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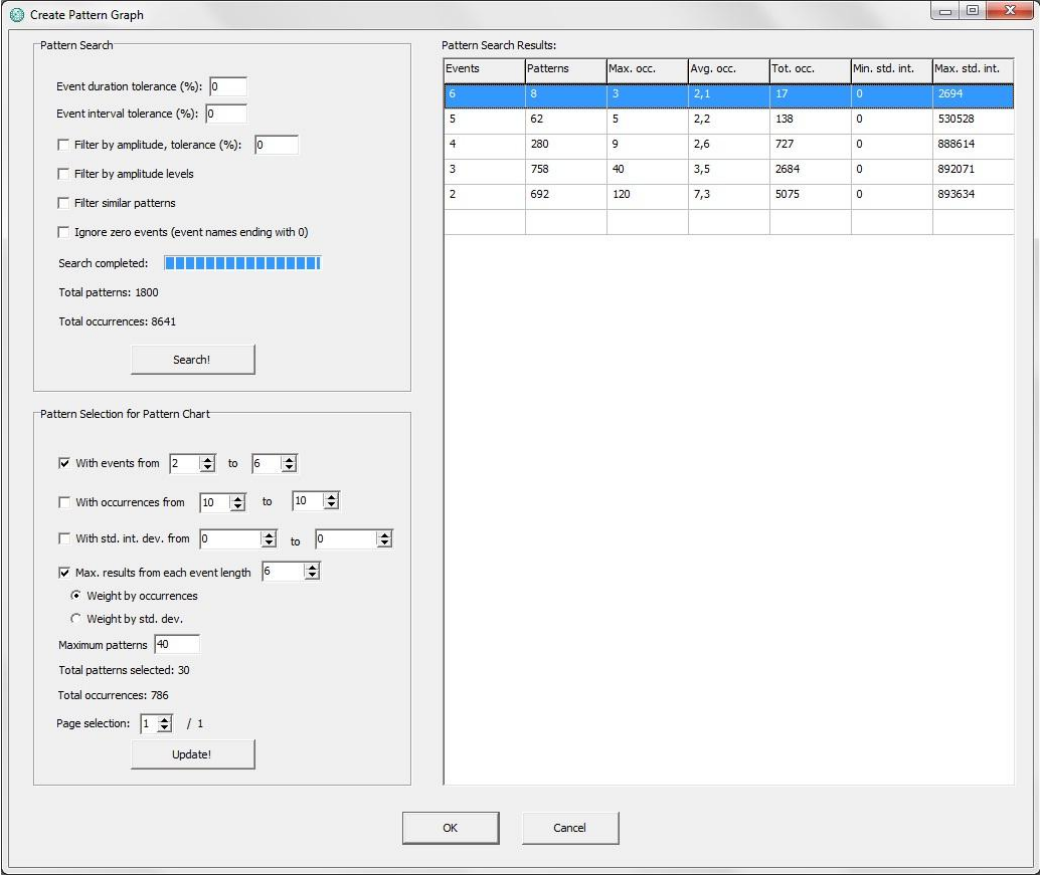Create or open a project and click the **Create Event Chart** button [icon] on the main toolbar or open an already created event chart.

The event can be manual, ambient, behavioral or multiple.

Once the event chart has been opened, click the **Create Pattern Chart** button [icon] on the main toolbar and the following window appears:

Figure 1 Create pattern chart

The window consists of:

Pattern Search Results

Events	Patterns	Max. occ.	Avg. occ.	Tot. occ.	Min. std. int.	Max. std. int.
6	8	3	2,1	17	0	2694
5	65	5	2,2	145	0	530528
4	293	9	2,6	759	0	888614
3	775	40	3,6	2755	0	892071
2	694	123	7,4	5127	0	893634

Figure 2 Pattern Search Results

- Number of events in a pattern
- Number of pattern types
- Maximum number of occurrences of a singular pattern
- Average number of occurrences of a singular pattern
- Total occurrences of all the patterns
- Minimum standard deviation interval
- Maximum standard deviation interval

Pattern Search:

Figure 3 Pattern Search

Event duration tolerance:

Define how far the pattern search should deviate from the length of the event.

Event interval tolerance:

Define how far the pattern search should deviate from the interval between each event.

Filter by amplitude:

The amplitude parameter associated with the behavioral event is taken into account when performing a pattern search. If the amplitude is outside the tolerance (%), it is removed.

Filter by level:

The behavioral events also have a level parameter associated with them. By checking this option you can restrict the pattern search to the levels found in the behavioral event analysis.

Filter similar patterns:

If occurrences of the same pattern intersect, the shorter occurrence is removed. This means that patterns that have the same events where one pattern is a subset of another, the subset occurrence is removed.

Ignore zero events:

In behavioral event analysis, zero events signify very little movement which can be interpreted as a non-action event. By checking this option the zero events will not be included in the pattern search.

Pattern Selection for Pattern Chart

Figure 4 Pattern Selection for Pattern Chart

With events from/to: The patterns are categorized by the number of events they contain. Select the number of events you want to include in the pattern.

With occurrences from/to: Define the range of occurrences. For example, if you choose occurrences from 5 to 6 this will restrict the selection of patterns to patterns that have 5 or 6 occurrences

With standard interval deviation from/to: Select pattern types with limited interval standard deviation, for example, ranging from 2 hours to 5 hours.

Maximum results from each event length: Results from each event length is weighted either by occurrences or standard interval deviation.

Maximum patterns: Define the maximum number of patterns per page.

Total patterns selected: The total number of found pattern types

Total occurrences: Total occurrences of all the patterns

Page selection: The user can define which page to view.

Scanning data for patterns

PatternFinder performs an automatic scan of all possible patterns. As can be seen in figure 2 this will usually produce many patterns.

Under **Pattern Search**, you can filter the patterns and see how the total number of patterns and occurrences reduces by clicking **Search**. You can perform the pattern search as often as you want.

Under **Pattern Selection for Pattern Chart** you can also limit the number of selected patterns by filling in the definitions and clicking **Update**.

Once the number of patterns has been reduced to a manageable number, click **OK** and the following chart appears:
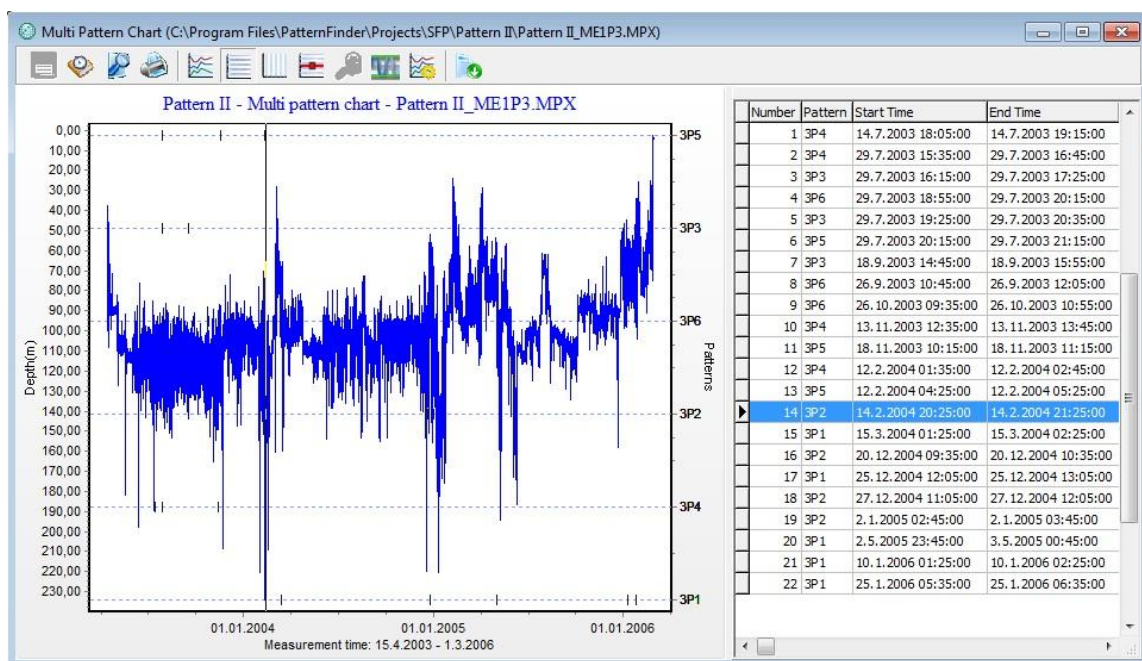

Figure 5 Multi Pattern Chart

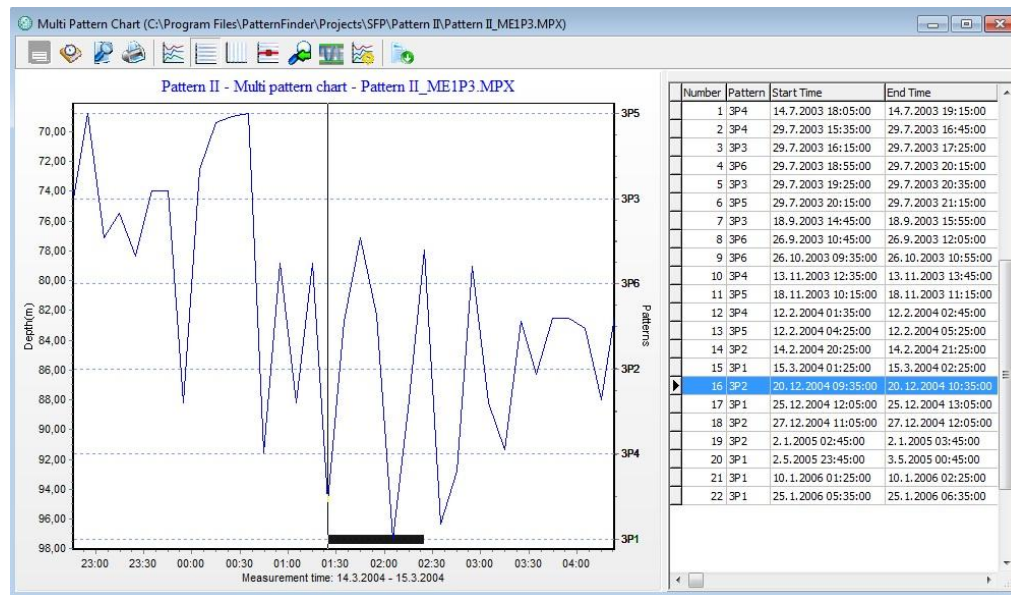You can zoom in on the chart to get a better view of each pattern (see figure 6).

Figure 6 Multi Pattern Chart: Zoom

History

Click the **History** button ![icon] on the chart bar to add comments and view information on the origin of the signal and the progress of the project (see figure 7). Click **Print** to print out the information (see figure 8).
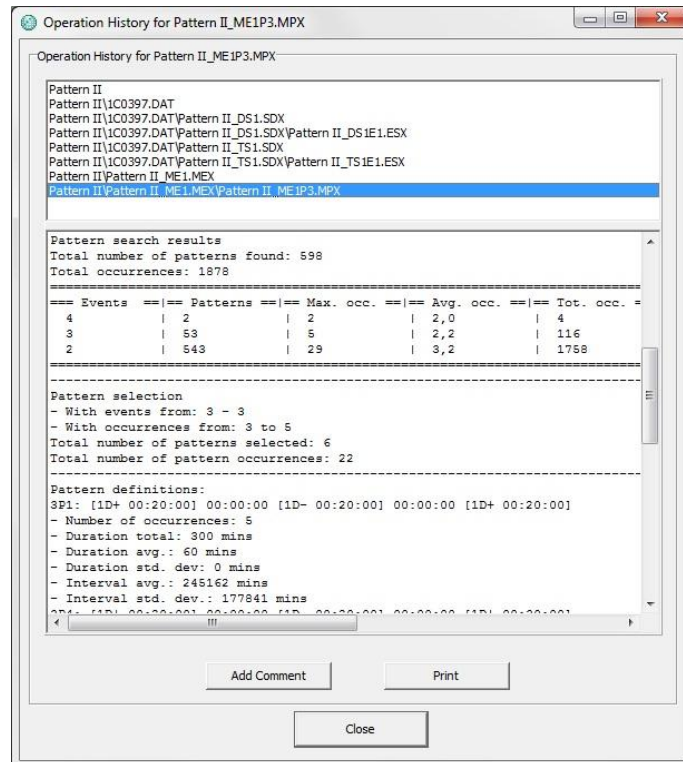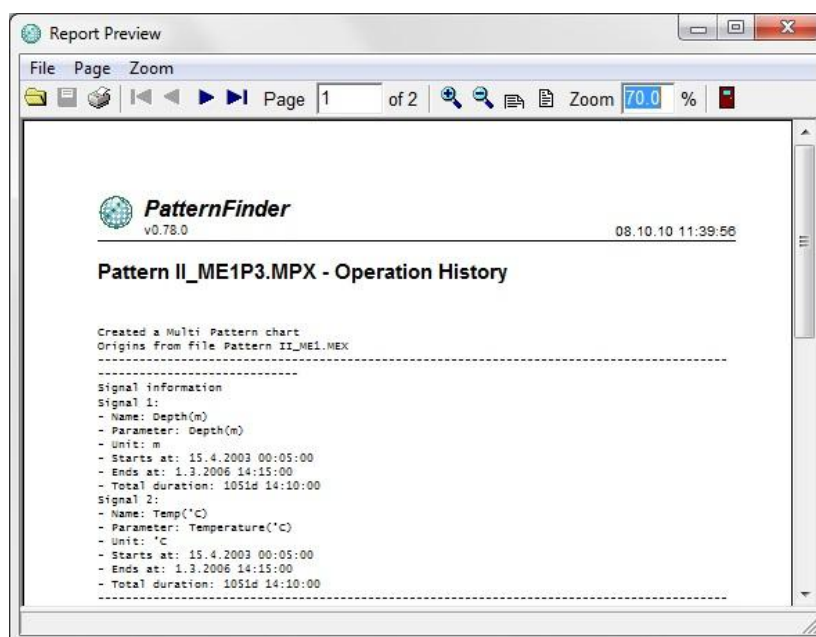

Figure 7 History

Figure 8 Print preview