

OPUS ERROR REPORTING

User Information

Version 1

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This manual is the original documentation for the OPUS spectroscopic software.

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1 Introduction

In many cases problems or errors witnessed with OPUS have just been accepted and it has been tried to somehow get on with them. However, this attitude does not help to improve the situation and solve the respective problems.

Therefore, report any single problem, error or OPUS system crash to the Bruker Optik software department. New ideas and suggestions for improvement are also welcome.

1.1 How to report errors?

- Send an informal e-mail to: opusbugs@bruker.de
- Use the official OPUS error form available in the intranet (only internally!):

file://pia.optik.lan/Home/Groups/QM/Formblätter/ IRENS/FBSOI008.doc

1.2 Mandatory items to be reported in any case:

- Exact OPUS version with date
- Operating system version
- Detailed description of the last steps which have been done or tried to do

1.3 Further items to be reported:

Depends on the complexity of the problem. Several different types of problems or errors are distinguished:

- 1 Complete operating system crash
- 2 OPUS crash
- 3 OPUS disappears
- 4 Error message in OPUS
- 5 OPUS interface freezes

The different types of problems or errors which may occur in connection with OPUS and their troubleshooting are described in chapter 2.

1.4 How to log errors?

Any type of crash occurred in OPUS is generally logged by Dr Watson.

In some cases, however, other Windows programs are used to log system crashes. Windows XP, e.g. can be configured such that the Windows Error Reporting (WER) program acts instead of Dr Watson. In this case, a typical Windows error message pops up.

It is possible to define Dr Watson as standard to trace errors in the form of so-called log files. The steps required are described in the following.

1.5 Define Dr Watson as log file standard

Help and Support Search Run All Programs	 Step 1: Click on the Windows <i>Start</i> button. Select the <i>Run</i> command.
Pum Pum Internet resource, and Windows will open it for you. Open: drwtsn32 -i OK Cancel Browse	 Step 2: Enter <i>drwtsn32 -i</i> into the command line. Confirm by clicking on the <i>OK</i> button.
Dr. Watson	Step 3: A message pops up and confirms that Dr Watson has been installed as stan- dard program for creating log files.

1.6 Error messages in Windows

DPUS Anvendungsprogramm Proteinginghul Applane: course Applyr: 6.0.72455 ModNane: quanta df ModNe: 6.072455 Otte: 0005/01 Proteinginghul Rechter von DPust Proteinginghul Rechter von Proteinginghul Rechter von DPust Proteinginghul Rechter von Proteingingen Proteinginghul Rechter von Proteinginginghul Recht	Step 1: Click on the <i>Click here</i> option when the message pops up to get more technical information on the problem.
What happens afterwards?	In general, the error processing is sent to Dr Watson which generates the cor- responding log files.
Problemberichtishalt X Die folgenden Daten zu finem Prozess werden beichtet: Immerichtishaft Richtigt Start, Britter Start, Starter Starter,	 Step 2: Make a screen shot of the problem report contents. Send this screenshot to: opusbugs@bruker.de Note: Do not send the *\accomp.txt file to Bruker, as this file does not contain any usable data at all.

2 Types of errors

The following chapter describes the different types of problems or errors which may occur when working with OPUS.

2.1 Complete operating system crash

What happens?	You probably get a blue screen.
Possible cause:	 Severe problems with the operating system Perhaps a non-conforming driver
What about OPUS?	OPUS probably does not cause this problem as it is a user-mode program.
Information on the error:	 Look at the first two lines on the screen (mainly figures). Look at the DLL list, written right below <i>Name</i>. Check drivers recently changed, or new hardware components. Remove drivers or look for more updated ones with the vendor.

2.2 OPUS crash

What happens?	OPUS crashes. Error message pops up.
Possible cause:	Any severe OPUS system error, e.g. out of memory/resources
Information on the error:	Generally, Dr Watson pops up (with Windows NT/2000/XP)

Standard logfile path:	• <\winnt\system32\drwtsn32.log • <\Documents and Settings\All Users\Applica- tion Data\Microsoft\Dr Watson (sometimes in case of recent systems)
	Note: To find out which logfile protocol path applies for the OPUS system used, have a look at the <i>Dr Watson for Windows</i> dialog (see chapter 2.2.1).

2.2.1 How to find out the logfile protocol path?

Help and Support Search Run All Programs	 Step 1: Click on the Windows <i>Start</i> button. Select the <i>Run</i> command.
Kun Image: Source and Windows will open it for you. Open: drwtsn32 OK Cancel Browse OK Cancel Browse OK Cancel Browse Cancel Dr. Watson for Windows Image: Cancel Comparison of the state of the stat	Step 2: • Enter drwtsn32 into the command line. • Confirm by clicking on the OK button. Step 3: The logfile protocol path is displayed. • Click on the Browse button to have the path structure displayed. • Confirm by clicking on the OK button.
	Step 4: Send the logfile to: opusbugs@bruker.de

2.2.2 Crash dump file

Usually, it is advisable to create a crash dump file (with *user.dmp* as file name). This type of file is very helpful in case of trouble-shooting. It requires, however, a lot of disk space.

Where can this file type option be set?

The crash dump file option has to be set on the *Dr Watson for Win- dows* dialog.

	Repeat steps 1 and 2 as described in chapter 2.2.1.
Pre-Watson for Windows Image: Constraint of the second	 Step 3: Activate the <i>Full</i> option button to set the file display size. Activate the <i>Create Crash Dump File</i> check box.
	Step 4:
	opusbugs@bruker.de

2.3 **OPUS** disappears

What happens?	 OPUS completely disappears from the screen. Even the OPUS process disappears from the Windows Task Manager.
Possible cause:	Any problem with the PC configurationInteraction with other programs
Information on the error:	No information available at all.
What is to be done?	 Directly contact Bruker software department to clarify whether additional debug tools can be used. Download the debugging tools for Windows from the following Microsoft Web site: http://www.microsoft.com/whdc/devtools/ debugging/installx86.mspx
Background information	Very often the hang only occurs when the pro- cess is under load. The best approach is to attach a debugger to the process after it has hung (if you can reproduce the problem or remote debug), or create a process dump. A process dump is almost as good as a live debug in these cases, as the state does not change much over time; that is as good a defi- nition of a hang as any other one.

2.4 Error message in OPUS

What happens?	OPUS still runs. Error message pops up.
Possible cause:	 Any temporary OPUS system error Wrong procedure sequence Missing files or methods
Information on the error:	Text written in error message
What is to be done?	Send a screenshot of the error message to: opusbugs@bruker.de

2.4.1 Error message in connection with ADIO/PROCESS

What is to be done?	Send the ADIO/PROCESS protocol log files to: opusbugs@bruker.de
ADIO/PROCESS log file path:	 ADIO: <opus\adio\error.log< li=""> PROCESS: <opus\process\processscenariosequence.obs\error.log< li=""> </opus\process\processscenariosequence.obs\error.log<></opus\adio\error.log<>

2.5 **OPUS** interface freezes

What happens?	OPUS does not react to any data input at all.
Possible cause:	Several actions running too fast in succession.
Information on the error:	No information available.
What is to be done?	 Wait at least 2 minutes to reverse this hang- up. Try to minimize the window. Maximize again to see whether the spectra display has been refreshed. If hang-up still persists, open the Windows Task Manager to have a look at the pro- gramme status. End task, if required. Send a short description of the situation to: opusbugs@bruker.de

Creating dump file for a hanging process

Click Here to Install Silverlight	United S	Step 1:
Microsoft	D web *	
Download Center		
Dombad Catter Home Product Families Windows Office Servers Bauriess Soldons Developer Tools Windows Live HSIN Cames & Abas Cames & Abas	Isaanh Mitowrianh User Mode Process Dumper Version 8.1 Brief Description Wirsden Sageward Professionals Toolkit for Windows The Liter Mode Procees Dumper (sendeng) duras any running Win32 pro- memory inage to the mitodatabathag dasbager, or tenninating targ reserve. On This Page C. Audor Putala.	• Download the Userdump.exe tool, version 8.1 (including the related doc- umentation) from the following Microsoft Web site: http://www.microsoft.com/downloads/ details.aspx?FamilyID=E089CA41- 6A87-40C8-BF69-28AC08570B7E& displaylang=en

Step 2:
 Run the Setup.exe program for your processor. By default, this Setup.exe program is included with the User-dump.exe tool in the C:\kktools\user dump8.1 folder. This Setup.exe program installs a kernel-mode driver and the Userdump.sys file, and creates the Process Dump icon in the Control Panel. If possible, disable the Dump on process termination feature when you run the Setup.exe program.
Step 3:
 If the program stops responding, go to the Userdump.exe tool and select the command prompt. Type in the following command: userdump <pid></pid>
Note: <pid> is a placeholder for the process ID (PID) of the program that has stopped responding.</pid>
 To obtain the PID of the program, open the Task Manager, and click on the <i>Process</i> tab.
Step 4:
When you run the <i>userdump <pid></pid></i> command, a <i>*.dmp</i> file is generated.
 Send the *.dmp file to perform post- mortem debugging to: opusbugs@bruker.de

Additional features of the *Userdump.exe* tool are described in detail in the *Userdocs.doc* file which is part of the *Userdump.exe* tool.

3 Error during mea-

surement

If OPUS shuts down or freezes during measurement, the following steps have to be performed:

- 1 Save and send a full report.
- 2 Save the last, still available measuring files.

3.1 Save and send full report

There are two possibilities to send a full report:

- · by means of the spectrometer diagnostics pages
- by means of the OPUS Instrument Status dialog

3.1.1 Send full report by spectrometer diagnostics pages

File Edit View Favorites Tools Help	Step 1:
Address Attp://149.236	 Open the internet explorer or any other browser. Enter the spectrometer IP-address and try to access the spectrometer.

File Edit View Favorites Tools Help Back Image: Solution of the sol	 Step 2: The spectrometer diagnostics page opens. Click on the <i>Service</i> option.
File Edit View Favorites Tools Help C Back - C - R C - C - C - C - C - C - C - C -	 Step 3: Click on the <i>Full Report</i> option to have the full report displayed.
Configuration & Diagnostics Report - Micros File Edit View Favorites Tools Help New Open Edit with Notepad Save Ctrl+5 Save As Dass Seture Dass Seture	 Step 4: Save the full report. Select the Save as command from the <i>File</i> menu in the browser.
	Step 5: Send the full report to: opusbugs@bruker.de

3.1.2 Send full report by OPUS

Measure Manipulate Evaluate Display Print Image: Advanced Measurement Image: Advanced Measurement Image: Advanced Measurement Image: Application of the Advanced Measurements Image: Advanced Measurement Image: Advanced Measurement Image: Application of the Advanced Measurements Image: Advanced Measurement Image: Advanced Measurement Image: Application of the Advanced Measurement Image: Advanced Measurement Image: Advanced Measurement Image: Advanced Measurement of the Advanced Measurement Image: Advanced Measurement Image: Advanced Measurement Image: Advanced Measurement of the Advanced Measurement Image: Advanced Measurement Image: Advanced Measurement Image: Advanced Measurement of the Advanced Measurement Image: Advanced Measurement Image: Advanced Measurement Image: Advanced Measurement of the Advanced Measurement Image: Advanced Measurement Image: Advanced Measurement Image: Advanced Measurement of the Advanced Measurement Image: Advanced Measurement Image: Advanced Measurement Image: Advanced Measurement of the Advanced Measurement Image: Advanced Measurement Image: Advanced Measurement Image: Advanced Measurement of the Advanced Measurement Image: Advanced Measurement Image: Advanceadvanced Measurement	 Step 1: Select the Optics Diagnostics command from the OPUS Measure menu.
Interest States 2	Step 2: • Click on the Send Report button. The report will be send to: opusreports@brukeroptics.de.

3.2 Save recent measuring files

	Repeat the step 1 and 2 as described in chapter 3.1.
File Edit Wew Favorites Tools Help Back - Or P R C Config Address Http://149.236.138.46/config/ MPA SN_MPA.003.02 Config - << One Level Back - View Instrument Configuration - Full Report - Log buffer - Beep - List of result data files - Special commands A	Step 3: • Click on the <i>List of result data files</i> option to have the list displayed.
Configuration & Diagnostics Report - Micros File Edit View Favorites Tools Help New Open Edit with Notepad Save Ctrl+5 Save As Doop Solution	 Step 4: Save the data files list. Select the Save as command from the File menu in the browser.
	Step 5: Send the data files list to: opusbugs@bruker.de



The appendix contains additional information for systems with the special WinDebug tool installed.

Resp C tradition (C ab Mote, the 7.2 0.2005. Two, 15.2 / 100/02.107.4. 2007. 107.11 Image C tradition (C ab Mote, the 7.2 0.2005. Two, 15.2 / 100/02.107.4. 2007.1. 2017.1. Resp C tradition (C ab Mote, the C ab Mote, the Mote, the C ab Mote, the C ab Mote, the C ab Mote, the Mote, the C ab Mote, the C ab Mote, the C ab Mote, the Mote, the C ab Mote, the	Step 1: When WinDebug has been activated, enter the following commands into the command line: - LM (Enter) - KV (Enter) - R (Enter) - U (Enter) - DB (Enter)
0:00> bb Child&P PetAde Arys to Child 0077101 791147 00000043 0000000 00658c0 macorwar HELprologi02 00771250 79116400 0077146 0000000 000000 macorwar HELprologi012 00771250 79117510 007146 0000000 000000 macorwar HELprologi012 00771260 7911750 007146 0010146 00684c4 macorwar HELprologi012 0077140 00127160 0071450 0010145 00644c4 macorwar HELprologi01 0077146 00127160 0071450 0010145 00644c4 macorwar HELPrologi01 00777146 00127160 0071450 0010145 00644c4 macorwar HELPrologi01 00777146 00127160 0014580 0046159 004624 0048276 00772840 00127160 00160000 004559c 0104807 0048276 00772840 00127160 000000 004559c 0104876 00772840 00127160 000000 004559c 0014645 001326474 00772840 00132647 0048274 0140400 0014452 00134645 00132647 00772840 00132647 0048274 0140400 0014452 00134645 00132647 00772840 00132647 0048274 0140400 0014452 00132647 00772840 0132847 0048274 0140400 0014452 00132647 00772840 0132847 0048274 0140400 0014642 00132647 00772840 0132847 0048274 0140400 0014642 00132647 00772840 01328470 0048274 0140400 0014642 0023847 00772840 0132847 0048274 0140400 0014642 0023847 00778404 0132847 0048274 0140400 0014642 0023847 00778404 0132847 0048274 0140600 00160464 0023847 00778404 0132847 0048274 0140600 00100000 014000000000000000000	Step 2: Select the Write Window Text to File command from the Edit menu. Some kind of logfile will be created.
	Step 3: Send the file to: opusbugs@bruker.de

For further information refer to:

http://support.microsoft.com/kb/892277

Chapt. 4 Appendix

OPUS Error Reporting