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Merging Two Projects into One Report Application Note

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Merging Two Projects into One Report Application Note

This application note describes how to generate documents from various data sources by taking advantage of the Model Quality Assurance (MQA) reporting function and utilities. As an example, it shows how to merge two MQA project results into one report. **Note**: This document was originally released for MQA V2010.2.0 in April 2011.

Introduction

MQA offers superb reporting functionality. Basic reporting functions enable it to quickly generate separate documents for each single project. Moreover, by using Lib Explorer and Report Collector, the user can further group, sort and filter various data sources (e.g., different projects) and generate content-rich reports with plots and tables.

Through Lib Explorer, the user can readily select multiple projects and merge them into one report in the order of selection. For a more flexible method of organizing the content, Report Collector can be utilized.

This application note introduces the detailed operational steps for utilizing MQA's Lib Explorer and Report Collector. The user can realize the specific functions by following the steps, one by one. For more information go to <u>www.agilent.com/find/eesof</u> or contact your local Agilent office. The complete list is available at: <u>www.agilent.com/find/contactus</u>.

Basic Reporting Function

First, let's take a look at MQA's basic reporting function. As shown in Figure 1, right-clicking on *Project Node Result* and choosing *Export to Report*, causes the Report Wizard window to pop up (Figure 2).

💥 MQA ¥2010.2.0.4										
<u>P</u> roject ⊻iew <u>M</u> odel M	l <u>e</u> asurement <u>R</u> eport <u>U</u> tilitie:	s !	<u>O</u> ptions	<u>H</u> elp						
🕨 🖾 😓 🌜	, 🍇 🤂 🚵 🔁	Q		3						
<u> </u>			OK for	checking	[SavePa;	ge (p, x, y	1)] wher	e [y1=ids]		
💋 MQATraining		1	New						I	₩(um)=2;L(um)=0.4;vds(V)=0.1
📄 🏳 Session1	_		No.	L (um)	Vds	W (um)	T (C)	Result	N	To.1 w(\um)=2;L(\um)=0.4,vds(V)=0
i	New group		1	0.4	0.1	2	27	OK 🔺	1	123E-04
Measuremen	Move data to group 🔹 🕨		2	0.45	0.1	2	27	OK		
🚽 🛁 🧾 SubcktQA 🍈	Refresh		3	0.55	0.1	2	27 27	OK OK	1	9.25E-05
Vth_bulit_in_	Kerresh		5	0.4	5	2	27	OK	1	
Session2	Delete		6	0.45	5	2	27	OK	Tdef à l	6.16E-05
⊕ Gession3	Remove node message		7	0.55	5	2	27	OK	ļļ	
	RMS Summary		8	2	5	2	27	OK	11	3.08E-05
	Grade Model Robustness		9 10	0.4	0.1	20 20	27 27	OK OK	11	
	Modify X/Y Scale Properties		11	0.45	0.1	20	27	OK	11	2.57E-13
	Fibally Ayr Scale Freperads		12	2	0.1	20	27	OK	1	0.00 1.50 3.00 4.54 Vgs(V)
	Export to Report		13	0.4	5	20	27	OK	11	
	Send to Collector		14	0.45	5	20	27	OK	Ita	
	Compress data		15	0.55	5	20	27	OK		w(um)=2;L(um)=0.45;vds(V)=0. ان 2 w(m)=2;L(m)=0.45;vds(V)=0.
	View the Folder		16 17	2	5 0.1	20	27 125	OK OK	¹⁴	
-			18	0.4	0.1	2	125	OK		1.15E-04

Figure 1. Export to Report

🙀 Report Wizard -	- Step 1 of 2			x
Name and Path				
Name: AccuracyChe	ck			
Path: D:\MQA_file	s\MQATrainin	ng\Session1		
Report Scheme :			▼ Save As	Remove
Type				
₩ PD <u>F</u>	<u>⊢ h</u> tml	□ PP <u>T</u>	<u>Excel</u>	V Hord
	v column			
		(2x2) C <u>6</u> (3x2)) C <u>6</u> (2x3) C <u>8</u>	(4x2) C <u>9</u> (3x3)
Export to Repo	ert			
🔲 Exp <u>o</u> rt to XML				
E Send to Collec	tor			
⊂Order Configurat	ion			
<u> </u>	nce by file			
Word Template				
Template :				
	< <u>B</u> ack	<u>N</u> ext >	OK Cancel	

Figure 2. Report Wizard

The user then needs to select *Report Format* type, from a list that includes options like PDF, HTML, PPT, Excel, and Word. Doing so generates a document with a user-specified name (e.g., "*AccuracyCheck.pdf*" or "*AccuracyCheck.doc*") in the folder designated "*Path*." For this example, the folder name is given by "*D*:*MQA_files**MQATraining**Session1*." The document contains all plots and tables within this project.

Create Combined Report using Lib Explorer

One function of Lib Explorer is to create a combined report project that merges the results of multiple projects into one document in the order of selection (Figure 3).

₩Lib Explorer - [D:\MQA_file	s\MQATraining\Session3\Session3.i	ni] 🗶
	Create From Project	Report Setting
🛃 Library	Create Combined Report	D 🖉
		Name and Path
🛅 Hb3v3	Renove	Name: RPCS_Table
Sunmary	🥬 Project Report 🖻 🍯 QA	Path: D:\MQA_files\MQATraining\Session3\PCS_Table
Hb3v3_ET Sunmary	B-6 Hb3v3_PCS_Table	Contents
🚞 Hb3v3_ET_Corner		Project - PCS_Table
Sunmary C Resistor_2	En Compare	Indiect roo_rable
Sunmary		
Hb3v3_PCS		Report Schene : Save As Remove
Summary) Hb3v3 PCS comp		Туре
- Sunmary		PDF HTML PPT Excel Word
Hb3v3_PCS_Table Summary		I THE I THE I THE I THE
Sunmary		Page Layout: row x column
		$\bigcirc \underline{1} \ (1x1) \ \bigcirc \underline{2} \ (2x1) \ \bigcirc \underline{4} \ (2x2) \ \bigcirc \underline{6} \ (3x2) \ \bigcirc \underline{6} \ (2x3) \ \bigcirc \underline{8} \ (4x2) \ \bigcirc \underline{9} \ (3x3)$
		₩ Egport to Report
		Export to XML
Project and Report All Projects		Send to Collector
Report Generator		Order Configuration
		₩ Control sequence by file
		D:\MQA_files\MQATraining\Session3\PCS_Table\order.config
1 😳 🔅 🔟		
	J	

Figure 3. Lib Explorer

To access this function, the user clicks the button *Create Combined Report* to open the window shown in Figure 4. Here, multiple projects can be selected by clicking the corresponding checkboxes. The user can also adjust the result order by clicking the *Move Up* or *Move Down* buttons.

💥 Create Combined Report – Step 1 of 2	×
Projects Tables	
10 QA	
Ё 🗹 🃁 НьЗхЗ	
🔽 🔍 Benchmark	
🖻 🖻 🗹 💋 Hb3v3_ET	
□ I I I I I I I I I I I I I I I I I I I	
····· I ♥ ● Kesistor ⊡··· □ ♥ Hb3v3_PCS_Table	
PCS_Table	
Corner	
🖻 - 🔽 խ Hb3v3_ET_Corner	
🔽 🚏 ET_Corner	
🗖 💭 🕼 Compare	
- E E PCS_Comp	
Result :	
Project - Benchmark	Move Up
Project - ET	
Project - Resistor	Move down
Project - ET_Corner	Remove
< Back Next > OK (Cancel

Figure 4. Create combined report, step 1of 2

In the example shown in Figure 4, the resulting report document contains results from the following projects: Benchmark, ET, Resistor, and ET_Corner.

Clicking *Next* in the window shown in Figure 4, causes the report generation wizard window in Figure 5 to appear. After clicking the *OK* button, one combined report project named "*Report1*" is created in

Lib Explorer's Report Generator panel (Figure 6).

💥 Create Combine	ed Report – :	Step 2 of 2			X
Name and Path					
Name: Report1					1
Path: D:\MQA_file	s\MQATrainir	g\Session3			
Report Scheme :			▼ Sa	ave As	Remove
Туре					
₽D <u>F</u>	<u>⊢</u> <u>h</u> tml	□ PP <u>T</u>	Ex	cel	Word
	x column				
C <u>1</u> (1x1) C <u>2</u>	(2x1) 🖲 <u>4</u>	(2x2) O <u>6</u> (3x2) <u>6</u> (2x	3) <u>C 8</u> (4x	2) 🔿 <u>9</u> (3x3)
Export to Repo	rt				
Exp <u>o</u> rt to XML					
🗌 Send to Collec	tor				
_Order Configurat	i on				
<u> </u>	nce by file				
	< Back	Next >	ок	Cancel	
	< <u>D</u> ack	Text >		cancer	

Figure 5. Create combined report, step 2 of 2

Click the button to execute the report generation. Finally a file named "*Report1.pdf*" is created under the Path " $D:\MQA_files\MQATraining\Session3."$

💥Lib Explorer - [D:\MQA_file	s\MQATraining\Session3\Session3.	ini*]
Library	Create From Project Create Combined Report	Report Setting
Hb3v3	Remove	Name and Path
 Summary Hb3v3_ET Summary 	✓ Project Report ☐ ✓ ✓ QA ☐ ✓ ✓ QA ☐ ✓ ✓ Hb3v3_PCS_Table	Path: D:\MQA_files\MQATraining\Session3
Hb3v3_ET_Corner Summary Resistor_2	Compare	Project - Benchmark Project - ET
 Summary Hb3v3_PCS Summary 	Combined Report	Report Scheme : Save As Remove
➢ Hb3v3_PCS_comp Summary ➢ Hb3v3_PCS_Table		Type □ PDE □ HIML □ PPI □ Excel □ Mord
Summary		Page Layout: row x column C 1 (1x1) C 2 (2x1) G 4 (2x2) C 6 (3x2) C 6 (2x3) C 8 (4x2) C 9 (3x3)

Figure 6. Combined Report 1

Report Collector

Report Collector allows the user to accomplish the same job previously discussed, but with more flexibility in organizing the report content. The user can send results from various sources to Report Collector, such as different projects or any plots or tables from anywhere within MQA. This content can then be organized in Report Collector to dump to report documents according to the following steps.

Send Results to Report Collector

The user must first right-click on any level of project node. The popup menu will appear showing one item named "*Send to Collector*" that sends the selected node to Report Collector. Besides the project level window shown in Figure 7, the "*Send to Collector*" item can also be chosen by right-clicking on one of the following:

- any rule level node, as shown in Figure 8;
- any plot, as shown in Figure 9; or
- any table, as shown in Figure 10.



Figure 7. Project level, Send to Collector



Figure 8. Rule level, Send to Collector



Figure 9. Plot, Send to Collector

₩ Vds(V)=3.3;Vb:	_ 0	
No.	Vgs (V)	T (C)
1	1.1	-40
2	1.1	25
3 4 5	View data as tai Set plot type	ble
6 7 8	Edit row messag Remove row	je
9	Copy selected r Copy all Save table as te	
	Send To Collect	or

Figure 10. Table, Send to Collector

Edit Items in Report Collector

After opening the Report Collector window, the user will find all items that have been collected via the *Collector* tab (Figure 11). Here the user can preview plots or tables, adjust a node's order by clicking





Figure 11. Report Collector

Organize Content and Dump Out

Normally, the *Collector* tab is just a container to store all sent items. However, sometimes the user may want to sort the items into various documents. To conduct this operation, click the *New* button to create another tab, by default it's called "*Report 1*." The second one is called "*Report 2*" and so on. Each new tab is dumped out as a document. Next, in the *Collector* tab, right-click on *Node* and *Send to* \rightarrow *Report 1*, as shown in Figure 12.

🙀 Report C	ollector
New Load Collector	1 🧩 🕊 🔂 🐺 🗡 🔊
🌾 Temp	Ft(GHz) vs W(um) Vds(V)=3.3;Vgs(V)=1.1;V
<mark>i i i i i i i i i i i i i i i i i i i </mark>	
🗄 📁 📁 Mes	Distance
	Move up Move down
	Flatten
	Template/Order Viewer Send to Report 1

Figure 12. Send to Report 1

The contents in "Report 1" are then shown, as in Figure 13.



Figure 13. Report 1

The user can right-click on the *Contents* node and dump out all items in "*Report 1*" to a document (Figure 14).



Figure 14. Dump Report 1

Finally, the uniform report generation wizard window pops up, as shown in Figure 15. By clicking the *OK* button, a file named *"Report2.pdf"* is created under the folder *"D:\MQA_files\MQATraining\Session3."*

A Dump	×
Name and Path	
Name: Report2	
Path: D:\MQA_files\MQATraining\Session3	
Report Scheme : Save As Remove	
Type ▼ PD <u>F</u> □ <u>H</u> TML □ PP <u>T</u> □ <u>E</u> xcel □ <u>M</u> ord	
Page Layout: row x column ○1 (1x1) ○2 (2x1) ○4 (2x2) ○6 (3x2) ○6 (2x3) ○8 (4x2) ○9 (3x3)	
Export to Report	
Export to XML	
Send to Collector	
Order Configuration	
Control sequence by file	
OK Cancel	

Figure 15. Dump window