Agilent Technologies

MBP

Advanced Graph Export

Application Note

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Advanced Graph Export
Application Note

This application note describes how to customize a report to be exported in Model Builder Program (MBP). **Note**: This document was originally released for MBP V2011.1.0 in July 2011.

Introduction
In addition to the basic graph export functions like “All Pages,” “Current View” and “Screen In One” that MBP supports, the software also provides an advanced graph export function that allows users to customize reports according to their specific needs.

This document introduces the options and steps for exporting graphs using this advanced mode. For more information go to www.agilent.com/find/eesof or contact your local Agilent office. The complete list is available at: www.agilent.com/find/contactus.

Basic Concepts
Before introducing MBP’s advanced graph export function, a clear and solid understanding of the software’s plot category methodology is necessary. To begin, the concepts of Device, Page and View in MBP are defined as follows:

• *Device*: Some measurement data and model simulation results are included under each device. Different devices are included in the device array at the top of the device navigator.
• *Page*: Page means a set of curves under every device, like Id_Vg and Id_Vd. This information is shown in the page list at the bottom part of the device navigator.
• *View*: Another plot sequence named “view” is independent from the device array and page list. View means that all of the plots are contained in the current screen. However, because of space limitations in the display area, MBP cannot display all of the plots at the same time. Instead, MBP displays some plots according to the layout configuration and hides the rest. Users can loop the plots in View using the blue arrow buttons in the tool bar.

As shown in Figure 1, the user can add plots to the current view by clicking the *Add* screen button beside the blue arrow. The math transform and the log/linear scale will also be memorized in a View. Pay attention to the difference between View and Screen. A View is a kind of extension of Screen and may have more than one screen.

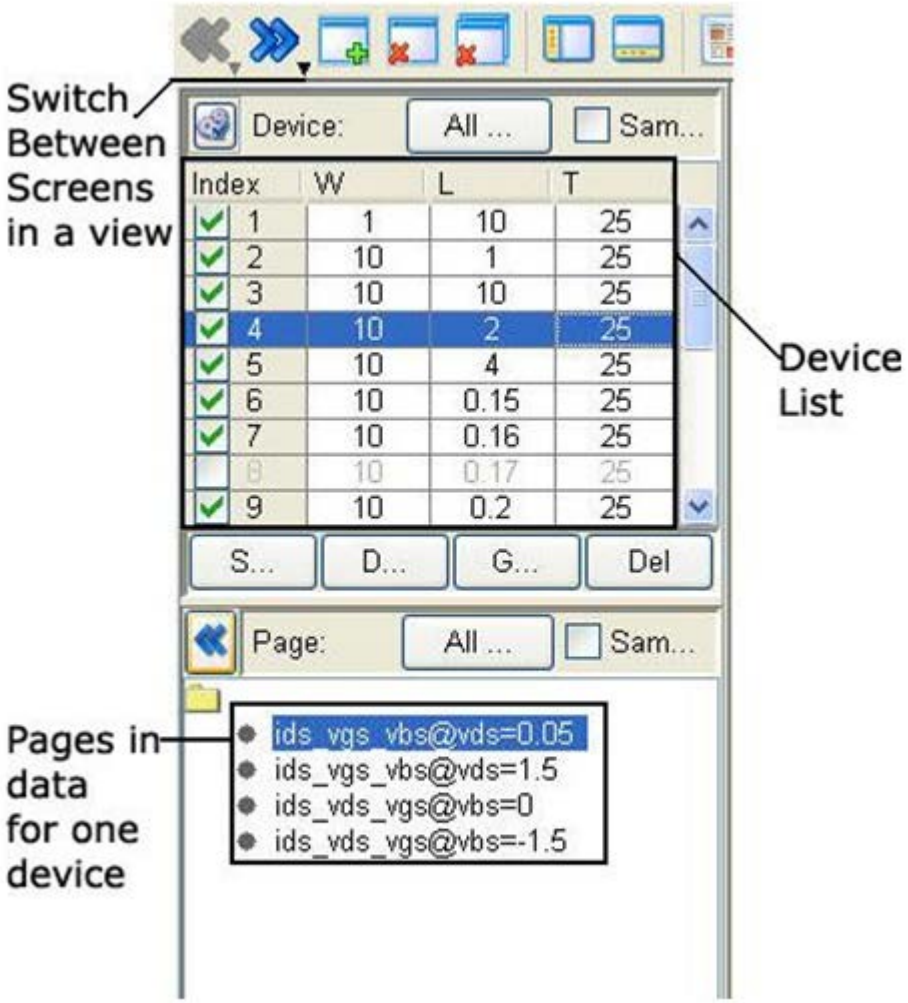

Figure 1. Device list

Export Graphics

MBP's advanced export function is based on the Device, Page and View grouping categories. To export graphics, the user must first click *Export -> Export Graph -> Advanced* from the main menu. This pops up the window called Report Collector, as shown in Figure 2.

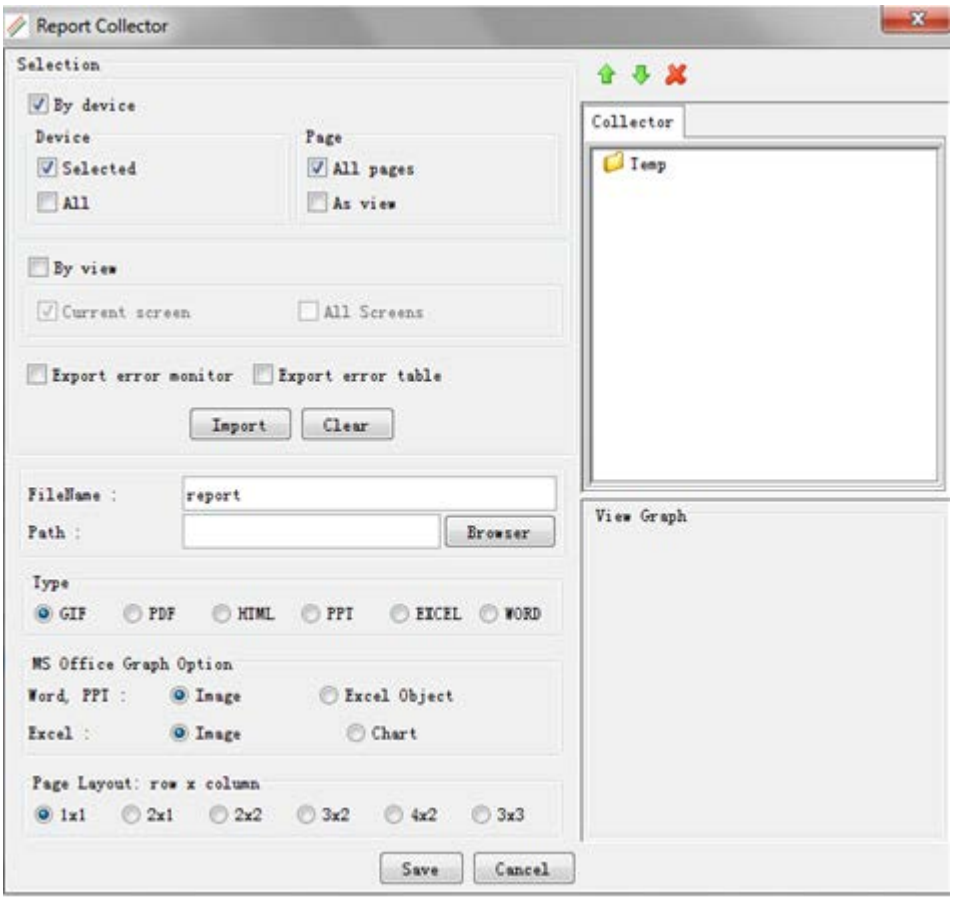

Figure 2. Report Collector

Choose exported graphs

The user must select the graphs to be exported. MBP provides two options in this regard: to export "*By view*" or "*By device*." The user is free to choose either option.

If "*By view*" is checked, there are two options for the user to choose from. One is to export the graphs in the current screen by checking *Current screen*. The other option is to export the graphs in all screens by checking *All screens*.

If "*By device*" is checked, the user has more options. First, the user must specify the devices to be exported, either choosing all devices by checking *All* or only the devices selected in device navigator by checking *Selected*. Then, the user must define the page to be exported for each device. Here, there are two options. *All pages* exports all of the pages for the selected devices, while the *As View* option enables the user to define a set of plots in a view and export the graphs of the selected devices according to the current view.

If the user checks the *Export error monitor* option, the error monitor graph (as shown in Figure 3) will also be exported.

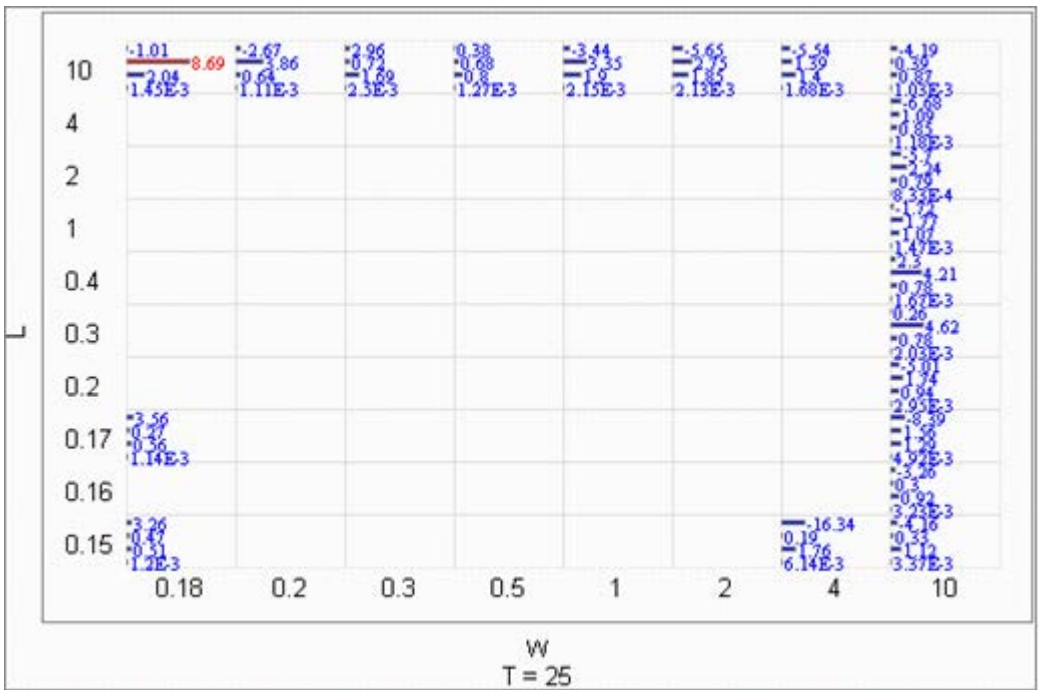

Figure 3. Error Monitor graph

By checking the *Export error table* option, the error tables (shown in Figure 4) will be added to the report.

Page	W	L	T	Bias	Math	RMS	MAX
ids_vds_vgs	1	10	25	vbs=0	y	1.96%	4.19%
ids_vds_vgs	1	10	25	vbs=-1.5	y	2.91%	5.50%
ids_vds_vgs	10	1	25	vbs=0	y	1.58%	4.80%
ids_vds_vgs	10	1	25	vbs=-1.5	y	1.28%	3.15%
ids_vds_vgs	10	10	25	vbs=0	y	0.38%	1.73%
ids_vds_vgs	10	10	25	vbs=-1.5	y	1.60%	3.51%
ids_vds_vgs	10	2	25	vbs=0	y	1.22%	3.83%
ids_vds_vgs	10	2	25	vbs=-1.5	y	1.12%	2.67%
ids_vds_vgs	10	4	25	vbs=0	y	0.59%	2.44%
ids_vds_vgs	10	4	25	vbs=-1.5	y	1.52%	3.60%

Figure 4. Error table

Collector

The next step, is to click *Import* so that all of the graphs to be exported will be placed in the *Collector* section, as shown in Figure 5. Here, the user can adjust the graph sequence by clicking the *Move up* or *Move down* icons. Then, click *Remove* icon to remove the selected graph from the *Collector*. When a file is selected in the *Collector*, its corresponding graph will be plotted automatically in the “View Graph” section.

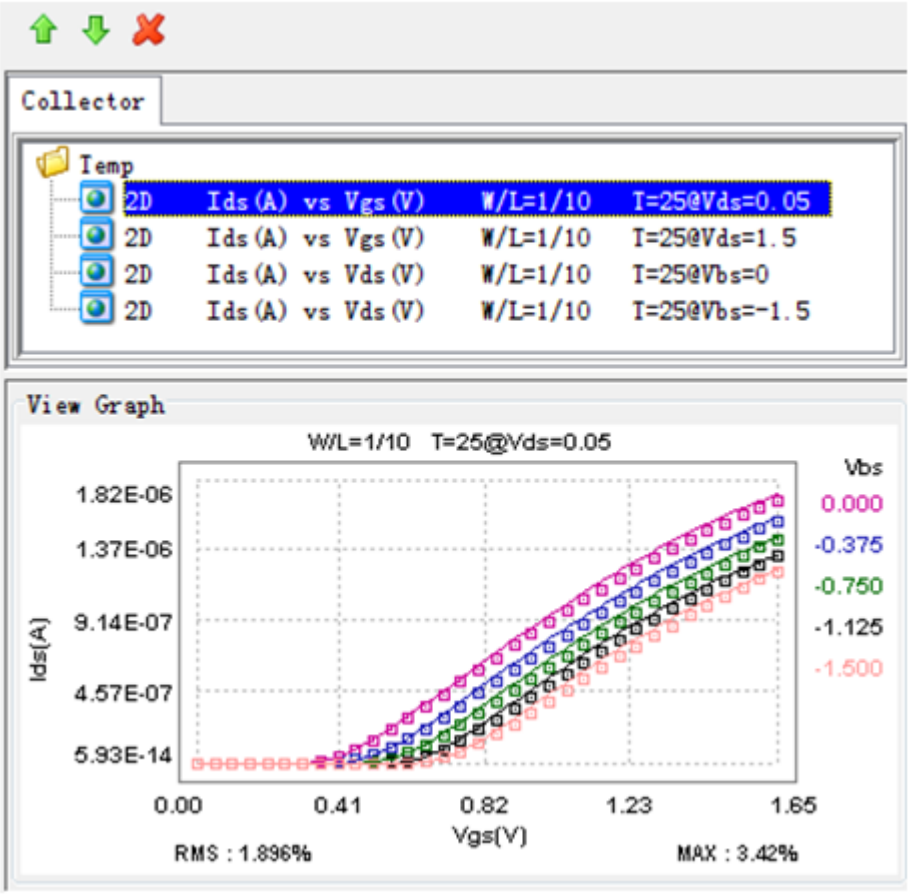

Figure 5. Collector section

Choose the Exported File Format

MBP allows multiple formats to be exported, including GIF (.gif), PDF (.pdf), HTML (.html), PPT (.ppt or .pptx), EXCEL (.xls or .xlsx) and WORD (.doc or .docx). The user may select any format desired in the *Type* section. If the exported file type is PPT, Excel or Word, the user will have more options to choose from in the *MS Office Graph Option* section.

1. If the file type is PPT or Word, there are three options:
    a. Choose *Image* in “Word, PPT” to export the graphs only in the generated PPT or Word file.
    b. Choose *Excel Object* in “Word, PPT” and *Image* in “Excel” to export graphs (plotted by MBP) with data in Excel format in the generated PPT or Word file.
    c. Choose *Excel Object* in “Word, PPT” and *Chart* in “Excel” to export graphs (plotted by Excel) with data in Excel format in the generated PPT or Word file.

2. If the file type is Excel, there are two options:
    a. Choose *Image* in “Excel” to export the data and graphs (plotted by MBP) in the generated Excel file.
    b. Choose *Chart* in “Excel” to export the data and graphs (plotted by Excel) in the generated Excel file.

Choose Exported File Format

After confirming the page layout (row x column), the user can then click *Save* to generate the customized report.