Seismatters.com

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VAPSDB3 :: Vibrator Status File QC

www.seismatters.com

Abstract Instructions for use Version 1.5 October 2019

Ian Vincent ian@seismatters.com

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History Scales Other Settings Listing Results Fleet Setup, Colours, Limits, Polygons etc Reshoot Rules Point Detailed View Deleting Points List and KML 3D View Export Misc Reset Form Locations Status Codes Concatenate VAPS Files Change Log	

Background

Modern Vibrator control systems can report various sweep attributes and statuses for every vibrator and every sweep. This allows for past acquisition QC and statistical analysis of vibrator performance over time.

Unfortunately, there isn't much software that takes advantage of this. VAPSDB3 is a solution.

VAPSDB3 resolves many of the limitations and shortcomings of the earlier package –VAPSDB2, and adds some new features that assist with QC of newer acquisition modes.

It currently only handles Sercel data sets, but will be expanded to handle others in the future.

Cautions

Whilst I believe the results are true and correct, you the user are solely responsible for the correct interpretation of results and for any losses incurred in using the program.

Installation

All files should be placed in a single folder of your choice. Under Windows 7/8/10 make sure it is a folder that can be written to by the application. This is usually not a problem, but some corporate preventers of IT place limits on users.

A licence key is required.

If, on starting the program, you receive a message about a missing DLL (MSCVR110.dll) then you will need to download and install Visual C++ Redistributable for Visual Studio 2012 Update 4 from this link: https://www.microsoft.com/en-gb/download/details.aspx?id=30679

Select the 32 Bit version - VSU_4\vcredist_x86.exe

On first run, you will be notified that there is no Key file found:

Licence Key Error	\times
No Licence Key Found, Do You Want To Request One?	
Yes No	

Follow the instructions to generate an .REQ file that you then send to me. (This file is generated in the same folder as the EXE.) If I consider you a worthy user, I will provide you with a key file, which you place the same folder as the EXE.

Note: In the event of a system upgrade (OS) it is possible that the Key file will be reported as invalid.

In this case, delete the files VAPSDB3.SMR and SM_Registration.REQ, start the program and generate a new REQ file which you send to me.

Using the Program

After receiving your key file, on first starting the program you will see this:



Click OK to continue



Creating a new Database

The First thing to do is create a new Project Database

VAPSDB3	•						A DESCRIPTION OF TAXABLE PARTY OF TAXABLE PARTY.	×
New Project	Select Project	Update Parameters	SPS	Export	Misc	About	Exit	
Current P	oet DataBas	e!!!!!					Seismatters.com	

This will bring up the following dialog:

🖁 New Project		×
Project Name		
Optional (But Recommended)		File Format
Oil Company		Sercel VAPS
Contractor		C VibPro <v2.64< td=""></v2.64<>
		C VibPro V2.64+
QC Company / Name		C Extended QC
Country		C GF
Region		
Block		
Block Extents (Recommended) Top Left Easting Northing 0 0 Can be updated later if not known Dei Eile Information (For Exercise 1)	Paste Bottom Right Easting Northing 0 0	Other High Vib
Erom I ITM Zone		
C User String		🔌 ок
		Connect

All entries except for the two indicated are optional, but highly recommended. They can be updated later if desired.

The entry '**High Vib**' specifies the number of vibrators that the database will be created for. It can be up to 64. There is no problem in specifying more vibrators than you have on crew – in fact it is recommended. But the more you specify, the larger the database. So, if you have 10 vibs, there is little point specifying 32, but it would be wise to specify 12 or 14 in case of crew expansion or swapping out of vibs for maintenance. If you specify less vibs than you have, data from the higher number vibs will not be loaded – you receive a warning though.

You can specify a logo of your choice by clicking on the rectangle below the 'High Vib' entry.

Logos are loaded from the "Logos" folder that is a sub folder of the one you placed the VAPSDB3 application in. You may create your own logo if you wish. Logos can be JPG, PNG, BMP or ICO files and should be kept small – They will be displayed at a maximum of 100 x 50 pixels, so there is no point using large images. Any that are larger than 100x50 will be resized when displayed, which may result in loss of detail.

A note on PRJ Files

PRJ files are associated with Shape files. The PRJ file contains, unsurprisingly information relating to the projection. In our case, we always output UTM, but the Shape file itself does not specify the UTM zone, or if using something other than WGS 84, the information required to place the points correctly on a map. This is where the PRJ file comes in.

If your project coordinates are WGS84, then you can create a PRJ file from the UTM zone you are working in.

If however, you are working in an area that uses a different datum (Oman for example uses PSD93 and Egypt has various 'Belts') then you should talk to your survey department. They should be able to provide a PRJ string that you can paste into the text box. Then specify "User String" and that will be used for any shape files generated.

😽 New Project		×
Project Name	Outer Maysabongo	
Optional (But Recommended) – Oil Company Contractor QC Company / Name Country Region Block	Big Oil Bob's Seismic Services Seismatters Elbonia Naruba Naruba South	File Format Sercel VAPS VibPro <v2.64 VibPro V2.64+ Extended QC GF</v2.64
Block Extents (Recommended) Top Left Easting Northing 314945 7416960 Can be updated later if not known	Paste Bottom Right Easting Northing 428550 7350175	Other High Vib 16
Prj File Information (For Export From UTM Zone User String Output Prj File	ing Shape Files) UTM Zone 25 V X	OK

If you don't want a PRJ file generated, then un-tick the box.

It should look something like this when complete.

Click OK to bring up the Vibrator Info page:

Vib	Type	BP Mass	BP Area	These settings affect the way			
1		0	0	Stiffness and Visco to 'Normalised' unit	sity are converted		
2		0	0	values, but the	y will only affect		
3		0	0	NEWLY loaded data	a. IE Data you load		
4		0	0	after mak	ing edits.		
5		0	0				
6		0	0	N15	3246		
7		0	0				
8		0	0	N65	N90		
9		0	0	AUV-TV 262			
10		0	0	AHV-1V 302	AHV-1V 304		
11		0	0	AHV-IV 380	PLS-326		
12		0	0				
13		0	0	SM26			
14		0	0				
15		0	0	Hemi-50	Hemi-60		
16		0	0	- Custom			
				Vib Type			
				ino ripe			
				BP Mass			
				BP Area			
					Ľ		
				Set Cu	stom		

Here you specify details of each vib on crew. BP Mass and Area are required to correctly calculate stiffness and viscosity from the reported values. The commonly available vibs are listed for convenience. Click 'All' as indicated, then any of the Vib type buttons.

Vib	Type	BP Mass	BP Area	These settings affect the way		
✓ 1	AHV-IV 362	1823	2.5	Stiffness and Viscosity are converted to 'Normalised' units. You can edit the		
⊻ 2	AHV-IV 362	1823	2.5	values, but they	/ will only affect	
✓ 3	AHV-IV 362	1823	2.5	NEWLY loaded data	a. IE Data you load	
✔ 4	AHV-IV 362	1823	2.5	after mak	ing edits.	
✓ 5	AHV-IV 362	1823	2.5			
✓ 6	AHV-IV 362	1823	2.5	N15	3246	
✓ 7	AHV-IV 362	1823	2.5			
✔ 8	AHV-IV 362	1823	2.5	N65	N90	
∀ 9	AHV-IV 362	1823	2.5	AHV-TV 362	AHV-TV 364	
✓ 10	AHV-IV 362	1823	2.5	AITV 1V 502	7110 10 304	
✓ 11	AHV-IV 362	1823	2.5	AHV-IV 380	PLS-326	
✓ 12	AHV-IV 362	1823	2.5			
✓ 13	AHV-IV 362	1823	2.5	SM26		
✓ 14	AHV-IV 362	1823	2.5			
✓ 15	AHV-IV 362	1823	2.5	Hemi-50	Hemi-60	
✓ 16	AHV-IV 362	1823	2.5	Custom		
				Vib Type		
				no type		
				BP Mass		
				BP Area		
				Set Cu	stom	

Here we have specified all vibs as 362s. You can click on a cell and edit it if your vib type is not listed, or you can use the Custom box in the bottom right. When satisfied, click **OK**.

You will see a message saying that your database has been created.





Limits

You should verify that the limits set are correct for your operation.

Limits are available from most of the result display pages, and from the main startup screen:



odala ao Respiraci		Deferration	Update so Resure	4.		216	rmakker	-
OI Conserv	en or	Gata File Portial According to	Ci Carpery	Linute				there are a second
Comector	Bobe Serenci Services	ingh Vib II	Cartiactor	Land Serve				
QC Campony /Teams	Septembers	Orth Rate	gi Onem/	These Brats	apply everywh	ervit		-
Darky	Eboria	Date To Doct-00-00	Curry		Low	High	😽 ox	5110
Tageir	Planubo			Onive		72	1	-
Best.	Nambé South	Logs	1943	Average Plane		-	The second li	
Mon Electric	514945		PERSONN	Annual Debattery		-	Defaults	
Nax Northing	7430460) Paste	100 C	Her furting	Peak Distortion		50		
MacEasting -	428550		Hes Earling	Average Porce	45	75		T .
Hen Hartforg	Copy 7255175		His last freq	Peak Farce	45			-
He Information Pro France	(Text Manue Fried)		1 mm.teur	Number of Salo	100	James and		-
From UTM Zone	uthe Zone	S Update Car	cel (7 Prostatio	Connection Age	100	12		E Cancel
		<u> </u>		Read Separation	-45	-35	-	-
C Life Strig.	1	Anna Anna	(Use Strip	Rev Mode [+]			Carrot	
Culput Pri The	20	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	POLIDUKPEL	-	110-	-	garana ju	Linns

As stated on the form, limits apply to everywhere. If deviating from contract specifications, you should consider the implications carefully. Producing a 'clean' display is not necessarily QC!.

For convenience, limits can be saved and loaded using the menu options at the top.

Selecting Existing Databases

Any number of Project Databases can be created, only limited by available disk space.

To select an existing database, click 'Select Project'

😽 VAPSDB3							
New Project	Select Project	Update Parameters	SPS	Export	Misc	About	Exit
Current Pr	oject						Se
Oute	er Mays	abongo	Seism	in durn			
Region		Naruba					

The available Databases will be shown in the box on the left

🗧 Select Project			2
Available			
Equat solite	Update as Required		
Iran.sqlite North India.sqlite	Oil Company	Big Oil	裬 ок
Outer Maysabongo.sqlite Pakistan.sqlite Somalia sqlite	Contractor	Bobs Seismic Services	
Southern Iraq.sqlite Tanzania.sqlite	QC Company / Name	Seismatters	X Delete
	Country	Elbonia	
	Region	Naruba	
	Block	Naruba South	
	Min Easting	466400	
	Max Northing	2421000	
	Max Easting	500000	
	Min Northing	2396000	
	Data File Format	Sercel VAPS	
	High Vib	30	
	Date From	2018-09-06	
	Date To	2018-11-29	
	Logo	Seismetters.com	Cancel
			<u> </u>

If you single click on any of the available, then information pertaining to that Database will be displayed. If it is the one you want, click OK, or double click on the entry in the list.

All settings for that project will be restored and you can access the data immediately.

Transferring Databases to another Computer

Since each Project Database is a separate entity (file), it is east to transfer a project to another computer with a registered version of VAPSDB3.

The database files are found in the 'Projects' Folder that is created in the same folder that the VAPSDB3 executable resides in.

The Root folder should look like this:

Name *	Date modified	Туре	Size	
퉬 Logos	15/01/2018 10:05 PM	File folder		
퉬 Projects	28/01/2018 8:58 PM	File folder		
퉬 SavedSettings	13/01/2018 6:35 PM	File folder		
퉬 Temp	28/01/2018 8:56 PM	File folder		
🚳 proj.dll	7/03/2003 6:10 PM	Application extension	269 KB	
🚳 proj_api.dll	18/09/2003 7:40 PM	Application extension	28 KB	
SM_Registration.REQ	15/01/2018 12:13 PM	REQ File	1 KB	
sqlite3.def	25/10/2017 2:28 AM	DEF File	5 KB	
🚳 sqlite3.dll	25/10/2017 2:28 AM	Application extension	833 KB	
🚳 SQLitening.Dll	22/07/2012 3:00 AM	Application extension	89 KB	
VAPSDB3.def	28/01/2018 8:58 PM	DEF File	57 KB	
😽 VAPSDB3.exe	28/01/2018 8:49 PM	Application	3,035 KB	
VAPSDB3.SMR	15/01/2018 12:05 PM	SMR File	1 KB	

Navigate to the Projects folder:

Name ^	Date modified	Туре	Size	
😼 Iran.sqlite	28/01/2018 8:54 PM	SQLITE File	816 KB	
😼 North India.sqlite	28/01/2018 8:58 PM	SQLITE File	816 KB	
😼 Outer Maysabongo.sqlite	28/01/2018 8:57 PM	SQLITE File	389,532 KB	
😼 Pakistan.sqlite	28/01/2018 8:53 PM	SQLITE File	816 KB	
😼 Somalia.sqlite	28/01/2018 8:54 PM	SQLITE File	816 KB	
😼 Southern India.sqlite	28/01/2018 8:58 PM	SQLITE File	704 KB	
Southern India.sqlite-shm	28/01/2018 8:58 PM	SQLITE-SHM File	32 KB	
Southern India.sqlite-wal	28/01/2018 8:58 PM	SQLITE-WAL File	137 KB	
😼 Southern Iraq.sqlite	28/01/2018 8:56 PM	SQLITE File	860 KB	
•				,

You will see you project listed, with extention .sqlite There might be other files with extentions of .sqlite-shm and .sqlite-wal, if so you will need these too. If they are not present, don't worry.

Copy all the files related to your desired project to the new computer and into the Projects folder.

Start VAPSDB3 and select the project. You can now access the data.

SPS

For the Patterns display function to work, the program, needs to know the planned position of each COG. In other words, you need to load SPS.



Clicking **SPS** will bring up this dialog:

😽 SPS		×
Exit		
Type of File SPS V2 SPS V2.1 428 Setout File 508 Setout File C	Reproject Zone From 0 • Zone To 0 • Reproject Ellipsoid	Erase SPS
C Select & Load		Close

Type of File
C SPS V2
C
SPS V2.1
C 428 Setout File
V HZO SELOUCT INE
508 Setout File
0
~
0

In most cases these days, SPS V2.1 will be available, but I have found that many crews have an almost religious objection to supplying Client Reps with up to date SPS. But they seem to have no problem providing the Setout files.

So, the program has the ability to load standard SPS files, or extract planned source point information from Setout files.

A basic check is done on SPS version. If V2 is specified for example, but the File Header entry specifies V2.1, then 2.1 will be used. This allows you to mix formats to some extent, but is not recommended.



In some operations, the survey block extends across UTM Zones. In this case, you might need to reproject provided coordinates

This doesn't happen often, and it is best if correct coordinates are supplied by the crew's survey department.

But it is supplied as a last resort.

😽 SPS		×
Exit Type of File C SPS V2 SPS V2.1 C 428 Setout File C 508 Setout File C	Reproject Zone From 31 + Zone To 30 + Reproject Ellipsoid Clarke 1880 mod.	Erase SPS
Select & Load	Cancel	Close

Click Select & Load to select your files and begin the load.

You can **Cancel**, but cancel only takes effect after the current file has been processed, so there might be a small delay.

Erase SPS does as it suggests. All currently loaded SPS will be deleted from the database.

Loading Data



Click Load to bring up the Data Load Dialog:

d VAP5							
Outer M	Outer Maysabongo						
Current File	Ignore Files Already Loaded						
Line in File	C Load Duplicate Files						
	🔲 Ignore Points Outside Block Extents						
Specify the Year for the File being Loaded	2018 O VAPS File Has Year Old VAPS						
<u>a</u>							
Start Start	Close						

As with VAPSDB2, you need to specify the year for the data you are loading. This may change in future versions and use the GPS Timestamp, but it gets complicated due to local time zones and end of year.

The options are fairly clear.

However, if you select '**Ignore Points Outside Block Extents'**, you must be sure that you have set these correctly when creating the database (or you have updated them later. In most cases, this option is not required, but can be useful if tests have been run off block for example.

Load Duplicate Files is useful if incomplete VAPS files had been previously loaded. New data will be added to the DB, but existing will not be affected.

For anyone used to VAPSDB2, data loading is much, much faster.

When you click **Start**, simply select the files you wish to load and they will be loaded into the Database. If loading many files, there may be a delay at the end before the program is ready.

A message appears in the bottom right status bar panel saying 'Wait for DB Ready'

The database is updating indexes and things during this time. When it is finished, you can continue with further actions.

If you did not specify enough vibrators when creating the database, you will receive a message like this:

Load VAPS			
		Outer Maysabongo	
Current File		C Ignore Files Already Loaded	
Line in File	VAPSDB3		
Specify the Y	1	Warning ->> The DataBase was setup with a High Vib number of 16, but higher numbers were detected when loading. (Max detected = 30)If this was a one off test, then you need not worry. But if more vibs have been added to the crew, then you need To create a new database and reload	
		ОК	
otari 😓 Stari	t	Close	
		Done Wait for DB Ready	

If you see this, you probably need to recreate the database (IE make a new one) and reload your data. Unless of course it was deliberate.

Common Features

Some features are common to all the displays generated:

Right Click

Right click on any display and a menu similar to this will appear:

Copy Image to ClipBoard Save Image to File PDF

There may be other, display specific options, but all displays can be output as a file (KML, PDF or PNG) or copied to the clipboard.

DB Range

The available date range of data in the DB is displayed in the bottom status bar

00	04:00	06:00	08:00	10:00 Sweeps	12:00 s in Display	14:00 : 12472	16:00
			DB Range	:: 6 Septemb	oer 2018 to 29	November 20)18

Listing File Names

This is a convenience feature so that you can output consistently formatted file names.

If you would prefer to enter a file name every time you list, then use the option "Set Blank"

This dialog is available from every results display screen.

😽 Vibrator Statistics						
Settings Limits Custom Setup	List Reshoots	Exit				
Range O Yesterday O Today	Text CSV XML Options				Vibra	tor \$ Genera
 Specific Day Range All 	V1	ve os% 0.0 0.0	Av. Phase V1 V3	OS% 0.0 0.0	Pk. Phase V1 V3	OS% 0.8 1.0

Clicking on Options brings up this dialog:

K ListOptions				×
File Naming Available Oil Company Contractor QC Country Region Block Date Today Date Selected Range Attribute Name	Selected Oil Company Attribute Name Date Selected Range	File Names will be generated based on the entries in the Selected Box and will be generated in the same order as shown in the Selected box	Shape Files	
Separator(Underscon C Suggest File Names Prefix MYB Test	re) 🔽 O Set Blank 💿 Use Sp	Decified : MYSB2019	VК ОК	

Double click on an entry in the "Available" List to add it to the "Selected" List. Use the up and down arrows to reorder the entries to suit.

Other Settings

All display pages have a settings menu selection to specify display specific colours and settings.

👯 Scatter Graph	😽 Vibrator Statistics
Scales Limits Settings List Shape Exit	Settings Limits Custom Setup List Reshoots Exit
🖸 Yesterday 🔿 Yesterday 🔿 Specific Da	ay
-Time Range	(Hour)- (Hour)- (Hour
Load From 0	

All settings pages are similar to a large extent, but each one is specific to the display.

Resetting Form Sizes and Positions

Starting with Build 1367, Form positions and sizes are saved, so you don't have to resize things every time you use the program. If for some reason this gets messed up (it shouldn't, but....) then you can reset all the form positions here, exit the program and restart. They should all then appear in the middle of your primary monitor when called up.

😽 VAPSDB3	E.						
New Project	Select Project	Update Parameters	SPS	Export	Misc	About	Exit
					Re	set Forn	n Locations
-Current Pr	oject				St	atus Coc	les
Oute	er Mays	abongo	Selism	Tille com			Jeisin

Status Codes



This entry is available in several places in the program. It simply displays a list of status codes and their meaning as I find it difficult to remember them all, and it is tedious to look them up in the manual when I need them.

-	Status C	odes	
Outer Maysa		Status Codes	www.seismatters.com
	Code	Description	I
Region	1	OK, Raw mode	
Block	2	Sweep aborted by DSD	
JIOCK	10	Sweep aborted by user	
ast VAPS Loaded	11	Ethernet error between DSD and PC	
	12	OK, Filtered mode	
	13	Discrepancy in DSD and DPG acquisition table	
1	14	Lift error	
S Load	19	OK, small PPS discrepancy	
T	21	Wrong sweep definition	
	22	Custom definition error	
Stats	23	Sweep start time expired	
	25	Overrun error	
	26	Slave recording unit failed to start	ATTA 2
Time-Status	27	PPS discrepancy	
	28	Force level too low	
	29	DSD didn't have time to save the previous signal to file	
SlinSween	30	GPS accuracy error	AN AREA CON
onpoliteep	90	Waiting for Status	
	98	No TO data received	
Dattorne	99	No T0 data received or no status report	
Exit		Dismiss	

Daily Stats



The Stats display provides a graphical summary of statuses for each vibrator for the specified date range. Typically only one day is wanted, but you can select any range you wish, up to the full range



of dates include in the database.

The initial display is of General Stats, providing an overview of vibrator in/out of spec over the selected range.

Averages, medians, differences, warnings, statuses and Navigation Statuses can be displayed, as well as a custom, user defined display.

You can specify the number of panels across – if you have a big screen for example, you can have more.

The dialog is moveable and resizable.



The results page can be resized and/or moved, Colours adjusted (see later)



You can switch between graphic and numeric results using the buttons shown:



Numeric results will be shown for the option selected. As with the graphic display, numerics will be updated as you change options.

ALC: NO.	WD	Drive	Av, Phase	FB. Physic	Av. Ost	Ph. Dist	Ay, Force	Ph. Force	HDOP	Num: Sats	Con
Tentersty	V3	0.0	0.0	0.0	0,0	0+2	15.9	0,0	0.0	0.0	0
Today	V2:	0.0	0.0	0.9	0.0	1.0	25.5	0.1	0.0	0.0	c
Starte Day	V3	0.0	0,0	1.2	0.0	0.8	24.2	0.0	0.0	0.0	6
	94	0.0	0.2	2.3	0.0	1.6	38.3	6.2	0.0	0.0	0
Bange	V5	0,0	0,1	13	0,1	1.3	28.4	0,0	0.0	0.0	¢
AI I	- 福二	0.0	0.0	1.9	0.0	1.7	19.9	0.0	0.0	0.0	¢
	¥7	0.0	0.0	2.9	0.0	1.2	25.0	0.0	0.0	0.0	
Children and	78	0.0	0.0	13	0.0	2.5	99.2	0.0	0.0	0.0	C.
a reason of	V9	0.0	0.0	0.2	0.0	0.0	13.6	0:0	0.0	0.0	- 0
Tel anno 111	¥20	0.0	0.0	0.5	0.0	0.2	9.1	0.0	0.0	0.0	0
A STORE MADE TO	¥11	0.0	0.0	0.5	0.0	0,1	5.7	6.0	0.0	0.0	5
	V13	0.0	0.0	1.0	0.0	0.1	0.0	0.0	0.0	0.0	C
Load	¥14	0.0	0.0	0.2	0.0	0.2	9.6	0,0	0.0	0.0	C
	¥15	0.0	0.0	0.2	0.0	0.1	6.3	0.0	0.0	0.0	0
~	V36	0.0	-0.0	0.5	0.0	0.3	9.4	Q.D	0.0	0.0	0

Listing of Results

🙀 Vibrator Statistics									
Settings Limits Custo	m Setup	List Reshoots	Status Co	des Ex	t				
- Panaa	_ 🗶	Text							
O Yesterdau		CSV						Vibra	tor §
C		XML							Genera
○ Today		Options		_					Genera
Specific Day		Driv	e o	5%	Av. Phase	OS%	F	k. Phase	OS%
C Range		V1	0.0) V1		1.1	V1		2.3
O AI		V2	0.0) V2		20.0	V2		30.7
		1/3	0.0	V3		73	\/3		77

Results can be output as Text, CSV or XML by clicking List in the top menu bar.

If selecting Text, the results will be shown immediately in Notepad, for the others, it will depend on the "Open Listing After Create" selection in Settings.

Stats Settings





The setting dialog is fairly obvious, so doesn't warrant much discussion. Setting changes are applied to the currently displayed results immediately. You can move the settings dialog to anywhere on the screen you desire.

10 : 326 12 Nov 2	81.05				Vibrator	Sta	tistics					111	-
	Nyg Drive ==	Avg	Phase Des	4	Phase De		Av Distortion	eal	Pk Dis	aprilon =	٨	v Force	-
11	75.2	VI.	2.0	¥1.	1.8	10		10.5		16.4	59		13.2
8	75.2	17	10	17	1 17	32		122 1	-	22.0	92		79.6
5	75.2	12	10	NT.	43	10		12.6 1	2	21.7	33		12.5
4	753	14	1.3	44	-6.1	14		23. 3	- -	14.5	34		74.5
6	15.1	74	3.5	15	1 12	14		114 3		12.4	15		11.5
16	75.2	1/8	1.0	10	0.5	1.18		123 1		23.2	58		10.2
0	75.5	VT	1.7	17	47	197	1	10.0 1	8	15.2	N7		22.8
15	75.2	38	1.0	18	23	14		121 1	8	20.1	18		73.3
10	15.2	3.8	1.9	5.8	1.8	43		11.5 1	2	212	10		73.5
10	75.2	110	10	WRD .	16	1410		88. VI	9	15.4	1/10		TRA
11	75.0	VII	1.0	WIE:	-15	1.12		52.4 VI		19.2	VII		12.9
12	75.0	1/12	1.0	112	26	1977		12.8 11	2	20.0	V12		74.0
4	75.2	V12	2.0	V13	2.5	1912		(1.3 V)	2	20.6	VII		17.8
74	75.3	214	6.1	5/14	5	814		TEA VI	•	21	514		74.2
Lim	100.0 nt 72.0 - 78.0 Pk Force	-10.0 Lim	10.0 it +/.5.0	-20,0 U	29.5 mit +: 10,0	0.0	Limit 40.0	97. S	D.O Limit	100.0 50,0	40.0 Limit	65.0 - 75.0 d Sweeps	9
a C	PII TT B	VI C	25.8	10	45.0	Not		745748 225		at.	10	SHENDROOM JOHN	CHI DH
10	79.5	N2	70.0	VP	75.5	VZ		127 3	7	0.7	12		828
ia l	75.4	Va	72.0	VS	79.7	VS		134	2	2.7	13		47
44	10.9	14	88.7	14	41.0	44		223 3	4	17	14		1847
18	17.8	Va	79.3	10	78.7	Vs		125	5	87	25		281
VB	76.2	10	75.1	VE	78.6	Ve		132 1	5	0.7	10	1	474
VT	Π.1	V7	148	V7	75.4	117		124 1	7	0.7	1/7		736
va l	17.7	VS	79.0	VE	73.6	VE		125 \	5	2.7	15		907
19	78.0	19	70.9	19	72.5	15		231 1	9	6.7	19		118
10	17.4	VID	70 1	010	79.0	Via		127 VI	0	07.	1/10		1046
93	75.4	NTT:	65.3	VII	80.5	VII		tet y	1	0.8	V11	5	893
12	19.0	VIZ	63.0	VIZ	90.3	VIZ		220 V	2	0.7	V12	100	587
44	79.7	Lord L	41.5	Line .	at 5	1440		140 144			1142	1 C	444

You can create quite colourful displays if you wish.

Stats Custom Displays





The setup appears quite intimidating, but is easy enough to use.

Attributes and statuses are grouped in boxes as shown.

Simply double click on one to add it to the output box on the far right.

Sweeps A	in Dature	and the second se	and the second sec								
All Color	ic Phase k Plase w Distortion k Force affrance sconity Soffwas Vieconity S an civ	Mass Hymnig Automatic Action of the second o	+COP Grant Sep Nuts Sats Corr Age Cl 1 Age Cl 1 Nam CPS Cl 2 DOPS Cl 2 DOPS Cl 3 Threadel Code Cl 4 RTK Fax Cl 5 RTK Float Cl 5 RTK Float Cl 3 RTK Float Cl 3 Smulation Cl 8 Smulation	Drf Ar Drive Drf Ar Ditwass Drf Nr Maass Drf Nr Maass Drf Ar Distortion Drf Nr Distortion Drf Nr Distortion Drf Nr Distortion Drf Nr Distortion Drf Nr Distortion Drf Softfress Drf Colomonty Drf Softfress Drf Colomonty Drf Softfress Drf Colomonty Drf Softfress Drf Colomonty Drf Softfress Drf Colomonty Drf Softfress Drf Colomonty Drf Softfress	Ned Av Drive Med Av Phase Med Av Phase Med Av Distortion Med Av Extortion Med Av Force Med Netotethin Med Av Force Med Netotethy Med CStiffness Med CStiffness Med CStiffness Med CStiffness Med CStiffness Med Con CV Med Sen CV	DOS A/ Drive DOS A/ Phase DOS A/ Phase DOS A/ Phase DOS A/ Data/top DOS PA/ Data/top DOS PA/ Data/top DOS PA/ Phote DOS PA/ Phote DOS PA/ Phote DOS Corr Age	1 Bins 2 Abort By DSD 10 Abort By User 11 Ethernet Br 13 Aug Table Br 14 UF Brow 19 Seal PRS 21 Wrang Swapp 22 Outon Br 23 Start Expired 25 Centrum 26 Searce Br 27 PRS Br	Av Drive Av Phase Mass Warning Poto Warning 11.0 thermal: Bir 14.0/f. Error 14.0/f. Error 14.0/f. Error 14.0/f. Error 14.0/f. 12.7 mitaned (%) 12.7 mitaned (%) 12.8 mitaned Societ Sweeps Bad Sweeps			
	All	All	All	All	QL 3 Ray GPS % QL 2 DGPS % QL 3 RTIC PE %	Dif Num Sata Dif Corr Age	Med Nurs Sala Med Corr Age		28 Fords Low 29 No Save 30 GPS err 90 Walt Status 98 No TD		
			Al	All	A\$	All	No Status 00 Uniovown Stat				
							1.Rave (%) 12 Mitered (%)		1		
		Custom Name	Whatever Name You Wa	ett.				and the second	-		
			10 C					Allow Duplication			

Use the Green arrows to move a selected item up or down in the list, and the red X to delete an item. When you are happy with your selection, enter a descriptive name in the Custom Name box and Click apply. You can use the Load and Save Buttons to save or load setups to disk.



Your Custom Display will be shown when you click Custom 1 as indicated

1 12	D : 326 12 Nov 2018				Vit	orator Statis	tics Want	-	-	100	-	1		
	Avg Dove	2	Avg Phase	1 1000		Mass Warning	100	1	Plate Warning	24		Status 11	201	
	NE 26	8		1.1	V3		0	14		0	vi	-	2	
	V3	10 V3		12	1/3		0	V2		0	1/2		5	
	74	10 W		1.1	VE		0	VE		2	14		3	
	VE 70	ia ve		TT	1/5		0	VS		0	VS			
	YE	10 Y		1.0	VE		0	VE		2	VB		4	
	VT 76	10 N7		1.0	V7		0	17		0	¥7		0	
	210	(0 Y10		1.2	¥10		0	110			¥30		5	
	711 76	ID VII		12	VII.		0	VII		0	VII		2	
	76	ie 412		1.1	112		0	912		0	¥12	100	1	
	713.	D VIE		12	V13		0	V13		Ð	V13		2	
	/14 76	o VI4		1.1	¥14		9	3/14		Ð.	534	in the second second	4	
	76	D VIS		11	VIE		0	V15		Ð	V16		5	
	70	D VIE		1.5	VIE		0	VIE		0	V18		3	
	/17	10 V17		12	V17		0	V17		D	V17	and the second se	3	
	70	D VIE		1.1	VIE		0	V19		0	A 46		5	
	70	E0 V20		1.2	VED		0	V20		D	V20		T.	
	76	D YOU		1.0	VP.		Ð.	V2B		0	V28	1.1	1	
	729	0 ¥28		1.1	120		0	V28		0	V29		2	
	0.0 100.0	10 -	0.0	10.0	0	Telefold	100	0	Total	100		Total of A	7	
	Constantin (1974		AND STREET		_	complex	_	-	TOTALID	_	-	TODAT: 0%	_	
	Status 14 (Life Error) o	m -	Status 1 (Raw N	Node) Pot	S	tatus 12 (Filtered M	lod _{pet}	100.7	Total Sweeps	Gnt		Good Sweeps	Cnt	
	N	V.		99.1	V1		0.0	X		434	V1		426	
	12	V		99-0	V3		0.0	V3		748	V3		726	
	74 7			99.3	14		0.0	V4		711	V4		69E	1
	VE 7	VE		99.1	VE		0.0	V5		818	V5		808	
	10	M		89.5	VE		0.0	VE		940	VE		829	3
	MT	17		992	¥7		0.0	¥7		940	¥7		928	mt
1	VICE	VIG		88.0	VID		0.0	V10		860	A3D		822	

The selected attributes will be displayed with the name specified

Time Status



Time-Status can display results in two ways -

- Single Vibrator with all Statuses
- All Vibrators and a single status

This way you can identify issues that apply to all vibrators, indicating field conditions or see if there is something specific to only one vibrator, indicating a problem with it.

🙀 Sta	tus vs	Time					
Setup	Limits	List	Options	Stat	us Codes	Exit	
Rar	nge						
0	Yesterc	lay	ОТ	oday	Ģ	Specif	ic Day
1	، ک	.oad			22 Oct	2014	•

Select the desired day and click Load

ge Verteeder	C Today IF Specific I	Display time		Con	C tool (and	C vizzation	Camerat	Single Vib Statuse
	France was			C Access these	Chicagolise	47 (I)	C intaki	All Vibe by Status
Load	Le NOV 2010	그 78 24 첫	10 -	F Proj. Prime C Avenue Detterture	C feel forr	C 107	C Conversion Ray	funerio
dor	-		- 1	11				
1 0.01	Vibrator:1 Status			Status Vs Time			2	018-11-22 %005p
	Bad Sweep		-					-0.72%
	Corr Age					-		-0.00%
	1.000					_	-	
r con	0.5615		Citere di la cite					-0.00%
0.0	Ethernet						and the state	-0.00%
1300 B	No. of Concession, Name		description of the	and the state of the state		a second second	and the second	
1 6 0	HOA MOVE							0.000
12 0	HDOP							0.00%
11 1	LID		-			-		-0.325
14: 17cm	and the second se							
# C.W	Plate Warn-		Constant and	A COLOR MANAGEMENT				-0.00%
E FW	Mass Warm		-			-	And Address of the owner of	-0.00%
n fm	In Case						_	
17. F.明.	PRForce						State State of States	-0.00%
(Tau	Av Force		-			-		-0.00%
1 f 31	Ok Dist					-		-0.000
	P. B. SHEET							0.0014
0.44	Av Dist-		Contraction of the local division of the loc					-0.00%
- C	Pk Phase-		-			-	and the statement	-0.00%
n na			a stand and a stand		Lund La Co	and the second	and the second	and there a
500	Av Phase-		a service and a state		Contraction of the			-0.00%
- 6-	Drive		-			-		0.00%
E F			4 4 4		14 AF AF	A	-	10 14

The initial display is the lowest vib that is available, with all its statuses displayed by time. If the crew is not working 24 hours, then you can adjust the displayed range:

-	Sta	tus vs	Time							
S	etup	Limits	List	Options	Statu	s Codes	Exit	~		
	Ran	ige —							Displa	ay Time
	0	Yester	day	0 T	oday	0	Specifi	c Day	From	<u>б</u> .
		5	Load			22 Oct	2014	•	То	24 ·

To display All Vibrators Click 'All Vibs By Status':

Status vs Time		19 19 19 19 19 19 19 19 19 19 19 19 19 1							.101
Satup Linits List Op	there Status C	ofes Ext	2023	and an	and a			× 1	
C Yesterday	C Today	🖗 Specific Day	hon 6	- AND	F Drive	C Peak Distortion	C Plate Warn	C Ethernet	Single Vb Statutes
		10.000	70 24 4	24	C Average Phase	C Average Force	C HOOP	C mists C Correction Age	All Vibs by Status
Loss Loss	. 8	208 2014	24 -		C Average Distortion	C Hass Ware	IT Hav Hode	T Bad Sovep	Numerica.

The Status Selection Box and Max Vib Selection becomes active



Here we see that Vib 6 had some sweeps with Average Force Out of Spec. As the other vibs did not, the issue is related to Vib 6 alone.



You can produce a listing of out of spec sweeps for a specific vibrator by clicking List and selecting the option you want. You will be prompted for a file name, and the output will be generated and displayed. The XML option produces a file that is directly compatible with MS Excel.

4	-	A100	4		103	100		- 16	14				1		- 11	-11			4		- 81 L		W.		-10			1
1 Sta	us-Ti	ime,	Failu	res Or	ily																							
2 Date 1	018-11-2	24			Vibr	eter 4			13 Dents	es Out of te	10																	
a fire	iker		Paint	050	Driv		Au Phase	PK Plane	Au Dist	Phillip	Av Force	Philones	Matc IN	a Plate W	a twp Sta	UHDOP	Nav P	Wod Et	bennet	Nam Sals	Con. Ap	Rad Sweet	9		Restaut			
8. (07.45	13 . 3	0000	4790.0		81 C	18	1	-12	1	1 26	24	7		Q.	C 1	1 (1.7		- 1	13		E.						
6.08.25	16 2	19895	47857		1200					0 0		1	2	0	0.9	6	0	5	.0	15		- E		Name in	Vit 6 and	0825.54	10.11.40	08:25:54
1 10121	12 2	0000	47117		• 200		- 0	1 1	01	0 0		6 1	1	0.	0 9	6	0	. 5	D	14	1	2 1		Seafard By	:Vi8.6 et l	19 22.47	who the etc	09/22 47
11.07	18 2	10027	47768		• Z			1.1	0	0 0		ñ 1	x	0	Q		é.		8	LA		÷ 1		Hechical By	: White at a	12826	viti Wat 1	108.06
011222	00 2	19907	47661		4	75	1	1.1.1		4 34	1		1	0	0	1 0	0.	1.5	D	12	1							
11 日 48	00 2	2518	47865			15	1.1		1	1 17	25	R		0	0	1. (00	. 2	D	19	1							
11 11.04	28 2	1000	477063			.75	- 1	. 7	1	2 23		r - P	÷	α · · ·	e 1	1 -1	LT.		1	18.	1	. E						
12 14 15	08 2	19916	47968		6	76		- 4	1	2 21	. 75	1 A	6	0	Ω	1 5	146	5	. Ú	16								
15 14:24	18 2	19958	47993		6	75	1.1	-1	- 9	6 17	77			0.	0	1 (16	.5	30	16	1	1. B						
14 14.55	57 52	19949	47981		1000	114	1	. 0	1. 11	0.0			3.	0	0. 9	P	0	15	T.	LT	2	1		Beacheri Ba	V0.1 m	# 38 10 1	vis 9 et 5	4.58.18
18 28.89	13: 2	19954	47968		6	14				6 54	C M	U 11	1. A	u	1 D	1 1	18		11	11		E						

Here For Vib 6, errors are highlighted. If the point was reshot, it is indicated on the right.

Future versions may expand on this to show results from all vibs.

SlipSweep



The SlipSweep section allows you to examine the time and distance relationships in SlipSweep operations.

The three modes are:

- Plain SlipSweep
- DS3
- DS4



The parameters for each can be set from the top menu selections as indicated.











DS4 Rules

DS4 is the only one that warrants discussion.

From the Sercel 428XI User Manual 1:



VAPSDB3 allows you to enter rules in much the same way, except that VAPSDB3 expects times to be in milliseconds.

Rules can be defined and saved for a later date (or historical reference).

Rules can be edited and updated. Up to 30 segments can be defined for each rule.

Click on a cell to edit or enter data.

A single click on one of the stored rules will load it for editing.

A double click will load it and make it the current rule, closing the selection dialog.

You can save and load rules to disk for sharing or archiving as desired.

Delete will remove the selected rule form the database.

New clears the table, making it ready for data to be entered.

When you click **'Close/Apply**' the currently displayed rule set will be stored internally and used for DS4 calculations. The rule is <u>not</u> saved in the database unless you click 'Save (DB)'. It will remain the current rule though until another is defined or selected.







Results from, a DS4 operation

SlipSweep Colours

S	ettings							×
	Points and Limits	Colour		Size Muidth		Logo Position		1
		Colour				0	œ	
	Good Point			2				
	Bad Point			8 -		0	0	
	Limit Line			1.		C None		
	Backgrounds					Pefz	aults	
		Colour From	Colour To	Colour Solid		Uero	uits	
	Drawing Area				Horiz	ontal 🔿 Vert	ical 🔿 Solid	
	Frame				Horiz	ontal 🔿 Vert	ical 🔿 Solid	
	Open Text A	After Create	🔽 Open F	PDF after Crea	ate	Ð	Close	

You can configure the results as you desire

Patterns

VAPSDB3		×
New Project Select Project Update	Parameters SPS Export Misc	About Exit
Current Project		
Outer Maysabor	Igo Setem Mirakeen	Seismatters.com
Region N	aruba	
Block Na	aruba South	
Last VAPS Loaded jd	262dgp.txt	
👌 Load	Areal	
Stats	Scatter	
Time-Status	Availability	
SlipSweep	History	
Patterns	Fleet	
Exit 💽	VP	
uild : 1.1.0.2835		DB Range :: 19 September 2018 to 22 September 2018

The Pattern displays allow you to see where the resolved COG is in relation to its planned location.

SPS must be available for this to work

Bange				
C Yesterday				
🔿 Today				
Specific Day				
C Range				
O All				
07 Jul 2018 💌				
24 Jan 2018 🛛 💌				
oad 😓				
\sim				
Cancel				

Select the desired range and Click Load.

The range will be loaded and displayed, with all Line/Point Pairs listed in the first box, and out of spec points in the second.

and a second	Line / Point	Emoc/005	Al Single	Histogram L Histogram 2	
Ynterlay	5330 2000	5308 2105	10 - 100	Internet internet	
Tada	5380 2001	5410 2000	301108	Source Patterns	The second second
1000	5380 2002	5416 2025	7 Jul 2010	Naruba [Naruba East]	
Specific Day	5380 2003	5452 2046	Table DD Spec - 5	and the second s	-71
Farce	5380 2004	5452 2090			
527 C	5380 2005	The second se			
-02	5380 2006		8		R
1 Jul 2018	5380 2007			1. A.	
	5380 2008				
(Jai 201) (P	0380 2009		2		12
	5380 2010				
1	5180 2012			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
Lund	5380 2013			100 AND	
	5380 2014			1944 - CA	
	5380 2015			24.2	
Carran	5380 2016				
and a management	5380 2017			in it	
	5380 2010		Î	ALC: 100	
and the second	5380 2019		1		
(tenti (n) 50 +	5380 2020		4 °	A STATE OF A	
ten nel fai man	5380 2021		12		
	5380 2022				
P Rather 4	5380 2023			10.00	
	5380 2024			and the second se	
I x Specing (m) 2	5380 2025			10 States	
	5180 2027			As in Apr	
* Specing (m)	5380 2028				
Real Briter Carte	5380 2029				
Star - 11-	5380 2030		1. The second se		
Show Grid	5300 2031				
	5360 2032				
lintete	5380 2033		R-		8
Carlower .	5380 2034				
	5380 2035				
	5360 2036				
	5390 2037		-25 -20 -15	-10 -5 0 5 10	15 20 25
	5300 2030		Tetal VHs Shows : 1826	X Offset (m)	Sweeps Massing SP5 #890



Display limits and the error radius can be set as desired. Any changes require clicking the '**Update**' Button.

Note that currently, the Grid Spacing settings have no effect. The grid is set automatically.

To see a single VP:

Line / Point	Error/OOS	All Single Histog	ram 1 Histogram 2
5380 2000 5380 2001 5380 2002	5398 2106 5410 2000 5416 2025	JD : 188	Fleet Patte Naruba [Narub
5380 2003 5380 2004 5380 2005	5452 2046 5452 2050	Linepoint : 5380 2000 Fleet 4	

In this mode, you can select a Line/Point Pair from either of the lists and it will be displayed


Histograms

Line / Point	Error/OOS	All Single Histogram 1	Histogram 2
5380 2000 A 5380 2001 5380 2002	5398 2106 5410 2000 5416 2025	JD : 188 7 Jul 2018	Fleet Patto Naruba [Narub
5380 2003 5380 2004 5380 2005	5452 2046 5452 2050	Linepoint : 5380 2000 Fleet 4	

Histogram 1

Histogram 1 shows an overall summary of points out of spec by Fleet and the total offset distribution



Histogram 2



Histogram 2 breaks down the offsets in to the X and Y directions

Array Size and Azimuth

This is only useful if more than one vib per fleet of course.



Pattern settings

Pattern Settings		X
Source Patterns	🛟 Defaults	Logo Position
Actual Source Point	X 3 🚝	
Resolved COG - Good	Z 5 🚔	O O
Resolved COG - Bad	8	C None
-Single Fleet Pattern		
Zero Point	X 16 -	
Vib Positions	X 16 👻	💫 Reset All
Resolved COG	<u>х</u> 16 📩	
Drawing Area	<u> </u>	orizontal C Vertical C Solid
Histogram Bars Colours From	O Solid O Left to Right	🛟 Defaults
To	C Right to Left	Gap 4 1
Solid	 Bottom to Top 	✓ Outline
Open PDF after Create		Close

Colours can be adjusted for any of the result sets to suit your needs or imagination.



Pattern Out of Spec Listings

			0		
😽 Patterns					
Settings SPS	List OOS	Exit			
Range	Text		Line / Point	Error/OOS	
Yester	CSV		2081 1631	2197 2179	
C Today	SHP		2081 1635		
O Specifi	Options	s	2081 1639		
O Bange			2081 1645		
			2091 1651	1	

The usual options are available. The outputs are equivalent, except for Shape files which obviously won't contain all the information.

An XML (Excel Compatible) result shown below:

	А	В	С	D	E	F	G
1	COG o	ut of S	pec				
2	Date 22 Fe	eb 2018 JD	: 53				
3	Total VPs	Evaluated	(With SPS): 12	2305			
4	Total Out	of Spec CO	G: 591			Error Radi	us: 5m
5							
6	Line	Point	Offset (m)	<u>dX (m)</u>	<u>dY (m)</u>	Fleet	<u>nVibs</u>
7	2449	3815	5.3	1.3	5.1	4	1
8	2449	4039	6.0	2.9	5.2	6	1
9	2449	4079	5.6	-5.5	0.8	6	1
10	2449	4135	6.8	-5.3	-4.4	4	1
11	2449	4163	5.3	-5.3	-0.5	6	1
12	2449	4227	5.2	-4.4	2.8	6	1
13	2449	4239	5.3	-5.0	-1.8	6	1
14	2449	4255	5.5	-5.2	1.8	6	1
15	2449	4279	6.7	-6.6	-1.2	6	1
16	2449	4283	6.2	0.3	6.2	6	1

Areal



🔆 Areal									
Setup Colours	Polygons	List Exit							
C Range	All	From 02 Mar 2018 💌	То	03 Mar 2018 💌	👌 Load	Cancel	C Auto	Block Bounds	Show Polygons
Attribute									

Click Load to load your desired Range.



Scales

Copy Image to ClipBoard Save Image to File PDF	
Scales	
Colours	

Right Click anywhere on the display and select scales

A CAR ALLER AN	all water and
Elevation	
High 200 Close	
Min : 95.7 Max : 288.3	

A box like this will appear and you can set scales as desired.

Apply will replot the data with the new scales, but not close the dialog.

Experiment with the usage.

Colours







Colour selection and Scales can be moved to anywhere convenient, and can be open at the same time. Quite interesting displays can be generated by adjustment of scale and selection of colours.



Additional colour maps may be available in future versions.

Polygons

It is possible to define polygons to be drawn over the areal display.

This can be useful for showing boundaries or exclusion zones.



Click 'Polygons' at the top of the screen

🔆 Areal									
Setup Colours	Polygons	List E	xit						
C Range	(° All	From	02 Mar 2018 💌	То	03 Mar 2018 💌	👌 Load	Cancel	C Auto	Block Bounds
Attribute			JD :					Elevation	

Any previously defined polygons will be listed. Click on any one to edit it, or New for a new shape.

Save Sale	ted Polypers Load Polypers Eet		2	4
Fiame	Restangle			
	Polygon Name	Upu	ale 💱 New	
	2 Earth	g herbeg		
	Topleft	Vinte	SH#	
			/	
			te	
	9	_		
	N 17	Hill Cathur		
	13 Fill Transporting	1 1 1 1 1	in the second	
	14 13 Line Width Text	cire Colour	CS2 Apply	
	16			
	18 n failing	<u> Herthing [.4</u>		
	20 I	To provide the		
	13	(P)-reven		
	23 24 E	(Phrise)	to from	
	25 T 20 0	(S-Smith		
	27 P 10	111111		
E Ar	29			
	13			
CHUR	15			
~		1	Ge Clase	
	wate swetted		H .5715	
😽 Polygons				×
Save Selected Polygons Load	d Polygons Exit			
Name	Circle			
Ar48	Polygon Name UH51		Jupdate	🎨 New
Ar49				
Ar50	Easting	Northing		
✓ Ar51	Top Left			
	Bottom Right		Write SHP	
Ar54				
Ar55	Centre 562301.9	3461970	-	
UH51	Radius 10		Paste	
UH52				
UH53		Fill Colour		
	Fill Transparency			
UH57				Apply
UH58	Line Width 2	Line Colour		
UH59				
UH60				

Here, editing a Circle shape. Rectangles and Circle shapes can be filled, with a user defined transparency. Line segment shapes, even if closed cannot.

The shape name is not currently drawn. This may change in future versions.

Shapes can be selectively shown or not. Here all are selected. You can deselect any you don't want.

Coordinates can be pasted with the **Paste** button.

For pasting of coordinates,

Rectangles should be in the form of:

Top Left X, Top Left Y

Bottom Right X, Bottom Right Y

Circles should be

Centre X, Centre Y, Radius

And Segments:

Easting, Northing

Easting, Northing

•

Easting, Northing

The separator can comma, space, tab, colon or semicolon, IE these will all work:

310395,2015596

320395 2015596

320395:2005596

310395;2005596

310395 2015596

New

New Polygon			X
Rectangle	Rectangle Polygon Name		Regional Save
Circle	Easting Top Left	Northing	
Point	Bottom Right		📔 Paste
Segment	Centre]	
	Fill Fill Fill Transparency Line Width 2 -	Fill Colour	
	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15		F2=Move Row Up F3=Move Row Down F4=Duplicate Row F5=Insert Row F8=Delete Row
Close	16 17 •	▼ ▶	

Operation is similar to the Update.

When creating a new Shape though, you must enter a name before saving it.

Note the distinction between Point Shapes and Circles.

A point within VAPSDB3 has a size. This is for display purposes in the program. In any Shape file that is created, it will not have a size. Circles will though.

Saving and Loading Polygons

👷 Polygons			×
Save Selected Polygons - Load P	olygons Exit		
	Circle		
Name Boundary	Ar2		6 5
Ar1	Polygon Name	rg- Update	X New
Ar2	Easting Northing		
Ar3	Top Left		
Ar4	Rottom Right	Write SHP	
Ar5	Bottom Right		
	Centre 590705 2440029		
	3440038	😑	

Save Selected Polygons allows you to save as a Shape file or as a PolySav file that can be loaded later by VAPSDB3.

Only selected Polygons will be included in the output.

If you save as PolySav then you can load the file later if desired, using Load Polygons. This is useful if using multiple databases of the same or adjoining blocks for example. You may have defined a list of Uphole or exclusion zones that need to be shared. Instead of having to enter the values for each DB, you can just load them.

The file is a text file in a specific and rigid format.

It <u>can</u> be edited, but it is <u>not</u> recommended.

Enabling

The **Show Polygons** must be selected to display Polygons.



Settings									
🙀 Areal									
Setup Colours	Polygons	List	Exit						
C kange	 All 	From	07 Jul 2019 🔻	То	14 Jul 2019 🔽	oad 🈓	Cancel	Auto	C Block Bounds
Attribute			JD : 188 to 217					Peak	Phase

Additional settings are available by clicking Setup in the top left.

😽 Areal Settings	X
Backgrounds	
Colour From	Colour To Colour Solid
Drawing Area	O Horizontal O Vertical O Solid
Frame	O Horizontal O Vertical O Solid
Logo Position	Colours
•	© Drive
0 0	C Average Phase
	O Peak Phase
C None	C Average Distortion
	C Peak Distortion
Blob Size (m)	C Average Force
X Size 50	C Peak Force
100	C Stiffness
Y Size	C Viscosity
	C Stiff/Visc
Grid Lines	C Statuses
✓ Horizontal	C HDOP
Vertical	C Elevation
	C Number of Sats
	C Geoid Separation
i Apply	C Correction Age
	C Fleet
Cancel	O Day of Year Acq.

Most are obvious, but **Blob Size** is provided to increase or decrease the size of the point drawn.

If line spacing is say 150m and point spacing 50m, then if the point is drawn at 25mx25m, we see individual lines rather than a smooth, continuous display. You can adjust these to suit your needs.



25x25

50x150

Any changes made here will not be applied until you click the apply button. This is because an areal display typically takes some time to redraw, and is best to make all changes rather than have to wait until redraw is complete before making another.

The Colour bar/colour mapping is provide here in case you want to change several attributes worth of colours. Simply select the attribute and then the colour. Click Set to save it. This probably won't get much use.

List			
😽 Areal			
Setup Colours Polygons	List Exit		
C Range 💿 All	Text CSV	3 ▼ To 02 Oct 2019 ▼	Load
Attribute	SHP		
C Drive	KML Overlay	p 278	
C i i i	Options	1 to 5 Oct 2019	

The list menus has the usual options, which are fairly obvious. Only KML Overlay is covered here.

Google Earth allows for "Overlays". These are image files that are positioned over the GE image.

These can be useful because displaying many thousands of points in Google Earth is just not viable – it locks up or becomes unresponsive. An image however is a single entity.

The dialog shown below lets you output an overlay file which can be opened by Google earth.

🔜 KML Overlay			×
UTM Zone 34	7 Parameter Tr	ransform	
	dX	400	
-	dY	300	
o 😓 Go	dZ	0	
	Rot X	22	
	Rot Y	-12	
	Rot Z	44	
	Scale	1.1	
Cancel			
	Ellipsoid (In)	WGS 84	
	Presets		
	🔽 Apply Tra	Insform	
Options			
Ouse Suggested File Names	Su	iggest Filenames	
C Blank File Name			
C. Constitution Name			
Specify File Name			
Draw Polygons			
Draw Coordinate Grid			
Auto Open in Google Earth			
			_
Keady			

The entries are very obvious and require little explanation.

What is less obvious is the ability of the transform to adjust for the problem we will always have of trying to fit a flat image to a spherical surface – 3 edges are OK, but the 4th does not cooperate.

This means that an overlay may not exactly match features where you need it to.

The transform can be used to not only place the overlay correctly, but to twist and offset it slightly so your area of interest is covered correctly.

This will become more obvious with use.

Scatter





The usual	l scatter	graph	display
-----------	-----------	-------	---------

- Diselau					
Display					
O Drive Level	O Peak Distortion	C Average Stiffness	C Force Overload	C Excitation Overload	C Correction Age
Average Phase	C Average Force	C Status Code	C Pressure Overload	C HDOP	C Geoid Separation
🔿 Peak Phase	O Peak Force	C Mass Warning	Mass Overload	O Navigation Mode	○ Stiff / Visc
O Average Distortion	C Average Viscosity	O Plate Warning	C Valve Overload	O Number of Sats	C Numerics

All available attributes can be displayed



The available vibs for the selected range are shown. They can be selected or deselected at will. Each vib's colour can be defined by clicking on the coloured box.

Any changes are immediately reflected in the display legend on the right.



For crews that do not work 24 hour days, you can specify start and end hour for the display:







Scales and Limits



These are available from the top menu.

Average Phase							
Low	-20 *	Apply					
High	20 🔺	OK & Close					

Some attribute have an implied upper or lower value.

Phase for example is always displayed as +/- xx.

In this case, it is the High value that has effect, so Low is disabled. Experiment with the usage.



The Limits page is available here also, but remember that limits are global. IE they may well affect other displays. And limits are generally fairly firmly set for a job. Be sure you are doing the right thing if changing them

Nav Mode is a special case. For VE464, it is common to operate in stakeless or near stakeless mode. In this case, final source positions and elevations are returned from the vibrator, and the GPS system operates in RTK mode.

The Nav mode status returned from the Vib GPS in this case should be 5 (or in rare cases 4), indicating RTK Float operation. Anything else **implies** an inaccurate position.

Crews that operate conventionally, have a survey team surveying each and every source position, so the vibrator GPS's do not need to operate in RTK mode and will typically be DGPS. In this case 2 is an acceptable status.

Older VAPS files, such as from VE432 or early versions of VE464 may not have an entry for Nav Status. In this case you can set it to zero, which will stop the program from flagging it as bad.

Other Settings	
😽 Scatter Graph	
Scales Limits Settings List Shape	Exit
Range O Yesterday O Today	• Specific Day 04 Apr 2018 💌
Load	Time Range (Hour) From 7 To 17

Available from the top menu.

Scatter Graph Setings		×
Points and Limits		Logo Position
Dot Size	5	• •
Limit Line Colour		0 0
Limit Line Width	k -	C None
Backgrounds		
Colour From	Colour To Colour Solid	🛟 Defaults
Drawing Area	• Ho	rizontal C Vertical C Solid
Frame	• Ho	rizontal O Vertical O Solid
Open PDF after Create		Close

No explanation is required.

Lis	sting	S					
7	Sca	tter Gr	aph				
S	cales	Limits	Settings	List	Shape	Exit	
	- Ran O	ige Yester:	ау от	O Al Se	OS I etup	Specific Day	04 Apr 2018 💌
	3	، ک	oad			From 7	To 17 .

You can list Out of Spec (OOS) sweeps or all sweeps for the selected day.

You should first specify which attributes you want to list, by selecting Setup from the drop down menu as shown.

Scatter OOS Specify Attributes to List Drive Average Phase Peak Phase Peak Distortion Peak Distortion Average Force Peak Force Mass Warning Plate Warning	 Valve Overload Excitation Overload HDOP Nav Mode Number of Sats Correction Age Geoid Separation ✓ Lift ✓ Ethernet 	 Text CSV XML ✓ Open Listing List OOS
Force Overload Pressure Overload Mass Overload All	 □ Wait Status □ No T0 Data □ No Status ○ No Status 	List All

Select the attributes you want, and the type of list output you want. If you also select 'Open Listing' then the results will be displayed in Excel after they are created (If you have selected Text as the output format, then the results will always be displayed).

You can generate the listing from here with either List OOS or List All.

For Text and CSV outputs, Out of spec attributes are marked with asterisks (e.g. *76*)

Out a Total	of Spec Sc Dut of S	atter gec Sweep	15	: 746									
	Line	Point	059	Easting	Northing	Time	Brise Level	Average Phase	Average Distortion	Average Force	HDOP	Lift	Etherset
12	in the second	100000	an hopi	strating to an it.	and the second states	Charles	and the second s	the state of the state of the state of the	terreruk an antinuk an antinuk ana si	the second second second second second	10,000,000,000	de partes de	and a chose particular.
1	3477	9727	13			00:94:93	75	8.8			0.0		+11+
2	3975	97.83		463412.6	2489848.5	00:04:17	75	1.0	14	74	8.9		-11-
3	3981	9687	15	463487.5	2409637.5	80:84:31	75	3.9	43	*64*	4.9		
4	3481	11183	14	462486.4	2428334.8	00:07:31	75	1.0	17	74	8.9		+11+
5	3479	11191	17	463464.4	2428439.5	00:12:37	75	1.0	31	*76*	0.9		
6	3827	9679	7			88:16:36	75	0.0			0.0	+14+	
7	3985	11182	14			00:16:26	75	6.0			0.0	+14+	
	3883	11175	. 1			00:21:15	75	0.0				*16*	

If outputting XML, the OOS attributes are highlighted:

Scatt	er ou	t of S	pec										
Date 201	8-09-18	JD: 261											
Total Ou	t of Spec	Sweeps.	746										
n.	Line	Point	DSD	Easting	Northing	Time	Drive Level	Average Phase	Average Distortion	Average Force	HDOP	Lift	Ethernet
1	5077	9727	15	0	0	00.04:05	75	0	0	0	0	0	11
2	3075	9703	7	463412.6	2409840.5	00:04:17	75	1	14	74	0.9	0	32
3	3081	9687	15	463487.5	2409637.5	00:04:31	75	3	43	64	0.9	σ	0
4.	5081	11183	14	463486.4	2428554.8	00.09:51	75	1	17	74	0.9	0	11
5	3079	11191	17	463464.4	2428439.5	00:12:37	75	1	31	76	0.9	0	0
6	3077	9679	7	0	0	00:16:36	75	0	0	0	0	14	0
7	3085	11183	14	0	0	00:16:56	75	0	0	0	0	14	0

In the case of invalid Eastings or Northings (IE for Lift, Ethernet, Wait Status etc.), The SPS will be queried and these coordinates used if available.

You do not need to use the setup feature each time. Once you have decided on the attributes you want, you can simply select List then OOS or All to generate the listing:

🙀 Scatter Graph		
Scales Limits Settings	List Shape	Exit
Range	OOS	
🔹 🔿 Yesterday 🔿 T	All	🔹 🗸 🗸 🗸 🗸 🗸 🗸
	Setup	
- 🔥 [Time Range (Hoūr)
Load		From 7 - To 17 -

Sh	ape	File	S											
-	Sca	tter (Grapl	h										
S	cales	Limit	is Se	ettings	List	Shape	Exit							
	-Ran	ge —				005								
	0	Yeste	erday	01	Гoday	All		pecifi	c Day	,	04 A	Apr 20	18 🔻	
							- Tim	- D		العربية	<u> </u>			
	د	3	1.03	a				e Kai	ige (r	nour)				
			LUa	u			Fr	om	7	÷	То	17	$\left \frac{1}{2} \right $	
					4									

A shape file for the current selection can be output if desired

Availability



Availability works by breaking the day down into time windows and counting activity for each vibrator within that window.

As there are many factors affecting production rates and where and when vibrators are and can be available, this display is probably best kept away from offsite Junior Managers.

Usage is straightforward:







A numeric listing of results is available by clicking 'Numerics'



Be aware though that adjusting '**Min Vibs Required**' will have no effect on the listing, unless the data is reloaded.

If **Min Vibs Required** is not selected, then there will be no colour highlighting in the listing

N 223 - 715																			
	Time	-Vs	VE	VE.	44	45	1.44	V7		15	\$10	VII	V12.	¥13	V14	V15	V16	917	VX+
Yesterday	00:00:00-00:14:59	1.4	1.0	6-18-5-		7	10.24	.13	4	0	0	10	No. 15-	3			CONTRACTOR OF	100	ā
Today	00:15:00-00:29:59	1. Q.	0	- 12	3	8	5		0	0	-6	- 8	. 5	1	12	.8	.8		0
Specific Day	00.30100-00144199	.0	0	7		8	3	30	0	0	.9	*	3	3	3	2	30		0
1 Nov 2018	00:45:09-00:59:59		0	. 6		12	7	30	0	0	7		7	0		7		6	9.0
1444 5010	01:00:00-01:14:59		0	- 20 -	5.	14	6	12	Q	0	30	4	7	0	7	#4	5	10	0
Sec. 11.	01/15:00-01:29:59		0	8	21	10	5	- 2	0	0	-6		30	0		8		- 2	0
1 1000	81:33:09-91-44:59		-0	7	12	- 11	11	10-11	g .	0	30	12	10	0	12	0	3		- 11
	811-45-00-01-198-59	10		11	17	13	15	14	a	01	11	10	15		18		11	12	a.
· ·	02:03:00 62:14:59		4	30	1	4	15	12	e.	0	- 24	. 7	12	0	11.	10	23	1	1
NA ADDRESS	02/15/00/02/29/59		. 4	30	- 10	0	15	2	0	0		12	0	0	17	-11	30		0
(Unit C	02,00,00,00,41,59	1				30	11	15	a -	U	14	10	10.00	U	15	10.	12	11.	0
Gright:	02:45:00-02:59:59		a		41	26	38	35	d i	0	35	10	15	2	10	0	. 8	10	0
	03:00:00-03:14:59		.0	30	17	16	17	5	a	.0	13	19.11	14	8	15	1	30	10	Φ.
andLinite	03115100-03129159	0	20	IN BOARD		0	0	1	0	0	11	1	- 9	3		0		19.3	0
Horizontal Grid	03:30:09-03:44:59		0	6	in i	10	11		0	0	13	10	6		- 10			3	9.
Vertical Grid	03:45:00-03:59:39		0	30	11	17	26	30	a	0	- 17	10	7	33	17	-11	33	7	0
An Vos Required	04/03/20-04 14:59		1.0		1	1	0.	0	0	0	4		1	0.		1.1	.0	10.1	0.
1.4	04(15/00-04/29/59	10	0	0	0	a.	0	0	0	0	Ð	0	0	0.1	(d)	10	0	1	0
14	04:30:00-04:44:59		0	6	6.1	10	7	-	a	0	11	6		1	11	11	- 2	8.	0
Vib Disclosured	04:45:00-04:59:39		.0	: 30	101	12	11		0	0	35	- 3	. 5		2.0	. 6	2		0
10	05:00:00-65:14:59		ú	. 9	1	11	12		0.	0	15	2	12	8	18	8	0	2	0
10 3	05115100-05129159		0	2	0	13	3	- 9	0	0	11	12	4		12	.4	.8	3	0.
	05:30:00-05:44:59		- 0	3.5	1	13	. 7	1.1	0	0	-12	- 14	7	4	12	.0	11	5	0
ey Tire	05:45:00-05:59:59	1.0	100	12	5.	đ		123.01	0.0	0.5	2	100	115	- U.S	- (B)	12	B -	1126	9
6	06:00:00-06:14:59	- 0	0	15	10	11	35	11	0	0	5	9	Ð	0	11	14	8	15	Ū.
« <u> </u>	06:15:00-06:29:59	1.	0	7	- + -	5	1.11	1.10	0	0	5		- 2411	4		7	6		Ő.
[11] - I	00:30:00-06:44:55	1.0		7			0	0	a	0 -	4	11.4	3		13		30	7	
14	06:45:00:66:59:59	18	- 0			1	0		G	0		3	4	Q	3		.0	5	0.
	07:00:00-07:14:59		0	7.	8 :	19	8	0	G.	0	24	19	12	- 91	15	11	30		0
waet WRate	07:13:00-07:29:59	10	0	8	14	36	-11	. 5	a	0	-13	14	15	4	13	-5	17	17	0
	07:30:00-07:44:39		0	- 11	25	10	25	24	a	0	15	14	35	25	16	0	17	.19	a
700	07:45:00:07:59:59		0	12	24.	16	13	13	0	0	35	15	5	- 12	13	30	29	17	0.
an UP Rate	08:00/00-06:14:59	. 4	0	11	5	11	12	8	0	0	13	10	Ð	15	24	11	24	. 6	0.
100 -1	08:11:00-08:29:59	0	0	-34	3	16	13		d.	0	12	15	0	7	15	.11	35	101	0
100	08:30:00-08:44:59		.0	13	10	12	9	30	a	0	17	17	0	327	14	-11	15		0.
Pilate	08:45:00-08:59:59	- 0	0	13	11	11	15	13	0	0	15	*	0	4	13	7	17		0
Average UP State	09:00:00-09:14:59		0	12	6	4	10	15	0	0	12	14		15	16		194		0
diam'r	09:15:00-09:29:59	0	0	12	1	a	8	30	G	0	17	34	30	11	14	7	47	-0	۵,
			-	-+0		-	144	1.4	-	+			-	-	++	++			10
	1.71	-			_	-													-

Listing Results

Right Click on the list display to bring up a selection menu

STOLEN STOLEN STOLEN					_			_	_										
N 146 100																			
e	Time	W3	82	13	1 14	13	VB	137		10	1 10	¥11	VII	113		VIS	VIE	Vit	VII *
estercley:	00:00:00-00:14:59		17	134	1.13	36	15	15	1001	10	a.		0	1113211		2	. 9	0	D
day	00115(00-00(29(59)	0	15	- 14	15	10	.15	12	0	3.	5	0	0	5	5.	5	6	0	0
peofic Day	00:30:00-00:44:59		115	11	2	18	13	34	34	15	25		0	17	10	37	13	0	0
and a second	00145:00-00159:59		The ster	1	0-	11	-11		11	14				28	12	28	1		0
· ····	01/00/00-01/14/59	0	UIC-CSV	4	0	15	16	15	26	12	.4	0	0	8	13	15		0	0
Contraction of the	01:15:00-01:29:59		LIEC- RML	0	0	11	33	34	13	14	11		0	30	11	13	00	0	D.
LGed	01:30:00-01:44:59		-15	13	0	п	20	1	ш	14	12		0		11.	13	00	0	0

Or click List in the top menu bar



If text listing is selected then results will be displayed in Notepad immediately. For CSV and XML listings, they will be displayed if the "Open Listing After Create" option is selected in Settings.

Other Settings



You can adjust colours as you see fit



Other settings are fairly obvious.

Production



Production Times and statistics are generated here.

Jowntime Criteria	Date	2021-06-28	Up Down Times Dept street Last Depter Depter
Delays greater than 400	First Sween	00:00:01	For: 28 August 2021
Seconds is considered to be Downtime	Last Sweep	23:59:54	First VP : 00/00:01 Last VP : 23:59:54
	Total Recording Time	23:99:54	Total VPs 12623 Reshot VPs 184
elays greater than 7200	Down Tane	02:20:40	All Times in Sequence
econds is considered non	Non Recording Time	00:00:00	From 00:00:00 To 00:00:01 = 1 Seconds (00:00:01) = 0.000 Hours UP
econding time (not downtime)	Actual recording time	21:39:14	From 00:00:01 To 02:34:35 = 9274 Seconds (92:34:34) = 2:576 Hours UP From 02:34:36 To 04:00:37 = 5161 Seconds (91:36:01) = 1.434 Hours DOWN From 04:09:38 To 12:36:03 = 51045 Seconds (91:36:04) = 0.434 Hours UP
bretors per Pleet	Total VPr	13623	From 12:38:04 To 12:46:52 = 528 Seconds (0:08:48) = 0.147 Hours DOWN From 12:46:53 To 18:36:24 = 20375 Seconds (0:59:35) = 5.660 Hours UP
HEEDE PER VP	Perhot VPs linchoting Partial		From 18:26:29 To 19:12:29 = 2751 Seconds (0:45:51) = 0.764 Hours DOWN
Calculate Production	return and throwing carries	L_27]	From 23:59:54 To 24:00:00 = 6 Seconds (00:00:06) = 0.002 Hours UP
🌏 update	Average VP-VP Time	6.2	Downtime
	Average VPs/Hour	582.9	From 02:34:36 To 04:00:37 = 5161 Seconds (01:36:01) = 1.434 Hours From 12:38:04 To 12:46:52 = 538 Seconds (01:08:48) = 0.147 Hours
eplay Time			From 18:26:29 To 19:12:20 = 2751 Seconds (00:45:51) = 0.764 Hours
rom 0 -			Production Times
• 24 -		📑 Exit	From 00:00:00 To 00:00:01 = 1 Seconds (00:00:01) = 0.000 Hours From 00:00:01 To 02:34:35 = 9274 Seconds (02:34:34) = 2.570 Hours From 04:00:38 To 12:38:30 = 32045 Seconds (02:37:25) = 8.624 Hours
20 August 2024			Total Action Time : 23-59-54
an rugun and t			
30:00 01:00 02:00 03:00 04:00 05	00.00.00.07.00 08:00 09:00	10.00 11:00 12	00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 24:00
Man Providence - DD 60.00		- Descention	24/20/44

Downtime Criteria Delays greater than 400 Seconds is considered to be Downtime
Delays greater than 7200 Seconds is considered non recording time (not downtime)
Vibrators per Fleet 1 Sweeps Per VP 1
👌 Update

The settings are fairly obvious.

Non Recording time is used on crews that do not record 24 Hours per day. If you are a 24 Hour operation, then set this to zero and any delays greater than the downtime setting will be counted as downtime.

Vibrators per fleet is shared with the 'Fleet' dialog. Change it here and it changes in Fleet.

Sweeps per VP is how we determine a complete VP, as the VAPS file is a log of sweep per vib. A VP is defined here as being a point shot by the same fleet with the number of sweeps being equal or greater than the Sweeps/VP specified.

The 'Calculate Production' option is provided so that you can save the delay in waiting for the production calculations to complete if all you want is the Up/Down image.

You can right click on the display panel to copy or save the image.

Settings and Colours

😽 Up/Down Time	
Settings List Exit Downtime Criteria Delays greater than Seconds is considered to be Downtime Las	te st Sweep st Sweep

This is very much like any of the other settings dialogs in the program:

🔆 Colours and Settings	×
Panel Colour From Colour To Colour Solid Background Horizontal	○ Vertical
Results Bar	 Preset 1 Preset 2 Preset 3
Bar Outline Bar Height Text Colour Image: Colour Open PDF after Create Open Listing after Create	Close

Not much explanation needed except for Presets and Bar Height

The 3 presets produce the following displays (in order):

28 August 2021		Total Active Time : 23:59:54
00:00 01:00 02:00 03:00 04:00 05:00 06:00 07:00	08:00 09:00 10:00 11:00 12:00 13:00 14:00 15:00 1	6:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 24:00
Non Recording : 00:00:00	Recording : 21:39:14	Down : 02:20:40
28 August 2021		Total Active Time : 23:59:54
00:00 01:00 02:00 03:00 04:00 05:00 06:00 07:00	08:00 09:00 10:00 11:00 12:00 13:00 14:00 15:00 1	6:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 24:00
Non Recording : 00:00:00	Recording : 21:39:14	Down : 02:20:40
28 August 2021		Total Active Time : 23:59:54
00.00 01:00 02:00 03:00 04:00 05:00 08:00 07:00	08:00 09:00 10:00 11:00 12:00 13:00 14:00 15:00 14	6:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 24:00
Non Recording : 00:00:00	Recording : 21:39:14	Down : 02:20:40

But you can adjust colours as you see fit and create a display that suits your needs.

Bar Height allows you to adjust the height of the Time Bar if you want.

From this:

28 August 2021		Total Active Time : 23:59:54								
00:00 01:00 02:00 03:00 04:00 05:00 06:00 07:00 08:00 09:0	00 10:00 11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00	0 20:00 21:00 22:00 23:00 24:00								
Non Recording : 00:00:00	Recording : 21:39:14	Down : 02:20:40								
To This										
28 August 2021		Total Active Time : 23:59:54								
00:00 01:00 02:00 03:00 04:00 05:00 06:00 07:00 08:00 09:0	00 10:00 11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00	0 20:00 21:00 22:00 23:00 24:00								
Non Recording : 00:00:00	Recording : 21:39:14	Down : 02:20:40								

In truth, it isn't much use, but during development, I could not decide on an optimum height, so made it variable. 35 is a good value to use.

Notes on calculated times

Time periods at the start and end of days may be Non-Recording, or up or down time depending on the parameters set.

In a 24 hour operation, the program assumes that the crew as working the day before, so any period at the start of day less than the defined Downtime delay will be considered up time. The same applies at the end of the day. So you may well see something like this:

	1 1	
Up Down Times	Production List Resh	iot Points
For : 28 August	2021	
First VP	: 00:00:01	
Last VP	: 23:59:54	
Total VPs	: 12623	
Reshot VPs	: 84	
All Times in Seq	uence	
	-	
From 00:00:00	To 00:00:01 = 1	Seconds (00:00:01) = 0.000 Hours UP
From 00:00:01	To 02:34:35 = 9274	Seconds (02:34:34) = 2.576 Hours UP
From 02:34:36	To 04:00:37 = 5161	Seconds (01:26:01) = 1.434 Hours DOWN
From 04:00:38	To 12:38:03 = 31045	Seconds (08:37:25) = 8.624 Hours UP
From 12:38:04	To 12:46:52 = 528	Seconds (00:08:48) = 0.147 Hours DOWN
From 12:46:53	To 18:26:28 = 20375	Seconds (05:39:35) = 5.660 Hours UP
From 18:26:29	To 19:12:20 = 2751	Seconds (00:45:51) = 0.764 Hours DOWN
From 19:12:21	To 23:59:54 = 17253	Seconds (04:47:33) = 4.792 Hours UP
From 23:59:54	To 24:00:00 = 6	Seconds (00:00:06) = 0.002 Hours UP
1		

The first and last entries are not mistakes, they resolve the relevant periods.

This is slightly different to displays from SLX2, which considered start and end of day Non recording.

Total Active time however is calculated as: (Time of the last VP- Time of the first VP)

Total Recording time includes the first and last periods of the day *if they are considered uptime*

Notes on Production Listing

Currently only VPs that have less than the required Vibs are counted as valid VPs. Sweeps with status errors are included in the count. This will likely change in future versions.

But in any case, the VAPS file does not know about void files (line breaks, noise on line etc.) so some points additional points may well be rejected by QC later on.

So, the production listing should only be used as an estimate and a guide.

The reshot points listing shows points where a VP has more than the specified number of sweeps.

Again, use this as a guide to understanding what happened, and refer to the Obs logs.

Future versions of the program may compare against SPS to detect missing points, but this is in the distant future, if at all.

History



It can be useful to monitor vibrator average performance over a long period of time. This allows you to see if one or more vibrators performance drifts away from the others. The History display displays the daily average of the selected attribute for each vibrator.

Any attribute can be displayed:

C Drive Level	C Peak Distortion	O Average Stiffness	C Force Overload	C Excitation Overload	C Correction Age
O Average Phase	Average Force	C Stiff / Visc	C Pressure Overload	C HDOP	O Status Code 🛛 🕅 🔽
O Peak Phase	C Peak Force	C Mass Warning	C Mass Overload	C Geoid Separation	O Nav Mode DGPS 🔽
O Average Distortion	C Average Viscosity	O Plate Warning	O Valve Overload	O Number of Sats	Numerics Graphics

Range	O Range	27 Jan 2018 💌
\$	Load	27 Jan 2018 🗾

Select the desired date range and click Load





In the case of Status Code and Nav mode, there are several sub attributes that can be shown. These are available from the drop down list when either Status Code or Nav Mode have been selected.



✓	V1		□ ∨ 33			
	V 2		🗖 V 34			
~	Υ3		🗖 V 35			
~	V 4		🗖 V 36			
~	V 5		🗖 V 37			
	V 6		🗖 V 38			
	ν7		🗖 V 39			
	V 8		□ ∨ 40			
	V 9		□ ∨ 41			
	V 10		□ ∨ 42			
	V 11		□ ∨ 43			
	V 12		$\square \lor 44$			
	V 13		□ ∨ 45			
	V 14		□ ∨ 46			
	V 15		□ ∨ 47			
	V 16		□ ∨ 48			
	V 17		🗖 V 49			
	V 18		🔲 V 50			
	V 19		🗖 V 51			
•	V 20		🔲 V 52			
	V 21		□ V 53			
	V 22		□ ∨ 54			
	V 23		🔲 V 55			
	V 24		□ ∨ 56			
	V 25		□ ¥ 57			
	V 26		□ ∨ 58			
	V 27		□ V 59			
V	V 28		□ V 60			
V	V 29		□ V 61			
V	V 30		□ ∨ 62			
Г	V 31		□ ∨ 63			
Г	∀ 32		□ ∨ 64			
	All		None			
Reset						

Any vibrator that is detected as active in the selected range is enabled on load. You can disable or enable any that you want. Colours can be set by clicking on the coloured box for eact vib.

Changes are immediately seen in the colour legend on the display:



Scales

These are available from the top menu, or the right click menu



Some attributes have an implied upper or lower value.

Phase for example is always displayed as +/- xx.

In this case, it is the High value that has effect, and Low is disabled. Experiment with the usage.

Other Settings

×	History					
Sca	ales Limits	Settings	List	Exit		
Г	Range	- \				
	o ai		Ran	ge	01 Apr 2018	•
	&	Load		•	23 Aug 2018	•

Colours can be adjusted as you see fit.

		History Settings	<u>×</u> JD : 91 to 235	
90-		Points and Limits	Logo Position 23 Aug 2018 -90 -	
		Attribute Line Width	• • • • • • • • • • • • • • • • • • •	1 2 3
		Limit Line Colour		4 5
85		Limit Line Width	C None -85 V	5 7 8
		Backgrounds	v	9 10
		Colour From Colour To Colour Solid	🛟 Defaults	11 12
80-		Drawing Area	rizontal C Vertical C Solid	13 14 15
ŧ		Frame G Hori	rizontal 🔍 Vertical 💭 Solid	16 17
00 75-	and the second		75 75	18 19 20
۹.		✓ Open PDF after Create ✓ Open Listing after Create	Close	21 22
			·	23 24
70-			7070	25
			v	28 29
65-			-65 🖬 V	80 31
			, and the second s	32
60- 01-04	-2018 21-04-2018 11-	05-2018 31-05-2018 20-06-2018 10	0-07-2018 30-07-2018 19-08-2018	
		Days in Display : 145		

Listing Results

History		
Scales Limits Settings	List Exit	
Range	Text	
• All • • O	CSV XMI	2 Jul 2019 🔽
Load	Options	9 Jul 2019 🛛 👻

Results can be output in the usual three formats.

If Text is selected, the results will be always be displayed immediately in Notepad.

If CSV or XML selected, then they will be opened in Excel if so specified in Settings:

History Settings			×			
Points and Limits		Logo Position				
Attribute Line Width	4	۰	0			
Limit Line Colour		•	0			
Limit Line Width	2 *	C None				
Backgrounds		E Defa	ults			
Colour From	Colour To Colour Solid					
Drawing Area	• н	orizontal 🔘 Vertical	C Solid			
Frame	Сн	orizontal 💿 Vertical	C Solid			
✓ Open PDF after Create ✓ Open Listing after Create Close						

Only the selected Vibs will be displayed.

Blank entries indicate that the specific vib was not used on that day

History Average Force Date Range 1 Apr 2018 to 23 Aug 2018 JD : 91 to 235											
n	Date	JD	V2	V6	V8	V9	V10	V11	V12	V13	V14
1	2018-04-01	91	74.5	74.5	73.9	74.8	74.9	74.8	73.9	74.8	74.7
2	2018-04-02	92	74.5	74.5	74.0	74.7	74 9	74.8	73.9	74.8	74.7
3	2018-04-03	93	74.7	74.4	73.8	74.3	7.7	74.9	73.9	74.9	74.8
4	2018-04-04	94	74.9	74.6	74.0	74.7	4.8	75.0	73.9	74.8	74.7
5	2018-04-05	95	74.6	74.6	74.1	74.7	74.8	75.1	74.1	74.9	74.8
6	2018-04-06	96 👞	74.4	74.1	74.0	74.6	74.6	75.0	74.5	74.8	74.6
7	2018-04-07	97	74.7	74.7	74.1	- 	74.7	75.2	74.7	74.8	74.8
8	2018-04-08	98	73.8	74.5	74.2		74.7	75.0	74.5	74.8	74.6
9	2018-04-09	99	74.5	74.5	74.0		74.8	74.9	74.5	75.0	74.9
10	2018-04-10	100	74.7		73.9	74.6	74.8	74.9	74.7	74.6	74.8
11	2018-04-11	101	74.7		73.9	74.7	74.8	74.9	74.6	74.9	74.7
Fleet



Fleet operates in much the same way as the Areal display, except that it displays the Average of selected attribute for the sweep. IE if there are 4 Vibs in your fleet, the result is the average of the 4 vibs, not the individual vib results as in Areal.

The big difference is in the ability to detect out of spec conditions and list or display points that require reshooting.

As with Areal, you can load a range or all entries in the database, you also have the convenience options of Yesterday and Today, which are usually what we are most interested in from a crew QC perspective.

Setup, Colours, Limits, Polygons etc.

These are the same as for Areal and warrant no further discussion here

Reshoot Rules



Clicking Reshoot Rules Brings up this dialog:

	Reshoot if Fleet Average OOS	Reshoot if any Vibrator OOS	🔌 ок
Drive			Defaults
Average Phase		— •	
Peak Phase		— •	
Average Distortion			
Peak Distortion	<u> </u>		
Average Force			
Peak Force	<u> </u>		
HDOP			Statuses 2, 10, 13, 14,
Number of Sats	<u> </u>		21, 22, 23, 28, 98, 99 will always generate a
Correction Age			Reshoot required
Stiffness=0			
Viscosity=0			As will a Baseplate or Mass Warning
Status 11 (Ethernet)			
Status 19 (Small PPS Err)			
Status 25 (Overrun)			
Status 26 (Slave Err)			
Status 27 (PPS Err)			
Status 29 (Save Signal Err)			
Status 30 (GPS Err)			
Status 90 (Wait Status)			
Vibrators per Fleet (1-16)	4 *		
Control Mode C R	taw 💽 I	Filtered	

Here you specify what you want to trigger a "Reshoot Required" Flag. Most of it will be obvious.

Here you also specify the number of vibs in your fleet and the control mode in use. These are checked when retrieving results from the database.

Reshoot window specifies the number of days the program will look ahead for a point that has been flagged for reshoot. Obviously if you are looking at the most recently acquired data, it won't do much, but if you are looking at a range of data acquired days or weeks earlier, you can verify that bad points have in deed been reshot. The reason for the Window is that block can be shot with zippers or double off end and the same point deliberately acquired more than once.

As noted in Red in the dialog, some statuses will always result in a "Reshoot Required" flag.

<u>Be careful when setting these rules.</u> If you have many error conditions, then the program will slow down significantly because it has to look for the reshoots. So select the ones that really matter in your operation.

Once you have set the rules, you can load data.

Remember that the rules are applied when loading data <u>here</u>, not at file load. So you can change the Reshoot Rules and reload data from the database here at any time.



Here we see a graphical display with all points shown. Very similar to the Areal display, but it is showing the Average of the fleet, not individual Vibs.

What we probably want is to see though is that out of spec points have been reshot. So select Numeric QC and "Reshoot Required" from the drop down box:

😽 Fleet										
Setup Colours Limits Resho	oot Rules	Polygons	List Exit							
C Yesterday C Today	e e	ange ()	All Fro	m 01.0 ot 201		21 Dec	2014	ALDA	Xo	ancel
is restered, is roady		ange o		Jor oct 201	*	proec	2014	- Cour	*` ``	
Mode										
Graphic										
	All									
Numeric QC										
	n	Line	Point	Date	Time	Fleet	VibCount	Drive	Phase	PkPhas
	1	1097	1055	2014-10-01	00:06:09	7	1	75.0	3.0	8.0
	2	1095	1063	2014-10-01	00:06:16	2	0	0.0	0.0	0.0
Any OOS	3	1081	1055	2014-10-01	00:06:23	5	0	0.0	0.0	0.0
Selected Attrib OOS	4	1099	1047	2014-10-01	00:06:30	17	1	75.0	2.0	-4.0
Reshoot Required	5	1099	1039	2014-10-01	00:06:37	11	1	75.0	2.0	-7.0
Not Reshot	6	1095	1071	2014-10-01	00:06:44	20	1	75.0	2.0	-3.0
HOUNCOIDE	-	4000	1001		00.00 Ft		-	75.0		

This will bring up a list as expected – you can resize the window to show all columns or use the scroll bar at the bottom.

- 23	ear Y	CHI (TT	(1 Lo 20	10	Hos	2014 2	(Sticed	X		0.60	- 58	# Rocette	1.000		131						
Res	noot Re	quired																			
1	400	Ren 1	TO Ben ST	Domain Co.	Part	(MCCourt)	1.0004	Past	C Hetsel	1 lag 1	N.that	1-Para I	Perform	1000		1 Solution	1001	Column 1	daring:	C Redicord Reg 1	· North
1	1005	3065	2014-0001	10010018	1.	1000	1.46	8.0	0.6	0.8	0.6	1000	1.0			41111	18.9	10.00	0.8	A CONTRACTOR OF	- Prile 204 8 (0 # 0
11	6965	1058	2014-30-00	00.06.03	8	0.000	480	8.0	-0.4	- 6.8	-8.6	10441	4.8	1.1		A 111	16.0	1.8.8	10.8	10.00	Ph 15 am 2004 80-01 at 0
	1873	2001	2014-38-00	00146-18	10	1014000	1.84	8.0	-8.6	- 6.8	-1.6	1041	1.88.2	1	- 8	4111	4.4	201423	4.8	1.000	Ph 1 19 cm 20104 30-01 at 1
4	18/%	228/	3111-1010	0.0148	8	111411	184	8.4	.5.8	3.4	4.8	1.04.2	2.26		1	411-1	4.8	1.6	- 14	100	Ph. 6 at 2019 40 (141)
1.	1440	2288	2014-30-00.	01061-02	34.	1108.00		2.0	0.6	3.0	5.6	1.84	COMP.	4.		1.11	0.0	100	0.8	10.000	18.134 at 2014 \$2-014
	1200	4070	2014-38-65	004938	30	11141	4.0	8.0	-0.6	6.8	0.0	1.0.0	8.8	1			6.0	1.1	0.8	Contraction of the	PE 130 at 2014 (2-01 at
1	1.000	1075	1014-1010	204031		100	- 8.8	6.0	-0.8	1.5	-0.8	1.58	100	1		1011	6.0	1000	5.8	of the local division of	R. B. 8 21+ D-114
4	1.500	1070	3144-30-00	0246.41	82	1. 1	-28	2.0	0.8	1.64	0.5	1.18	1.8.8		1.4	1000	1.2		2.8	-	PT: III all 2014 20-01 all
	1579	105	3014-36-01	10.0148	11.	10.000	1.80	8.0	9.8	0.8	9.6	1.000	1000			100.00	1.8.0	23.6	0.8	ACCRET OF THE	181111-00-0014-00-0114
40	1525	100	3014-36-01	100401	11.	10.00	1.00	-8.0	0.8	0.8	0.8	1000	100			100	4.0		0.8	1.00	R11100204-05-01#
11	1300	+010	2014-01-01	dobald.	1.1	10040	1.44	4.0	-0.6	- 9.8	-0.4	1.25	8.2			100	44	1.00	0.8	1000	Photo Market Market
12	1507	MIL.	Stan store	10038-04	.00	4	1.2	8.0	-94	6.8	-54-	2.6	1.8.8			4 11	.6.8	100	6.8	100	Ph 1 20 m 2014-30-01 at
15	1803	1111	2014-30-00	004141	11	10.8.3	84	8.0	6.8	6.8	- 6.8	1.08	185	1.1		1.00	-6.0	1.4	0.0	Sec	Phot 11 am 2014 30-011 at
210	1170	1118	2010-2000	00.08-40	11	1000	1000	8.0	4.8	14	44	1.76411	1.44			1.1	8.0	2.41	0.8	1.00	Phy 37 pp. 2014 (00.01) pt
15	1874	1140	304-00-01	40-01108	11	1.4	188	80	4.4	6.8	44	1.18		4		4.5	- 6.2		5.8	1.000	10.11a 201010.01a
12	1801	1041	2016 4125	03.78-62	Ŧ	1000	1.48	2.0	4.8	3.5	4.0	1.88		1	T.	100	0.0	10.01	-2.8	10.000	10.
17	1396	1178	3114-39-01	1248.3	18	0.43	1.4.8.2	8.0	0.8	.0.8	9.6	1.8.1	8.5	1		1.00	6.0	1.4	0.0	100.000	NR
10	1368	1207	2014-30-02	024838	11	in a lot	1.00	8.0	0.6	0.8	0.0	1.24	100			1.0	1.5	1.00	0.8	1000	HT: 11 al 2004 10 01 al
tr.	1.862	1200	(c) = (c)	10016-08		114	188	8.0	- 14	.4.8	14	1.68	1.20			A1011	1.2		2.8	100	10
10	1.000	1298	2014-2010	20079-08	- 40	11.74	1.00	8.0	0.4	0.4	8.6	1.001	100			41.0	1.0	1.1	0.8	1.00	Ph://mini.2014.2014.2014
24	1570	4209	3014-36-01	024228	7	100	1. B.B.	8.0	- 14	0.8	4.6	2.88	1.8.8		. 6	1	- 6.2		.08	1.00	Phi Fieldon sh-Isain
12	(396)	2.75	204-20-01	0010108	-11.	1	71.0	0.80	E -011	-20.0			11.0				87	4.4	0.0	1.100	Ph 121 ar 2014 30-01 al
10	1500	: 278	3010-3070	0013388	11	11415	1188	- 80	- 14	0.0	- 14	1.04	2.2.2	+		1151	4.0		-0.8	Citer 1	Ph-121== 2004-82-81.m
2.74	15/5	048	2014/20-00	0108-01		Carle Dur	44	8.0	94	-0.6	0.6	2.84	8.0	4		1. 1. 1.	0.0		0.8	0.40	(file 1 at 2014 20-01 at 1
28	1888	1288	2014/2016	00487-08	8.	10.4	4.0	8.0	- 64	48	- 6.6	1.24	5.2			4.2	6.0	1.4	0.8	1.00	PR (5 arr 2004 (0:0) at (
	1.0407	1.000	3014-10.01	2461.01	44.		8.8	0.0	-1.8	3.6	-1.8	1.4	8.2		18.	4.1	6.2	3.8	9.8	1.000	PR 1 11 (# 2019-11-01)
12	1803	1001	2019-03-00	293210	11.	1118	184	8.9	1.1	3.0	5.8	1.58		18.1	1	1100	-0.0		0.6	10,786 3 10	16.
	1827	1075	-B1+3-01	09,25,44		10.08.0		8.0	. 5.5	.0.8	. 1.1	1.64	1.88.	1.	1.8	8,111	. 8.0	1.0	0.6	100.000	10110-00-001+00-01-00
1.20	1360	1802	3014-31-01	10030344			L LT	8.0	0.5	1.8	-2.8	10.000	8.9			1 1 1 1	1.5	1.0	0.8	and the second	HE: 104 2014 (2-0.1d)

We can see most out of spec points were reshot, but some were not. You can then refer to the observer report for explanations and if not available, water board or otherwise interrogate him.

PkPhane	Det	Pk Dist	Force	PKForce	Mass	BP	StatusErr	HDOP	n5ata	Corr Age	Reshoot Reg?	Reshot
0.0	0.0	0.0	0,0	9.0	0	0	1.00	0.0	0.0	0.0	Yes	Fit : 2 on 2014-10-01 at 00:08:00
0.0	0.0	0.0	0:0	0.0	0	0	1	0.0	0.0	0.0	Yes	Fit: 5 on 2014-10-01 at 00:09:18
0.0	0.0	0.0	0.0	0.0	0	0	1	0.0	0.0	0.0	Yes	Fit: 19 on 2014-10-01 at 00:50:25
0.0	0.0	0.0	0.0	0.0	0	0	1	0.0	0.0	0.0	Yes	Fit: 6 on 2014-10-01 at 01:02:15
0.0	0.0	0.0	6:0	6.0	0	0	1	0.0	0.0	0.0	Yes	Fit: 14 on 2014-10-01 at 01:05:46
0.0	0.0	0.0	0.0	0.0	0	0	1	0.0	0.0	0.0	Yes	Fit : 20 on 2014-10-01 at 01:49:01
0.0	0.0	0.0	0.0	0.0	0	0	1	0.0	0.0	0.0 9.0		Fit: 20 on 2014-10-01 at 01:49:41
0.0	0,0	0.0	0.0	0.0	0	0	1	0.0	0.0	0.0 0.0 Yes		Fit : 20 on 2014-10-01 at 01:54:00
0.0	0.0	0.0	0,0	0.0	0	0	1	0.0	0,0	0.0	Yes	Fit : 11 on 2014-10-01 at 01:54:21
0.0	0.0	0.0	0.0	0.0	0	0	1	0.0	0.0	0.0	Yes	Fit : 11 on 2014-10-01 at 01:55:18
0.0	0.0	0.0	0.0	0.0	0	0	I.	0.0	0.0	0.0	Yes	Fit : 2 on 2014-10-01 at 01:55:04
0.0	0.0	0.0	0.0	0.0	0	0	1	0.0	0.0	0.0	Yes	Fit: 20 on 2014-10-01 at 01:56:22
0.0	0,0	0.0	0.0	0.0	0	0	1	0.0	0.0	0.0	Yes	Fit : 11 on 2014-10-01 at 02:12:33
0.0	0.0	0.0	0,0	0.0	0	0	19	0.0	0.0	0.0	Yes	Fit: 17 on 2014-10-01 at 02: 21:26
0.0	0.0	0.0	0.0	0.0	0	0	1	0.0	0.0	0.0	Yes	Fit: 11 on 2014-10-01 at 02:29:22
0.0	0.0	0.0	0.0	0.0	0	0	1	0.0	0.0	0.0	Yes	No
0.0	0.0	0.0	0.0	0.0	0	0	2.1	0.0	0.0	0.0	Yes	No
0.0	0.0	0.0	0.0	0.0	0	0	1	0.0	0.0	0.0	Yes	Fit : 11 on 2014-10-01 at 02:50:18
0.0	0.0	0.0	0.0	0.0	0	0	1	0.0	0.0	0.0	Yes	No
0.0	0.0	0.0	0.0	0.0	0	0	1	0.0	0.0	0.0	Yes	Fit : 20 on 2014-10-01 at 03:09:53
0.0	0.0	0.0	0.0	0.0	0	0	1	0.0	0,0	0.0	Yes	Fit: 7 on 2014-10-01 at 03:43:42
-25.0	28.0	99.0	83.0	93.0	0	0	0	0.7	0.0	0.0	Yes	Fit : 21 on 2014-10-01 at 03:52:08
0.0	0.0	8.0	0.0	0.0	0	0	1	0.0	0.0	0.0	Yes	Fit : 21 on 2014-10-01 at 03:58:16
0.0	0.0	0.0	0.0	0.0	0	0	1	0.0	0,0	0.0	Yes	Fit : 6 on 2014-10-01 at 03:56:19
0.0	0.0	0.0	0.0	0.0	0	σ	1.5	0.0	0.0	0.0	Yes	Fit : 5 on 2014-10-01 at 04:00:07
0.0	0.0	0.0	0.0	0.0	0	0	1	0.0	0.0	0.0	Yes	Fit: 11 on 2014-10-01 at 04:28:23
0.0	0.0	0.0	0.0	0.0	0	0	1	0.0	0.0	0.0	Yes	140
0.0	0.0	0.0	0.0	0.0	0	α	1	0.0	0.0	0.0	Yes	Fit : 5 on 2014-10-01 at 04:22:47

Point Detailed View

To find out more about a point, you can DoubleClick on any row in the list. This will bring up a detailed view of the attributes and statuses for the point:



You can click on either the buttons or an entry in the table to change the graph

Tiret | × Fleet 01 2993 Line Point 1487 Line : 2993 Point :1487 Peak Force Fleet 01 Vib Count 4 -Date Time 14:00:21 Status 44 12 110 VZ1 Please Air Drive Av Phase 70.0 8.0 90.0 5.0 70.0 70.0 70.0 6,7 70-Pk Pha -11.0 \$7.0 0.0 15.0 14.7 40 Av Det Pk Dist 19.0 28.3 0.0 14.1 0.0 Av Forb 67.0 60.0 60.0 61.0 50 Pk Parce Stiffness 71.0 79.0 27.0 75.3 24.0 40 28.0 0.0 13.0 0.9 9.0 18.0 0.0 15.0 15.3 HDOP 0,9 0.0 0.9 9.0 30 9.0 n Sata 8.0 4.0 Cort Age 1.0 1.0 1.0 1.0 1.0 20 Status 14 0.0 0.0 417607.9 627598.4 627607.1 637615.0 Easting Northing Elevation Control Mode 2400355.5 2400329.5 2400295.0 2400314.0 10 143.2 143.7 142.2 \$43.0 Ρà; Filt Filt Plate Warn Maux Warn V4 V7 V19 V21 0.0 140021 a QC Low Liett - 78 Fleet Avg+75.3 QC-Mph Lim Drive Phase Pk.Phase Detertory Pk.Date.ton Purve Pk.Porce Class Previous 0 Next Stiffless Viscosity HOOP Num Sats Carr Age Resinant Rules (Info Only) PLDist. Force N.Force 1008 Con Age \$11 \$19 \$25 1126 527 529 530 590 Drive 17 T r 1 11 10 1 1 1 E Fast 1 T Г 17 ٣ -17 гггг F. Ē 17 F F г г (b)

The Red Lines indicate the Limits that have been set, the blue line is the calculated average.

The "Next/Previous Buttons move you to the next or previous point in the list. You can click and hold them down to scan though automatically.

Deleting Points

Points can be deleted from the list by right clicking and then clicking Delete Entry on the popup message. This can be useful if you want to remove points that have been flagged, but are not really errors – Similarities for example. This will delete the entry from the database permanently! If you want it back, you will have to reload the file.

Force	PKForce	Mass	BP	StatusErr	HDOP	nSats	Corr Age	Reshoot Req?	
0.0	0.0	0	0	1	0.0	0.0	0.0	Yes	
0.0	0.0	0	0		ი.ი	0.0	0.0	Yes	
64.0	72.0	0	0	Delete Entry?	.8	10.0	1.0	Yes	

List and KML 3D View

😽 Fleet										
Setup Colours Limits Resho	ot Rules	Polygons	List Exit							
			Text							
C Yesterday C Today	ΘR	ange C	CSV		let 2019	To	12.0 et	2018 💌	A Load	
			XML				12.000	2010		
Mode			SHP							
Graphic			KML Ove	rlay						
	Res	100t Re	KML 3D \	/iew						
Numeric QC			Options							
	n	Line	Point	Dat	te	Time	Fleet	VibCount	Drive	

The list menu allows you to output what is shown on the screen. IE. If you have selected "All" then all points will be output, if "Not Reshot" is selected, then only these points will be output.

Only KML 3D View is unique to Fleet. All the other entries are effectively covered elsewhere.

KML allows for the creation and display of polygons. These can be used to create pseudo 3D overlays or to visually describe a feature or attribute:



In truth, it isn't a great deal of use for day to day QC, but it can keep junior managers amused while you get on with real work.

The dialog allows you to set parameters for the output:

KMZ Output	×
KMZ Options UTM Zone Point Polygon	
Polygon Scalar (Linear) 1 Polygon Exageration (Degree) 2 Polygon Offset 0 Camera Tilt (0-90) 45 Camera Height 8000 Camera Direction (0-359) 0 Polygon :: X Size 50 Y Size 50 Rot Y 0	
C Top Left C Top Right C Centre Ellipsoid (In)	
Easting 0 Northing 0	
Open in Google Earth After Create	
C Specify File Name Suggest Filenames C Specify File Name Cancel	

As with KML Overlay, you can apply a transform if desired.

KMZ Options
Point Polygon
Polygon Scalar (Linear)
Polygon Exageration (Degree) - 2
Polygon Offset 0
Camera Tilt (0-90) 45
Camera Height 8000
Camera Direction (0-359) 0
Polygon :: X Size 50 Y Size 50
- Camera Position WRT Block
C Top Left C Top Right
C Centre
C Bottom Left Bottom Right
C Other
Easting 0 Northing 0
☑ Open in Google Earth After Create

A problem with these displays is that some attributes can be very close to zero (Phase) or quite large (Stiffness) or not vary by much (Force). To get a visually appealing image we can scale, offset and exaggerate the results.

Polygon Scalar is a simple multiplier

Polygon Exaggeration allows you to apply a coefficient eg squaring or cubing the value. This has the effect of exaggerating the height of values further away from zero (1.5 or 2 is usually good enough). The maximum allowed is 4.

Polygon offset is a value *subtracted* from the value. For example a typical force level is 75%. If you want to see differences more clearly, you can apply an offset of 60 and an exaggeration of 3.

These values are set to get the display you want and are specific to the attribute displayed.

KMZ Options	
Point	Polygon
Polygon Scalar (Linear)	1
Polygon Exageration (Degree)	3
Polygon Offset	60
Camera Tilt (0-90) ———	45
Camera Height ———	8000
Camera Direction (0-359)	• 0
Polygon :: X Size 50 Y Siz	ze <u>50</u>
Camera Position WRT Block	
O Top Left O T	Top Right
Centre	
O Bottom Left O B	Bottom Right
C Other	
Easting 0 Northing	0

The entries indicated here specify the 'Camera' or 'Eye' position. IE the observation point.

Play with them to get the display you want

KMZ Options	
Point P	olygon
Polygon Scalar (Linear)	1
Polygon Exageration (Degree)	3
Polygon Offset	60
Camera Tilt (0-90)	45
Camera Height	8000
Camera Direction (0-359)	0
Polygon :: X Size 50 Y Size	50
Camera Position WRT Block	
C Top Left C To	op Right
Centre	
C Bottom Left C Bo	ottom Right
C Other	
Easting 0 Northing	0
✓ Open in Google Earth After Create	

The polygon size allows you to make the block bigger or smaller depending on your needs. If displaying "Reshoot Required" for example, there is likely very few points, which may be difficult to see, so you can make the block much bigger, say 300m x 300m.

If trying to relate a problem to a geographical feature though, you probably want it smaller.

Adjust as needed.

Export



The Export dialog looks quite intimidating, but is intended to be easy to use.

👯 Export				×
Save Load Exit				
General	Performance	Statuses	Navigation	Output
Line Point Line Point Easting Northing Elevation Vibrator Fleet File Name Date Day of Year Time The COS Times	Av Drive Av Phase Pk Phase Av Distortion Pk Distortion Av Force Pk Force Stiffness Viscosity cStiffness cViscosity cS on cV	Status Code Decoded Status Bad Sweep Mass Warning Plate Warning Force Overload Pressure Overload Mass Overload Valve Overload Excitation Overload	HDOP Nav Mode Decoded Nav Mode Num Sats Corr Age Geoid Separation WGS84 Easting WGS84 Northing WGS84 MSL Alt	Line Point Easting Northing Mass Warning Plate Warning Nav Mode
Choose Vibrators				
		9 🔽 10 🔽 11 🔽 12 🔽 13 🔽	14 🔽 15 🔽 16 🖌 🕱	
			30 🔽 31 🔽 32 ✔ 🕱	
All None	G1 G2 G3 G4	G5 G6 G7 G8	Setup Groups	
			·	Allow Dupicates
Specify Coordinate Limits		Specify Line/	Point Range	Output as
Min Easung 314	Block Extents	Paste F	rom To	🔽 Text 🔽 Auto Open
Max Northing 74:	16960	Inside Inside	00 2510 🔽 Use	CSV Auto Open
Max Easting	428550	Outside C Point 1.3	356316 1.356316 Use	Shape File
Min Northing	7350175	I Use		
Specify Date Range		Order By	voint C TB Time C DSD	A Start
From 14 Apr 2018	To 16 Apr 2018	Use C Fleet	C None	Start
Additional Criteria				
Additional Criteria				
Bad Sweep	• O< • = O·	<> O >v< O >	Use Vse	Close
	DR Rand	ne 4 February 2018 to 2 Sentem	her 2018	
J		ge in 4 rebruary 2010 to 2 Septemi	0012010	

First specify what you want extracted from the database – here we see Line, Point, Easting Northing, Mass Warning, Plate Warning and Nav Mode. But any combination is allowed, including duplicates if the 'Allow Duplicates' option is selected.

To select an attribute for export, simply double click on the entry in the relevant list box. It will appear in the right most' Output' box.

You can adjust the order of the output list by clicking an entry in the Output box and using the green Up and down arrows to position it where you want. The red X will delete a selected entry and the white page looking button lower down will erase the list entirely.



Once you have specified what you want output, specify which vibrators to output.

It is quite obvious how to use this section. Except perhaps for the Groups Buttons, G1 to G8.

These are provided for convenience, and in many cases will not be needed. They allow you to set up lists of vib numbers and assign them to a button. If for example the crew is operating in DS3 or DS4 mode, vibs will be separated by large distances, and will seldom swap around between North and South (or East and West). In this case, if you only want to output results from one set of vibs, you can assign them a button.

Click Setup Groups, you will see this:

🔆 Groups	5																													x
Choose	Vibrato	ors —																												_
□ 1	<u> </u>	□ 3		4		5	▼ 6	Г	7		8		9		10		11		12		13	☑	14		15		16	~	×	
17	□ 18	<u> </u>		20		21	⊽ 2	2 🗆	23		24		25		26		27		28		29	•	30		31		32	✓	×	
— 33	[] 34	[] 35	Γ	36	Γ	37	V 3	8 F	39	Γ	40	Γ	41		42	Γ	43	Γ	44	Γ	45	V	46	Γ	47	Γ	48	✓	×	
L 49	[50	[51	Γ	52	Γ	53	V 5	4 F	55	Γ	56		57	Γ	58	Γ	59	Γ	60	Γ	61	$\overline{\mathbf{v}}$	62	Γ	63	Γ	64	✓	×	
All		None	•		G1		G2		G3		G4	ł	G	5	G	6	0	57		G8						S	Save	Grou	p	
			/	۶	1						€	•	Cl	ose	;								/	/						

Here we are assigning Vibs 6, 14, 22 and 30 to G1.

So when you click G1 in the export dialog they will be set.

Now we move onto the sections that allow you to isolate the entries you really want.

-Specify Coordinate Limits			
Min Easting	314945	Block Extents	Paste
Max Northing	7416960		Inside 💿
Max Easting		428550	Outside C
Min Northing		7350175	🔽 Use

Here you can specify a bounding box of coordinates. If **'Inside'** is selected then any points inside the box will be considered. If **'Outside'**, then strangely enough only points outside the bounding box will be included. The buttons for Block Extents and Paste are Obvious.

The 'Use' selection tells the program that you want to use these coordinates as limits. You don't have to, other ways of limiting the result set are available:

Specify Line/Point Range				
	From	То		
Line	2500	2510	🗹 Use	
Point	1.356316	1.356316	🗖 Use	

Here you can specify the Line and point limits to use if desired.

Or a date range

Specify Date R	Range or 2018	• T	o 16 A	pr 2018	•	🔽 Use			
Or some add	itional crit	teria							
- Additional Criter Bad Sweep	ia	• •	< ©	= 0 <	> C >v-	< 0 >	0	5	Use

All these work together as an 'AND' function. IE all conditions for all the criteria enabled with the respective 'Use' selections have to be true for the point to be output.

Finally (almost) you specify how the output list is to be sorted:

Order Bu			
Order by			
C Line/Point	C TB Time	OSD	
C Fleet	C None		

Here by DSD

Then you tell the program what format to output the data:



Be aware that if your criteria allows for many points, it may take some time for the output file to be created and even longer for it to be opened and displayed if "Auto Open" is selected.

When you are satisfied with the criteria, click **Start** and you will be presented with a dialog allowing you to specify the output file name and location:

👯 Export					×
Save Load Exit					
General	Performance	Statuses	Navigation	Output	
Line Point Line_Point Easting Northing Elevation Vibrator Fleet	Av Drive Av Phase Pk Phase Av Distortion Pk Distortion Av Force Pk Force	Status Code Decoded Status Bad Sweep Mass Warning Plate Warning Force Overload Pressure Overload	HDOP Nav Mode Decoded Nav Mode Num Sats Corr Age Geoid Separation WGS84 Easting	Line Point Easting Northing Mass Warning Plate Warning Nav Mode	①
File Name	Output File			×	
Date Day of Year Time	Look in: 🔒 New fo	lder ↓ Date	G D D E E C	<u>₹</u>	×
Choose vibrators	Recent Places				
▼ 17 ▼ 18 ▼ 19 ▼ 20					
🗌 🗌 33 🔲 34 🔲 35 🔲 36 🛛	Desktop				
	Libraries				
All None	. 🧠			v Duplicates	
Specify Coordinate Limits	Computer			it as	
Min Easting 31494	e 👘 👘			ext 🔽 Auto Open	
Max Northing 74169	Natwork				
Max Easting	File name:	Mayraabaaga Evaart	_	Open SV J Auto Open	
Min Northing	nie name.			hape File	
	Files of type:	(*.TXT, *.CSV, *.SHP)	<u>▼</u> (Cancel	
- Specify Data Dange		Open as read-only			
Specify Date Range		O Line	Point C TB Time C DSD	Start	
From 14 Apr 2018	To 16 Apr 2018	Use C Flee	et O None	Start	
- Address - Collecter					
Additional Criteria					
Bad Sweep	0 < 0 = 0 <	<>	0 5 🔽 Use	Close	
	DB Rand	e :: 4 February 2018 to 2 Septe	mber 2018		

If you have elected to output multiple formats, the file name remains the same, the extention is changed as appropriate.

The only indication that you will receive of the export in progress will be this:



It will clear when the export is complete.

You will not be able to perform any other operations while the export is underway.

S	SPS	Export	Misc	About	Exit	33
1			Re	set Forn atus Cod	n Locations les	Hors co
	A Sec	Resources Consu	Co	ncatena	te VAPS Files	decisied

Here a few items that don't fit anywhere else.

Reset Form Locations is useful in the case of using multiple monitors and reverting to 1 as maybe the case with a laptop. It can easily happen that some of the displays are on a screen that is no longer present. Resetting the form locations brings everything back to the main screen.

Status Codes is simply a convenience – I can never remember what all the codes mean.

Concatenate VAPS Files

Some crews provide VAPS files by swath or other criteria. Vibrator QC is done by day, and that is how the program expects data to be presented – a single file for each day. Although it will load and handle multiple files for a day, some features, like History and Availability will not give correct results. This is because these results are calculated after each file is loaded.

So, this option allows you to concatenate multiple VAPS files into one file, and remove duplicate entries and output in various orderings.

😽 Concatenate VAPS Files	×
A Simple Concatenation just combines all the header. There is no duplicate removal or sorti remove duplicates and can	ne selected files into one with one ng. The other concatenation options output sorted data
Outout Options	
Dulicates Removed	She chud
Time (Normal)	Start
C Line then Point	
C Fleet then Vib	
C Vib then time	
Dulicates NOT Removed © Simple Concatenation	Close

It is very obvious how it is used – select the output option 'Time (Normal)' is the usual one, click start, select your input files. These will be loaded, often very quickly and you will get a prompt for an output file. Enter a name and the files will be created.

Note that in the event of more than 1 day being present in the selected files, a file will be generated for each day found, with '_JDxxx' appended to your specified file name. The limitation on this is no more than 1 year's set of files. IE do not include 3-March-2021 and 3-March-2022 as they are the same ordinal day.

Change Log

Build 1.1.0.270 17-Feb-2018

- Fixed issue of error in Patterns if no SPS loaded
- Fixed Issue in Patterns where if no data for selected range, load was disabled
- Scatter Graph and History Limit line thickness can now be set (JM)
- Scatter Listing implemented

Build 1.1.0.324 21-Feb-2018

- Fix issue in Patterns where resizing the dialog does not keep the draw area square. Now circles remain as circles
- Added Listing to History

Build 1.1.0.385 14-Mar-2018

- Added listing to Vib Stats
- Fixed possible crash in Vib Stats is data not loaded
- Added listing to Availability

Build 1.1.0.929 19-Apr-2018

- Added Export Dialog
- Added Shapefile export to listing in Patterns (OOS points)
- Add listing to Areal Text, CSV and SHP only. XML takes too long for big data sets
- Added Easting/Northing to mouse position in Areal
- Added listing of rejected files when loading data
- Added Nav Mode to Limits some crews don't use RTK so good status can be 2 (DGPS) instead of 5 (RTK Float), but you can specify anything including zero in case no Nav Status reported
- Updated Polygons dialogs see instructions for use
- Fixed possible issue if delete the current database could not create a new one
- Fixed issue where Vib 1 was reported as zero sweeps in Availability
- Fixed possible crash in Stats if no Bad sweeps in the selected range
- Updated About Box
- Fixed issue of pasting cords from Excel (new Project and Update Parameters)
- Changed the way Out of Bounds points are handled in Load. Points with 0,0 as cords will always be loaded as we need these for QC purposes. If the option for 'Ignore Points Outside Block Extents' is selected, then any points outside the bounding area, but >0 will be ignored.

Build 1.1.0.1367 6-Aug-2019

- Add Prj File creation for Shape files
- Fix setting dialog error in Areal settings colour bar settings
- Fix scrolling and scroll bar issue in Stats

- Fix Areal scaling for Av and peak phase can set low and high values now
- Added a couple of tooltips in the Export Dialog
- Added 'Suggested File Names' Dialog and logic
- Add SPS access to the Patterns Menu
- Add remember form positions and sizes
- Add Reset form positions and sizes to main form Misc menu
- Fix bug in Patterns that could cause a crash
- Fix Display of colour bar in Areal Colour selection
- Fix display of polygons where polygons bigger than the display area were not plotted properly
- Increased number of segments allowed in a polygon to 60
- Fixed crash when exiting program with a display still open
- Fixed possible crash when updating limits and lots to plot
- Improve Scale dialogs in Scatter and History mode displays

Build 1.1.0.2831 2-Oct-2019

- Add KML Overlay output
- Add Status Codes List (Convenience Feature I can never remember then all)
- Add 'Fleet' display and QC
- Fix Minor error in loading files
- Fix possible crash on selecting a project when none created
- Add KML 3D (Polygon) output only in Fleet for now
- Add Save and Load Limits to the Limits dialog

Build 1.1.0.3059 21-May-2021

- Added estimated velocity to Areal display
- Fix error in Fleet where vib count was not incremented correctly resulting in reshoot required for too few vibs

Build 1.1.0.3200 13-June-2021

- Remove remnant of debug code that could cause an obscure problem if selecting custom Stats display under some conditions
- Fixed Vib Colours in scatter plot and history- some colours mismatched the vib
- Add borders to high Vib colour boxes in Scatter
- Vib Legend in Scatter and History now shows all active vibs was limited to 32
- Added Geodetic transforms to Export
- Added Array Size distribution and Azimuth Distribution to Patterns. Note that points with only 1 vib are not included in the distribution calculations or plot
- Added Full Text listing to Patterns note that points with 1 vib are listed with a blank Azimuth

Build 1.1.0.3369 5-January-2022

- Fixed possible crash in Vibstat display if too few sweeps available in selection
- Added DX80 to Vib types
- Added get SPS from 508 Raw log file crews are reluctant to give planned cords until it is too late for some reason, but this is available in the 508 log file.
- Added VAPS file concatenator routine under Misc on the start form
- Improve Pattern Display of Single VP, when only 1 vib per fleet (Vib and COG were coincident).

Build 1.1.0.3738 1-June-2022

- Fix issue in loading where GGA string has been moved not sure yet if this is a Sercel or crew issue
- Added 'Production Times' to Availability. This provides production Listings also

Build 1.1.0.3745 23-October-2022

• Fixed Azimuth calculation error where Vibs are all in line vertically. Problem was my check in the Least Squares calculation produced a zero slope for a zero discriminator. It should have resulted in a 'very large number' instead.

Build 1.1.0.3755 19-Nov-2022

- Improved error message in event Create DB fails usually due to user using some auto backup software that locks the folder.
- Changed VAPS file detection routine so the BGP VAPS derived from XQC files loads

Build 1.1.0.3768 15-Feb-2023

- Fixed issue in Stats where some statuses where not correctly calculated because the sweep was flagged as a bad sweep and the status count ignored. Same for GPS statuses.
- Fixed related issue so that RTK Fixed and Float are now displayed properly and in Percent of total sweeps
- Changed Bad Sweep indication for Status 30 (GPS error) from bad status to good (in load VAPS)

Build 1.1.0.3770 25-May-2023

• Another change to the File detection routine. INOVA's iX1 transcriber program will output VAPS files, but the headers are not the same as the Sercel VAPS files, so needed to handle this. Potentially a problem in the future as it looks like many variations are possible.

To Do

Add support for VibPro VM files + Sercel Extended QC and maybe GF files Add Zoom function in Areal Add Areal Deviation display Add Labels to Polygons Fleet differences Historic Production graph and stats

Production calcs to include options to reject bad status points