InterDynamics

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FAID Quantum

Work Schedule Input

Guide to inputting hours of work

data into FAID Quantum

Contents

FAID Quantum Work Schedules

FAID Quantum uses hours of work data to determine fatigue exposures.

- The Work Schedule **must include all hours of work** of an individual for the analysis period.
- **Do not include short breaks** (less than 4 hours) during a work period (unless the break was long enough and appropriate facilities were available for the possibility of sleep).
- You **can have multiple work periods in one day**, as well as back to back work.

Inputting shift data into FAID Quantum

Information regarding schedule input can be found in the FAID Quantum User Guide, Section 7.

There are three methods of inputting work schedule data into FAID Quantum:

Create the shift patterns in a spreadsheet and then **copy and paste** into FAID Quantum (FAID Quantum User Guide Section 7.1.3)

Read in a work schedule file (comma separated text file) (FAID Quantum User Guide Section 7.1.1)

Direct input via Add Shift function within FAID Quantum (FAID Quantum User Guide Section 7.1.6)

Format

FAID Quantum uses comma delimited text files.

There is one task/shift record per line containing three compulsory fields of information (five compulsory fields of information if using Time Zone version because there needs to be two times for start and end to calculate time zone details). Below is an example:

ID#,Start,End

1,20 May 2021 07:00,20 May 2021 16:45

1,21 May 2021 07:00,21 May 2021 16:12

1,22 May 2021 07:00,22 May 2021 16:12

1,23 May 2021 07:00,23 May 2021 16:12

1,24 May 2021 07:00,24 May 2021 16:12

Required data fields

The minimum details for the data are:

1) Individual Identification (either value/number or text [but need to make sure in Settings you have set for Value or Text])

2) Start of work period (ddmmmyyyy hhmm)

3) End of work period (ddmmmyyyy hhmm)

Start and End are the date and time of the task/shift– FAID Quantum writes these in "dd mmm yyyy hhmm" format but is quite versatile in interpreting (reading) most common date/time formats.

SCHEDULE

Formatting

Identification	Name (Text) ⌄
	ID (Value)
Date	

ID#	Start	End
1	3 Jun 21 06:30	3 Jun 21 17:00
1	4 Jun 21 06:30	4 Jun 21 17:54
1	5 Jun 21 06:30	5 Jun 21 17:14
1	6 Jun 21 06:30	6 Jun 21 16:57

Additional data fields

Extra details can be included in the work schedule, such as location, activity, task risk, sleep buffers

Name	Start	Origin	End	Destn	Activity Code	Task Risk
D10000	27 Dec 16 19:55	LHR	27 Dec 16 21:25	LHR	Brief	Moderate
D10000	27 Dec 16 21:25	LHR	28 Dec 16 17:40	HKG	FL	High
D10000	28 Dec 16 17:40	HKG	28 Dec 16 18:10	HKG	Debrief	Moderate
D10000	30 Dec 16 17:50	HKG	30 Dec 16 19:10	HKG	Brief	Moderate
D10000	30 Dec 16 19:10	HKG	31 Dec 16 07:20	SYD	FL	High

To include the extra details, the user needs to navigate to INPUT Admin - Settings and select YES for the specific Work Schedule Display.

Work Schedule Display

Include Task Risk	No
Include Activity	No
Include Locations	No
Include Sleep Buffers	No
Include Post Shift Rest Quality	No

If importing data (reading in csv file or pasting from spreadsheet), the fields must appear in the same order as in FAID Quantum Work Schedule.

All available fields are as follows (in order):

Name, Start, Origin, Origin Start, End, Destn, Destination End, Post Shift Rest Quality, Activity Code, Task Risk, Sleep Buffer Prior, Sleep Buffer Post

History data

7 days work history data is required before the analysis period (15 days for time zone analysis).

For example, if you would like to review the month of April, the work schedule should include all work performed from 25 March to 30 April. The week 25 March to 31 March will be the History Week before the Analysis Outputs of 1 April to 30 April.

Analysis Details

History From	25 Mar 21
Start Date	1 Apr 21
Last Date	30 Apr 21

ANALYSE

Tips & tricks

Manipulating data for importing

Spreadsheets are a good way to assemble a lot of data and provide the ability to manipulate shifts. Below is an example of how to use the 'Quick Roster' spreadsheet. (The Quick Work Schedule Creator can be downloaded here under Work Schedule Downloads)

Utilising some additional columns (Day, Shift Length, Time To Next Shift [Days, Time]) you can enter one date and time in the first Start shift, and the rest of the required FAID Quantum

columns of data (ID#, Start, End) can be calculated ready for copying and pasting back into FAID Quantum using pre-developed formulas.

	A	B	C	D	E	F	G	H	I	J	K	
										Time to next	
1												
2												
3												
4		Day		ID#	Start	End		Shift Length		Days	Time	
5		Mon		123	12/03/2013 22:00	=+E5+H5		8:00			16:00	
6		Tue		123	=+F5+J5+K5	=+E6+H6		8:00			16:00	
7		Wed		123	=+F6+J6+K6	=+E7+H7		8:00			16:00	
8		Thu		123	=+F7+J7+K7	=+E8+H8		8:00			16:00	
9		Fri		123	=+F8+J8+K8	=+E9+H9		8:00		2	16:00	
10		Mon		123	=+F9+J9+K9	=+E10+H10		8:00			16:00	
11		Tue		123	=+F10+J10+K10	=+E11+H11		8:00			16:00	
12		Wed		123	=+F11+J11+K11	=+E12+H12		8:00			16:00	
13		Thu		123	=+F12+J12+K12	=+E13+H13		8:00			16:00	
14		Fri		123	=+F13+J13+K13	=+E14+H14		8:00		2	16:00	
15		Mon		123	=+F14+J14+K14	=+E15+H15		8:00			16:00	
16		Tue		123	=+F15+J15+K15	=+E16+H16		8:00			16:00	
17		Wed		123	=+F16+J16+K16	=+E17+H17		8:00			16:00	
18		Thu		123	=+F17+J17+K17	=+E18+H18		8:00			16:00	
19		Fri		123	=+F18+J18+K18	=+E19+H19		8:00		2	16:00	
20		Mon		123	=+F19+J19+K19	=+E20+H20		8:00			16:00	
21		Tue		123	=+F20+J20+K20	=+E21+H21		8:00			16:00	
22		Wed		123	=+F21+J21+K21	=+E22+H22		8:00			16:00	
23		Thu		123	=+F22+J22+K22	=+E23+H23		8:00			16:00	
24		Fri		123	=+F23+J23+K23	=+E24+H24		8:00		2	16:00	
25												

To start, enter the first Start date and time (example: E5).

For the shift (row) enter the Shift Length (HH:MM) and Time To Next Shift (Days and/or Time).

Next, the cell containing the End date will have the calculation:
= Start cell + corresponding Shift Length.
(F5 = +E5 + H5)

Then, the following Start Date will have the calculation:
= previous End Time To Next Shift [Days] and [Time] (E6 = +F5 +J5 +K5)

Go back to Step 2. and repeat for as many shifts necessary.

When finished, copy to the clipboard the data under the highlighted FAID Quantum data columns (ID#, Start, End)

	A	B	C	D	E	F	G	H	I	J	K
1					**Data for FAID**						
2											
3										Time to next	
4		Day		ID#	Start	End		Shift Length		Days	Time
5		Mon		123	12/03/2013 22:00	13/03/2013 6:00		8:00			16:00
6		Tue		123	13/03/2013 22:00	14/03/2013 6:00		8:00			16:00
7		Wed		123	14/03/2013 22:00	15/03/2013 6:00		8:00			16:00
8		Thu		123	15/03/2013 22:00	16/03/2013 6:00		8:00			16:00
9		Fri		123	16/03/2013 22:00	17/03/2013 6:00		8:00		2	16:00
10		Mon		123	19/03/2013 22:00	20/03/2013 6:00		8:00			16:00
11		Tue		123	20/03/2013 22:00	21/03/2013 6:00		8:00			16:00
12		Wed		123	21/03/2013 22:00	22/03/2013 6:00		8:00			16:00
13		Thu		123	22/03/2013 22:00	23/03/2013 6:00		8:00			16:00
14		Fri		123	23/03/2013 22:00	24/03/2013 6:00		8:00		2	16:00
15		Mon		123	26/03/2013 22:00	27/03/2013 6:00		8:00			16:00
16		Tue		123	27/03/2013 22:00	28/03/2013 6:00		8:00			16:00
17		Wed		123	28/03/2013 22:00	29/03/2013 6:00		8:00			16:00
18		Thu		123	29/03/2013 22:00	30/03/2013 6:00		8:00			16:00
19		Fri		123	30/03/2013 22:00	31/03/2013 6:00		8:00		2	16:00
20		Mon		123	2/04/2013 22:00	3/04/2013 6:00		8:00			16:00
21		Tue		123	3/04/2013 22:00	4/04/2013 6:00		8:00			16:00
22		Wed		123	4/04/2013 22:00	5/04/2013 6:00		8:00			16:00
23		Thu		123	5/04/2013 22:00	6/04/2013 6:00		8:00			16:00
24		Fri		123	6/04/2013 22:00	7/04/2013 6:00		8:00		2	16:00
25											

Then, return to FAID Quantum and in Inputs – Work Schedule 1 (or 2) click the paste from clipboard button.

You now have the ability to manipulate a roster by changing the Shift Length and Time to Next Shift data on the spreadsheet.
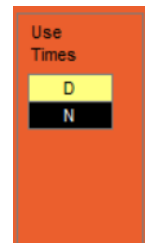
Shift types

Default shifts can be created for ease of use when adding shifts to the Work Schedule.

Shift types can be added under Inputs - Admin – Settings – Inputs by selecting **Add Shift to Shift Type** button. (For more details on adding shift types see FAID Quantum User Guide Section 6.1.1.7.)

Once shift types have been added, navigate to Inputs - Work Schedule, select and select from shifts listed on the right hand side under **Use Times**.

Shift types can also be used in the .csv for Spreadsheet Style function (see below).

Spreadsheet style

FAID Quantum has the capacity to import Work Schedule data using shift codes. To use this function, navigate to Inputs – Admin – Settings – Inputs and change **.csv for Spreadsheet Style** to **Yes.**

When reading or importing from clipboard, FAID Quantum will be looking for the format of the first field (ID# or Name), then all fields to the right will be read as shift codes (ensure all codes are entered in Shift types as above). When importing, the user will be prompted to select starting date and number of days in schedule.

Editing work schedule

To edit a work schedule

1. Left click in a cell to edit cell details, or
2. Right click on a row to delete a row, or
3. Select delete button on control panel to delete multiple rows, or whole schedule (select row range to delete)

Importing multiple files

To import multiple files at the same time, go to Inputs – Admin – Settings - Inputs, select **Yes** for **Option for All Files in Folder**. If set to yes, when the user selects to load in a file to the Work Schedule, then if any other files with the same file extension are present in the selected folder, they will also be imported and appended to the Work Schedule. (Useful for importing multiple individual work schedules to create a combined work schedule).

Adding a second work schedule

FAID Quantum offers the option to add a second Work Schedule to enable analysis comparisons (for example planned hours v actual hours worked).

In Input – Work Schedule – Input Table Editing, select Work Schedule 2 from the View drop-down menu. From here, the second schedule can be imported, created or copied from Work

Schedule 1 then modified.

Trouble shooting

Error messages when importing data

If you are receiving error messages when attempting to read in file or paste from clipboard, go to Settings – Inputs, and check all settings match data being imported.

Check Columns

- Check columns included (task risk, activity, locations) match import data and

Work Schedule Display	
Include Task Risk	No
Include Activity	No
Include Locations	No
Include Sleep Buffers	No
Include Post Shift Rest Quality	No

- Check column order (The data needs to be in the same order as you see on the panel in FAID Quantum – see <u>Additional Data Fields</u>.)

Check Header Row

	A	B	C
1	Name	Start	End
2	Sample1	20/05/2021 7:00	20/05/2021 16:45
3	Sample1	21/05/2021 7:00	21/05/2021 16:12
4	Sample1	22/05/2021 7:00	22/05/2021 16:00
5	Sample1	23/05/2021 7:00	23/05/2021 16:48
6	Sample1	24/05/2021 6:30	24/05/2021 16:42

- If importing from csv file with header row, select 'Remove Header Row' - Yes.
- If pasting from clipboard, ensure selected range does not include header row (and 'Remove Header Row' – No)

Shift errors

An error column will appear on the left of the work schedule if there are shift errors (overlapping shifts, shifts with zero work time, shifts without an ID, duplicate shifts)

Either:

1. Manual edit work schedule as required to eliminate errors (see <u>Editing work schedule</u>), or
2. Delete whole schedule, then go to Input - Admin – Settings – Inputs, and ensure errors are removed when reading in file by selecting Yes to relevant options under Read File. Then read in file again. (Users will be notified of number of work periods removed).

Read File	
Remove Zero ID	Yes
Remove Zero Times	Yes
Remove Zero Work	Yes
Remove One Work Period	Yes
Remove Duplicate	Exact