# Creating automated reports using VBS          AN44

Application Note to the KLIPPEL ANALYZER SYSTEM (Document Revision 1.0)
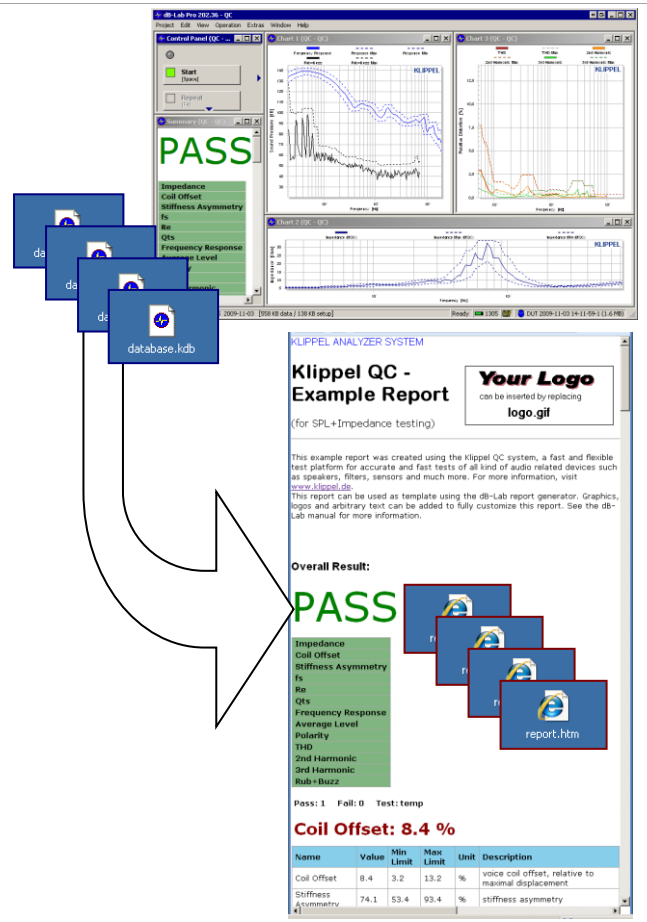
Publishing measured results is important to customers and clients. While the KLIPPEL database contains all information about results and setups in one single file, this format may be not appropriate in some use cases. Using the KLIPPEL software, it is easy and fast to create measurement reports using the HTML-templates based on operations or objects within KLIPPEL databases.

Still, if multiple reports are required e.g. from a series of measurements or on a regular basis, the user interactive method of creating a report (opening database, navigating to operation, selecting templates etc.) is unnecessarily repetitive.
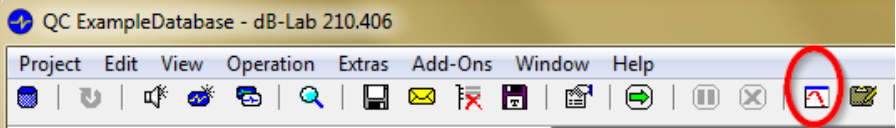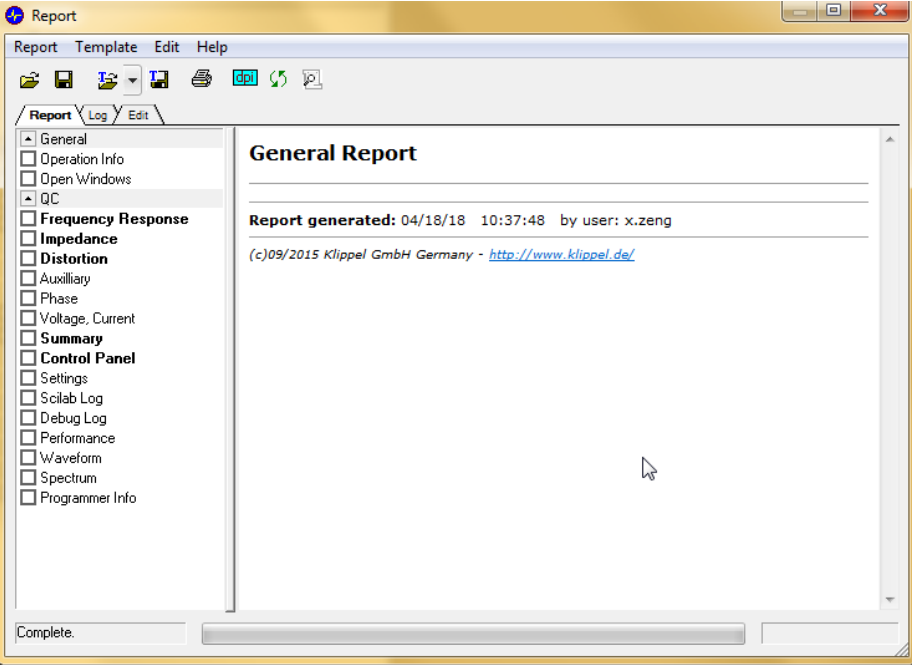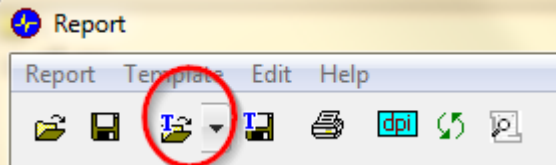
In this Application Note, we will show you how to set up dB-Lab within several minutes so that it generates your reports automatically. Starting with the ready-to-use examples that we provide, you can modify the scripts to fit your own application and hence make use of the automation features of dB-Lab.

## CONTENT

# 1 Interactive Report

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| **Open Database** | If the database is not already open (just after a measurement), double click on any kdbx-file to open the database in dB-Lab. Select the object and operation for which a report shall be generated.<br><br>QC: Note that for all QC databases there is only one object "QC" in the root folder containing only one operation also labeled "QC". No login is required for creating a report.<br><br>R&D databases usually contain multiple operations in one or more objects / folders. |
| **Create report** | To create a report, select *Project / Report* or click on the report icon:<br><br><br><br>The report dialog will open:<br><br> |
| **Select a template** | Select *Template / Open* or click on the icon:<br><br><br><br>to open a template. For most operations generic templates are provided from KLIPPEL. |
| **Print / Save report** | Select *Report / Save as…* or *Print* to publish the report as HTML-file or as printed output (pdf, hard copy). |

## 2    Requirements for Automated Reports

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| **KLIPPEL Automation** | The KLIPPEL Analyzer Software can be controlled via software interface by external applications, such as Visual Basic, C++, C# or Scripting applications. In this Application Note a simple windows scripting program is used to generate reports from KLIPPEL databases. The source code is provided in the Software Package belonging to this Note. <br><br> The KLIPPEL Automation Software comes with the dB-Lab installation. <br><br> For details see the comprehensive Automation Documentation Package (please contact Klippel support to get this package). |
| **Windows Script** | Please note that the Automation interface needs to be run out of a 32 bit environment. If the operating system is 64 bit, SysWoW64's version of cscript needs to be used to run the VBS script in 32 bit mode. This check is performed in the batch file *CreateReports.bat.* <br><br> In a standard Windows system, the two versions of *cscript.exe* are located at: <br><br> *C:\Windows\System32\cscript.exe* (32 bit) <br><br> *C:\Windows\SysWoW64\cscript.exe* (emulates 32 bit on 64 bit systems) <br><br> Scripts run without compilation, so no further software tools are required. |
| **KLIPPEL dB-Lab** | KLIPPEL dB-Lab Viewer Software and the dB-Lab Lite version cannot be used. <br><br> For QC3 and earlier versions, a dB-Lab Pro license is required. <br><br> For QC4 and higher, no additional license is required. |
| **Database Extension** | Please note that the KLIPPEL database extension is depending on the used dB-Lab version. From dB-Lab v206 the extension is ".kdbx"- earlier versions use ".kdb". The report system can handle both types of databases. But in this AN the examples only cover the .kdbx databases. <br><br> If the wrong extension is used, the input databases cannot be opened. |

## 3    Examples for Automated Reports

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| **Example 1: Process one single database file** | |
| **Target** | A single operation in a database shall be processed. QC databases typically contain just one operation while R&D databases may contain multiple operations. <br><br> In the batch file the operation and the containing folder must be specified. <br><br> After the generation, the result shall be opened automatically. |
| **Run Example** | o   Download and extract examples *AN_44_Creating_Automated_Reports-Examples.zip*. There is a single database *"TestDatabase.kdbx"*. <br> o   Start the batch file *"Example1.bat"*. <br> o   A command window will open. <br> o   dB-Lab is now called and the report is generated. <br> o   The shell window is closed automatically, and the report will be found in the created folder *reports*. <br> o   Open the report using a web browser. |
| **Example 2: Process one complete QC test folder** | |
| **Target** | In this example a typical QC test folder (called *MyWoofer*) is used. In such a folder databases are stored from QC measurements in the *Log* folder. Each database contains one measurement. <br><br> For each measurement database a report with the same name shall be generated and |

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| | stored in a subfolder called *reports.* |
| **Run Example** | o   Download and extract Examples *AN_44_Creating_Automated_Reports-Examples.zip*. There is a QC test folder *MyWoofer.*<br>o   Start the batch file *"Example2.bat".*<br>o   A command window will open.<br>o   dB-Lab is now called and the reports are generated.<br>o   The shell window is closed automatically after all reports were generated.<br>o   Navigate to the output folder: *MyWoofer/Log/reports*.<br>o   Open one HTML-file using a web browser to verify the result. |

# 4   Create Own Automated Reports

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| **4.1: Report template** | |
| **Modify Template** | dB-Lab uses a template to organize the layout of the report. KLIPPEL provides a set of standards templates. You can also modify the template in any HTML editor and save it as your own template. Then all measurement results and graphs are replaced, but the modified appearance (text, graphics, pictures etc.) is used from the user modified HTML-file.<br><br>See also the dB-Lab Manual for more information. |
| **4.2: Windows script** | |
| **Modify VBS Script** | The provided scripts do not provide a graphical user interface. If this is required, use the script as template and implement your project using one of the high-level programming languages. |
| **4.3: Batch files** | |
| **KLIPPEL Example** | The script *CreateReports.bat* in the *Examples* folder works both with single specified databases as well as entire QC test folders, as shown in section 3 above.<br><br>Create your personal report templates (section 4.1) and integrate them by simply adjusting the variable *reportTemplate* in *CreateReports.bat* at line six.<br><br>The batch files (*Example1.bat* and *Example2.bat*) specify the test folder parameter for *CreateReports.bat*. If running the script without any test folder parameter (e. g. by just double clicking *CreateReports.bat*) the script prompts the user to input the name of the data to report in the command line. This function is also integrated to process manual tasks. |
| **Modify the Example** | Using a simple text editor (e.g. Notepad) you may personalize the example to your needs. You can for example:<br>o   Create automatic report sequences (e.g. create reports of selected multiple tests)<br>o   Specify the path, where databases are searched.<br>o   Open created reports automatically.<br>o   Personalize every report with modifying *reportTemplates*.<br>o   Integrate a message box with necessary information. |

## 5    Disclaimer

The software provided with this Application Note is NOT to be used in customer applications as it is. Additional parameter, checks and tests should be used to make the solution robust and safe. However, it is beyond the scope of this Application Note to provide a complete solution. The software included is intended to be used as a starting point for customer specific solutions.

Find explanations for symbols at:

http://www.klippel.de/know-how/literature.html

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