

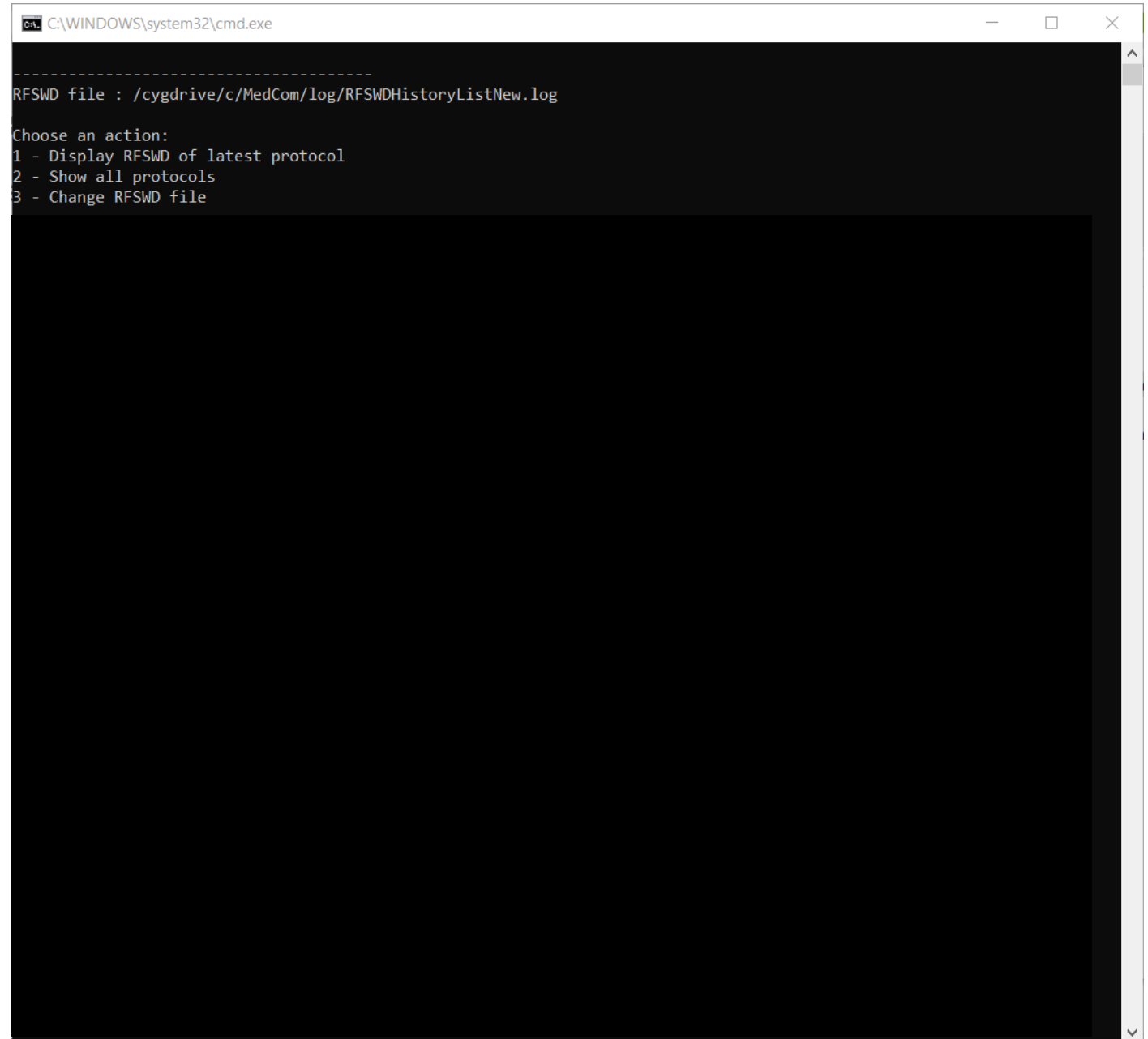
SAR management at the Siemens MR scanner

Batch executable: ***dump_RFSWD_info.bat***

Information is retrieved from the MR scanner log file called “*RFSWDHistoryListNew.log*”

3 options are available:

1. Display RFSWD extraction from latest executed protocol
2. Display a list of all protocols from current study
3. Switch to another RFSWD log file (older file still available in the log history)



```
C:\WINDOWS\system32\cmd.exe

-----
RFSWD file : /cygdrive/c/MedCom/log/RFSWDHistoryListNew.log

Choose an action:
1 - Display RFSWD of latest protocol
2 - Show all protocols
3 - Change RFSWD file
```

SAR management at the Siemens MR scanner

Once the RFSWD of an executed protocol is chosen, detailed information is displayed in several sections:

1. General information

Information about the protocol

```
C:\WINDOWS\system32\cmd.exe

-----
RFSWD file : /cygdrive/c/MedCom/log/RFSWDHistoryListNew.log

Choose an action:
1 - Display RFSWD of latest protocol
2 - Show all protocols
3 - Change RFSWD file

Answer: 1
RFSWD extraction in progress ...

100 Date & Time ..... : 2025/05/07_10:40:46.085108
300 Sequence Path ..... : %CustomerSeq%\ns_tse
301 Protocol Name ..... : ns_tse_HR_siemens_BR192_2mmthck_1s1
1208 Total Measurement Time (MCIR) ..... : 0.185532 s
338 TX pulse amplitude m[ 1] ..... : 2.79 V
339 TX pulse amplitude m[ 2] ..... : 2.79 V
340 TX pulse amplitude m[ 3] ..... : 2.79 V
341 TX pulse amplitude m[ 4] ..... : 2.79 V
342 TX pulse amplitude m[ 5] ..... : 1.92 V
343 TX pulse amplitude m[ 6] ..... : 1.92 V
344 TX pulse amplitude m[ 7] ..... : 1.92 V
345 TX pulse amplitude m[ 8] ..... : 1.92 V
346 TX pulse amplitude m[ 9] ..... : 1.92 V
347 TX pulse amplitude m[10] ..... : 1.74 V
402 Tx Local Sar ID n[0] ..... : 9053
403 Tx Local Sar CRC n[0] ..... : 1048029353
1200 Operation Mode ..... : Normal
1211 Meas UID ..... : 53
610 DiCoTest MeasUID n[0] ..... : 42

900 Most Critical Aspect Number / Name..... : 4 / 'Torso Local'
901 Most Critical SAR Aspect Number / Name..... : 4 / 'Torso Local'

DiCoTest Phase Drift measured Value n[0] ..... : 0.967423 degree

Press enter to print SAR lookahead
SAR lookahead
SAR 360s : Whole Body ..... : 0.023898
SAR 360s : Torso Local ..... : 0.167286
SAR 360s : Coils ..... : 0.161780
SAR 360s : Head Local ..... : 0.162250

SAR 10s : Whole Body ..... : 0.011949
SAR 10s : Torso Local ..... : 0.083643
SAR 10s : Coils ..... : 0.080890
SAR 10s : Head Local ..... : 0.081125
```

SAR management at the Siemens MR scanner

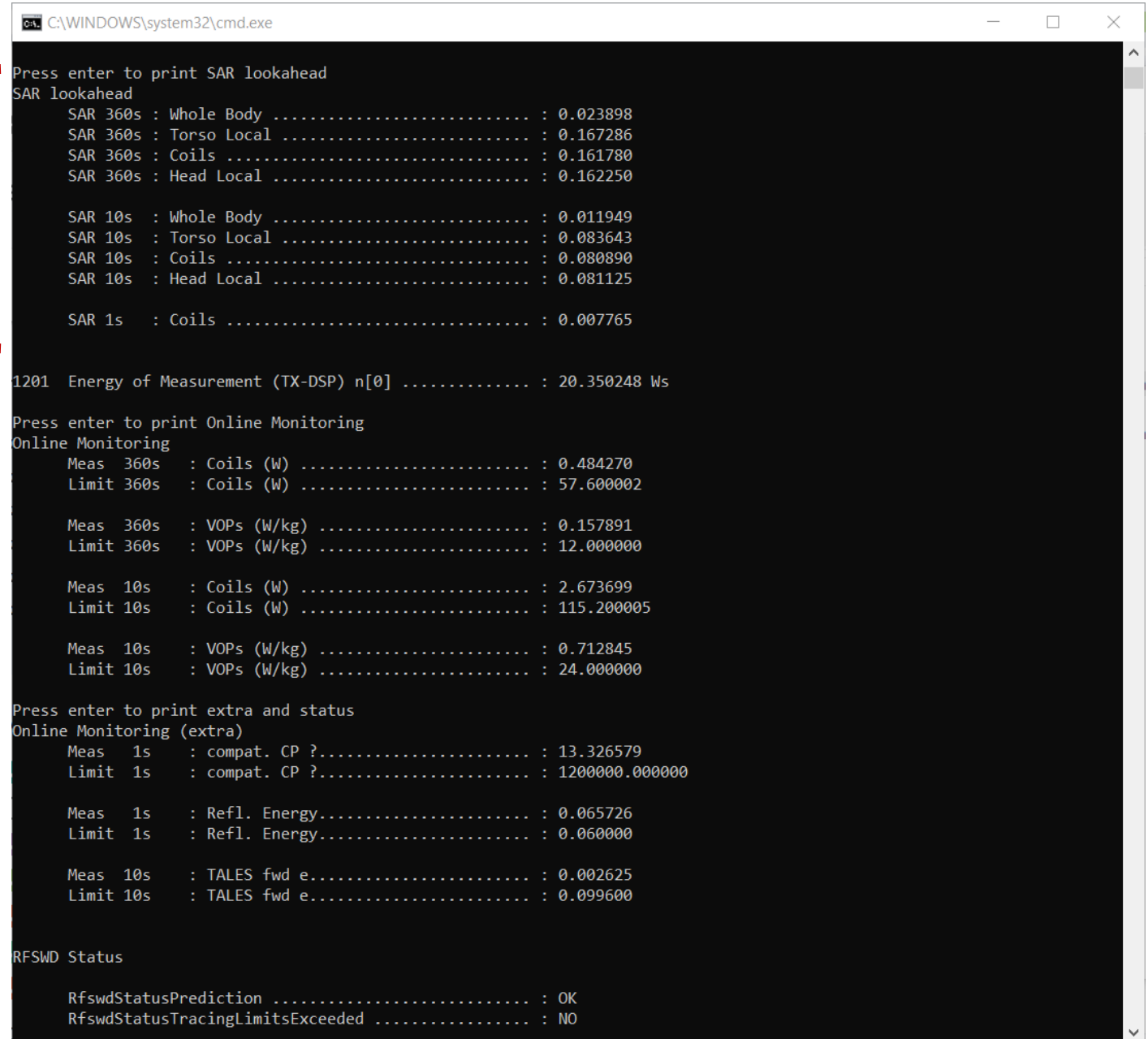
Once the RFSWD of an executed protocol is chosen, detailed information is displayed in several sections:

2. SAR look-ahead

SAR look-ahead levels for a set of limits that are checked by the system.

- A value of 1.0 means 100% of the given limit

If any value is above 1.0, the protocol did not run because the SAR lookahead prevented the acquisition.



```
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SAR 360s : Head Local ..... : 0.162250

SAR 10s : Whole Body ..... : 0.011949
SAR 10s : Torso Local ..... : 0.083643
SAR 10s : Coils ..... : 0.080890
SAR 10s : Head Local ..... : 0.081125

SAR 1s : Coils ..... : 0.007765

1201 Energy of Measurement (TX-DSP) n[0] ..... : 20.350248 Ws

Press enter to print Online Monitoring
Online Monitoring
Meas 360s : Coils (W) ..... : 0.484270
Limit 360s : Coils (W) ..... : 57.600002

Meas 360s : VOPs (W/kg) ..... : 0.157891
Limit 360s : VOPs (W/kg) ..... : 12.000000

Meas 10s : Coils (W) ..... : 2.673699
Limit 10s : Coils (W) ..... : 115.200005

Meas 10s : VOPs (W/kg) ..... : 0.712845
Limit 10s : VOPs (W/kg) ..... : 24.000000

Press enter to print extra and status
Online Monitoring (extra)
Meas 1s : compat. CP ?..... : 13.326579
Limit 1s : compat. CP ?..... : 1200000.000000

Meas 1s : Refl. Energy..... : 0.065726
Limit 1s : Refl. Energy..... : 0.060000

Meas 10s : TALES fwd e..... : 0.002625
Limit 10s : TALES fwd e..... : 0.099600

RFSWD Status

RfswdStatusPrediction ..... : OK
RfswdStatusTracingLimitsExceeded ..... : NO
```

SAR management at the Siemens MR scanner

Once the RFSWD of an executed protocol is chosen, detailed information is displayed in several sections:

3. Online monitoring

“Online monitoring” refers to the measurements on the transmit path made by the system in real time.

The measured level, the type of limitation, the sliding window duration as well as the corresponding limit is displayed.

If the limit is reached during runtime, the sequence aborts before the end.

```
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Limit 10s : Coils (W) ..... : 115.200005

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Limit 10s : VOPs (W/kg) ..... : 24.000000

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Meas 10s : TALES fwd e..... : 0.002625
Limit 10s : TALES fwd e..... : 0.099600

RFSWD Status

RfswdStatusPrediction ..... : OK
RfswdStatusTracingLimitsExceeded ..... : NO
```

SAR management at the Siemens MR scanner

Once the RFSWD of an executed protocol is chosen, detailed information is displayed in several sections:

4. RFSWD status

RFSWD status gives some information about the reason a scan is being aborted during runtime.

```
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Meas 1s : Refl. Energy..... : 0.065726
Limit 1s : Refl. Energy..... : 0.060000

Meas 10s : TALES fwd e..... : 0.002625
Limit 10s : TALES fwd e..... : 0.099600

RFSWD Status

RfswdStatusPrediction ..... : OK
RfswdStatusTracingLimitsExceeded ..... : NO
RfswdStatusPALISwitchedOff ..... : YES (!)

-----
```

SAR management at the Siemens MR scanner

Once the RFSWD of an executed protocol is chosen, detailed information is displayed in several sections:

In this example, “reflected energy” was too high, and the sequence was stopped during runtime:

```
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SAR 10s : Whole Body ..... : 0.011949
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Meas 10s : TALES fwd e..... : 0.002625
Limit 10s : TALES fwd e..... : 0.099600

RFSWD Status

RfswdStatusPrediction ..... : OK
RfswdStatusTracingLimitsExceeded ..... : NO
RfswdStatusPALISwitchedOff ..... : YES (!)

-----
```