprocessing.m, swivt_plot.m, swivt_plot_nest.m	1.3
removed DIR from table in default_all_nest.spt		1.3
adapt code to cope with longer placeholders	required for new keyword NUMREFRLOFF	1.3
adapt code to facilitate single precision output in *.mat file	upgrade D to SWAN4072 involved changing from MATLAB level 4 output to level 5. As a side effect the results in the *.mat file are now given in single precision (see also SWAN user manual). Some of the plot routines used in SWIVT require double precision input ; these have been accomodated.	1.3

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CHANGES	COMMENT	VERSION
minor bug with regard to scrolling of parameters in Edit Case window resolved		1.3
documentation	The documentation is updated to reflect the changes between version 1.2 and 1.3.	1.3
change in windparameters	changes to f130ijsse002.swn, f130ijsse006.swn and f130ijsse007.swn; for both SWAN4072A and SWAN 4072ABCDE; also new version of f130ijsse.pdf	1.3.1
added missing Case meta data	f100am04z, f101am05z, f150ow07z	1.3.1
inputfiles filename lower case for use on unix os	for SWAN4072A and SWAN4072ABCDE following cases corrected: f100am04z and f102am07. Also changed ONR to onr in observ directory for cases: f110, f130,f140 and l100.	1.3.1
changes to casesdatabase	major reshuffle and addition of new cases for f101am05z and f102am07z cases. Also involved addition of new templates.	1.3.1
bugfix swivt_utils_read_data.m	error found whilst reading in SWAN location names	1.4
added SWAN4081.exe	normal upgrade, f150ow07z first nest failed to run with this SWAN version. bug added to SWAN Tracker. Reply: try to run with version 4085.	1.4
added missing TAB files	some TAB files were missing for f102	1.4
added cases to casesdatabase	f062westr, f082norde, f103am06z, f120ppbay, f160ww07z and f101am05z001–004 These will be added to the server as they become available, from June 2011 onwards.	1.4
added updated casemetadata	f062westr, f082norde, f100am04z, f101am05z and f102am07z, f103am06z, f120ppbay, f160ww07z	1.4
added default values for SWAN4081 to existing SWAN4072ABCDE cases in xml files	identical to those of SWAN4072ABCDE, apart from NUMREFRL ; these values are set to 0.	1.4
added SWAN4081 to xsd and default.xml files	same keywords as SWAN4072ABCDE	1.4
documentation	The documentation is updated to reflect the changes between version 1.3 and 1.4	1.4
corrections to case data, following quality check on version 1.4 data.	f062westr, f082norde, f100am04z, f101am05z and f102am07z, f103am06z, f104am10z, f110oostr001, f120ppbay, f150ow07z, f160ww07z	1.5
added SWAN4091.exe and 4091 cases	No output available from cases.	1.5

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CHANGES	COMMENT	VERSION
added SWAN4091 to xsd and default.xml files	same keywords as SWAN4081, except for WCAP1 and BREA1, these do not exist anymore	1.5
documentation	The documentation is updated to reflect the changes between version 1.4 and 1.5 (no major issues)	1.5
added templates for f104 009–015		1.5.1
added f104 cases 009–015	new cases (with output)	1.5.1
corrected generation of html table with case overview list	An error occurred when cases were listed with and without WCAP1 an BREA1 (in that order) were to be displayed.	1.5.1
removed WESTH (ie WCAP1 and BREA1; and replaced by KOM in GEN3) for all 4091 cases	*.swn and *.xml files adapted as well as code where appropriate.	1.5.2
added f131 cases	new cases (with output)	1.5.2
added templates for f131		1.5.2
added updated checklist to M&M documentation	since 1.4 a number of checks have been added to the checklist, the document has been amended to reflect this.	1.5.2
bugfix values along axis 2d plots	swivt_plot_2D_parameter_surface.m, changed to ensure that correct values appear along the axes in the 2d surface plots	1.5.3
added f132 cases	new cases (with output, apart from cases 005 and 015)	1.5.3
added templates for f132		1.5.3
added SWAN4101.exe and 4101 cases	No output available from cases.	1.6
added SWAN4101 to xsd and default.xml files	same keywords as SWAN4091	1.6
fixed a few small bugs in surface plotting routines for linked cases	swivt_plot_2D_parameter_arrows.m, swivt_plot_2D_parameter_combined.m, swivt_plot_2D_parameter_surface.m, swivt_plot_all_2D_parameter_surface.m, swivt_plot_overview_locations.m, swivt_present_cb.m	1.6
fixed bug in checking spt files	swivt_utils_check_spt.m; the third argument was not used, but always set to 1.	1.6
documentation	The documentation is updated to reflect the changes between version 1.5 and 1.6 (no major issues, a few tables were rearranged due to the growing number of SWAN versions)	1.6

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CHANGES	COMMENT	VERSION
added templates for f105, f132 and f151	Templates are added to SWIVT source code zip–files.	1.7
added SWAN4110.exe and 4110 cases	No output available from cases.	1.7
added SWAN4110 to xsd and default.xml files	Same keywords as SWAN4091	1.7
documentation	The documentation is updated from version 1.6 to 1.7, no changes.	1.7
sources and utilities	SWIVT code is upgraded to Matlab version 9.0 (2016a). A standalone version is compiled for Matlab Runtime version 9.01. Use of the functions strmatch, str2mat, findstr, strread and others is replaced by recommended alternatives. Surface plots are now correctly handled by Matlab, bug fixes are removed. Both SWIVT versions, 1.7 for Matlab 7.3 and 1.7.1 for Matlab 9.0, are available on swivt.deltares.nl	1.7.1
added SWAN4120A.exe and 4120A cases	No output available from cases.	1.8
added SWAN4120A to xsd and default.xml files	Same keywords as SWAN4091	1.8
documentation	The documentation is updated from version 1.7 to 1.8, no changes.	1.8
changed server url to https://swivt.deltares.nl/	The change of http to https caused a problem when adding cases to SWIVT.	1.8.1
added nonstationary f998 and f999 test cases	New nonstationary cases (with output)	2.0
added templates for f998 and f999		2.0
added SWAN4131AB.exe and 4131AB cases	No output available from other cases than f998 and f999.	2.0
added SWAN4131AB to xsd and default.xml files	New keywords for nonstationary cases added.	2.0
documentation	The documentation is updated from version 1.8 to 2.0, a number of changes are made related to the nonstationary mode of SWAN.	2.0

Latest changes – intermediate versions

CHANGES	COMMENT	VERSION
added SWAN4141.exe and 4141 cases	No output available from other cases than f170 [001 ... 021].	2.1
added f170 [001 ... 021] cases	New stationary Petten field cases (with output).	2.1
added templates for f170 [001 ... 021]		2.1
documentation	The documentation is updated from version 2.0 to 2.1.	2.1