

IbaAnalyzer 5.17.0 new functionality description

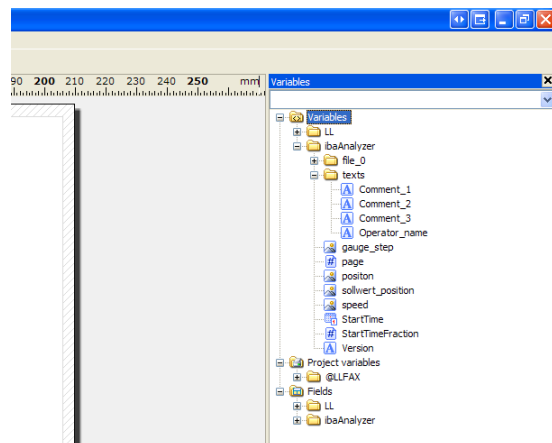
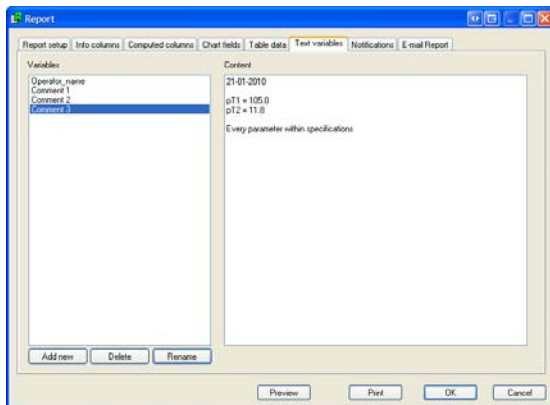
Report new features

Text fields

A new tab entitled “Text variables” is added to the report dialog. Here you can specify additional variables to be used in the report designer that have a text as content. This was implemented so that when one is generating reports interactively, one can add comments to the report without changing the layout of the report (i.e. the .lst file) or even entering the designer at all. The idea is that one specifies the comment variables and places placeholders for the comments in the report layout once, while changing the contents of the variables each time one wants to make a report.

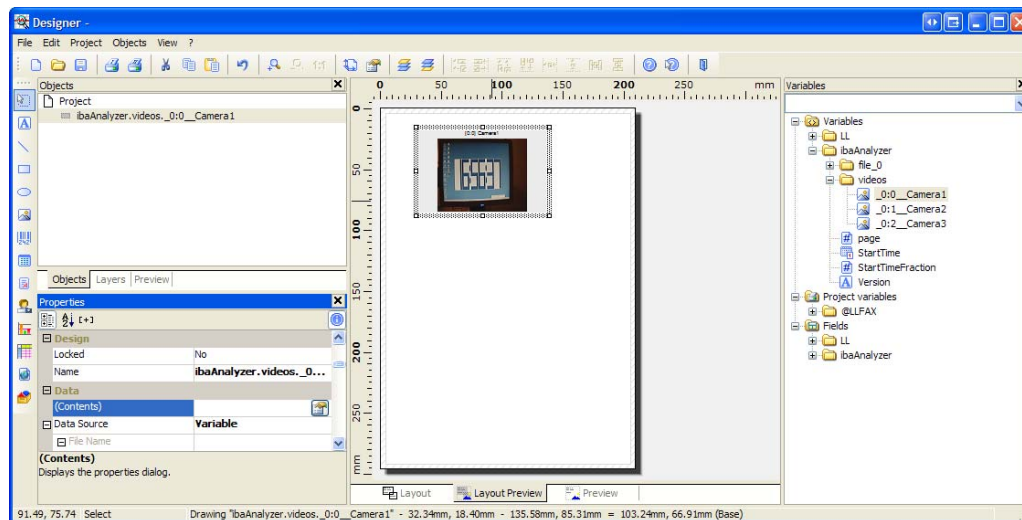
In the “Text variables” report dialog tab, you can add new variables, delete and rename them in the list to the left. You can change the content of the selected variable in the edit box on the right. Note that you are not limited to one line of text; you can enter several lines of text for each variable.

The text variables can be found in the designer in the variables tree under the node “ibaAnalyzer.texts”, i.e. a variable named “Text1” in the report dialog tab is named “ibaAnalyzer.texts.Text1” in the report designer.

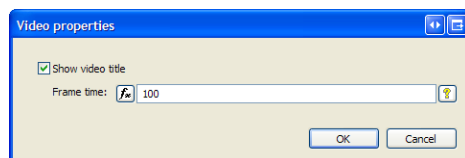


Video objects

For each ibaCapture-CAM video that you have opened in ibaAnalyzer before starting the designer there is a video object present that you can insert into your report. The objects are present in the variables tree under the node “*ibaAnalyzer.videos*”. You can move and resize the objects similarly as dragging ibaAnalyzer graph objects.



By default the object displays the video title along with the video frame corresponding with the start time of the loaded *.dat* file. You can however by either double clicking or pressing the button in *Properties*→*Data*→(*Contents*) display a properties dialog where you can select to hide the video title and/or specify another frame time in seconds relative to the start of the loaded *.dat* file.



Note that you can also type an ibaAnalyzer expression for the frame time. One could for example take the time of the first rising edge of a digital signal by typing
`XFirst([digital signal])`

Note also that the video objects are not limited to interactive report generating, one can also generate reports from the command line with the `/report` switch on condition you have specified an analysis and *.dat* file that opens the videos. Also from the ibaDatCoordinator such reports can be generated, again provided that you have specified an analysis that contains videos.

iba Capture-CAM enhancements

The Play and Pause buttons are now merged into one button that toggles between either giving the Play command or Pause command depending on whether the video is paused or playing respectively. The icon on the button changes accordingly.

New buttons are added that allow you to forward and rewind the video frame by frame. These buttons are auto-repeat buttons, which means that if you keep the button depressed, after an initial delay of about 1 second the button will behave as if it is rapidly clicked (5 times per second), thus allowing you to forward or rewind the video frame by frame rapidly.

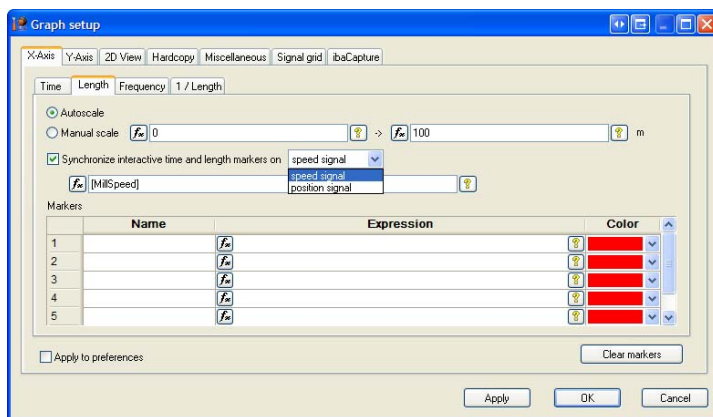
For videos with a high frame rate (more than 30 frames per second), the speed slider bar will adjust so you are able to select slower speeds than usual.



Signal visualization new features.

Time and length marker synchronization

When on the marker tab and both having length based and time based signals visualized, one can synchronize the time and length interactive markers so that when moving the time markers, the length markers move along to an appropriate length position. Also when moving the length markers, the time markers move along to an appropriate time position. The positions where the markers need to move to are determined from either a position signal (i.e. a time-based signal giving for each time stamp a corresponding length position) or from a speed signal that ibaAnalyzer will integrate to obtain a position signal. These signals are similar to the signals that need to be used for the second argument of the TimeToLength function (speed signal) or TimeToLengthL function (position signal). A position signal should be non decreasing. If a position signal is specified that has sections that are decreasing or invalid (i.e. a gap in the signal), those sections will be ignored and the marker positions will be determined by linear interpolation between the last value before the decreasing or invalid section and the first value after the decreasing or invalid section. A speed signal will be integrated and invalid or decreasing sections in the obtained position signal will be similarly ignored. To make certain that no invalid or decreasing sections appear in the obtained position signal it is sufficient that the speed signal is never negative.



The feature can be activated by going to the *X-Axis*→*Length* tab in the graph setup dialog, checking the checkbox “*Synchronize interactive time and length markers*”, specify the synchronization signal and select from the drop list whether the signal is a speed signal or position signal.

This feature was implemented in response to a customer request to be able to synchronize video frames on length signals, i.e. to see the video frame corresponding with a certain length position. Note that this is now possible; moving the length marker will move the time marker which will in its turn position the video on the correct frame.

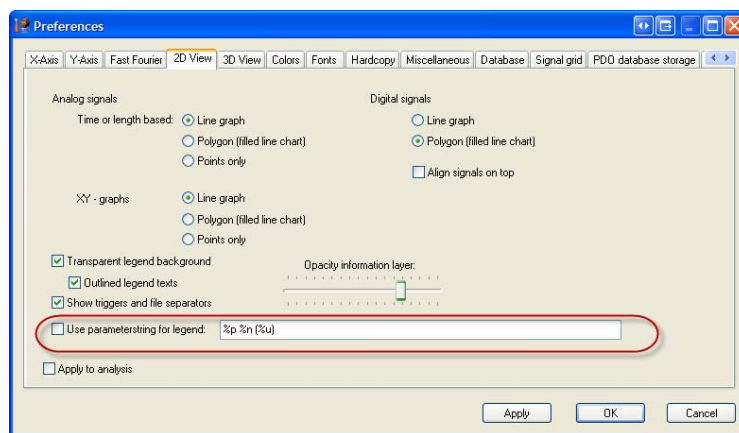
Parameterizing legends

Several customer requests have been made to modify the legends of the signals in the graphs of the recorder view:

- The ability to add one or more comments to the name in the legend.
- Use one of the comments instead of the signal name in the legend.
- Show the marker values in the legend.
- Hide the legends altogether (note that that was already possible for graphs in reports).

Rather than implement these features individually, we thought it would be more convenient to implement them all in a single feature. Also there was the problem that when additional information needs to be depicted in the legend it was difficult to decide how to format the legend (i.e. order of the information and what delimiters should be used) so that the result is clear and aesthetically pleasing to all customers.

Hence the possibility to specify a *parameter string* for the legend. A parameter string is a text containing one or more of several placeholders and other characters. The placeholders start with a ‘%’-sign followed by one or more characters identifying what information is requested. The actual legend used in the grid is then a copy of the parameter string where the placeholders are replaced by the requested information or removed if the requested information is not available and all other characters are copied verbatim.



The feature can be activated for each individual graph by going to the *2D View* tab in the graph setup dialog, checking the checkbox “*Use parameterstring for legend:*” and specifying the parameter string, by default the parameter string “%p %n (%u)” is suggested which would result in a legend almost identical to the legend depicted when no parameter string is used.

Alternatively one can also set the same options in the *2D View* tab of the global preferences, any new graph added to the current analysis or any new analyses will then by default have the specified parameter string.

Here follows a list of the placeholders that can be used in the parameter string, the same information is depicted summarized in a tooltip when hovering over the parameter string input box in the setup and preferences dialogs:

- %p: When a graph without a parameter string is put in FFT view a prefix is put in front of the legend consisting out of the letters “FT” followed by the mode between brackets, e.g. : “FT (amp-norm)”. If you want the same information in your legend you should include this placeholder in your parameter string.
- %n: This placeholder is replaced by the signal name
- %u: This placeholder is replaced by the unit of the signal if available, otherwise the placeholder is removed.
- %c1: This placeholder is replaced by the first comment of the signal if available, otherwise the placeholder is removed.
- %c2: This placeholder is replaced by the second comment of the signal if available, otherwise the placeholder is removed.
- %m1: If on the marker tab this placeholder is replaced by the value the signal has for the X-value of the X1 interactive marker. If not on the marker tab the placeholder is removed. Note that when moving the marker, the legend gets updated.
- %m2: Same as %m1 but for the X2 interactive marker.

Note that the case of the placeholder (upper- or lowercase) is relevant, currently all placeholders are lowercase. Additional placeholders might be added in future versions of ibaAnalyzer.