

NORBIT WBMS direct interface without NORBIT GUI

Basic outline V1

12.2018

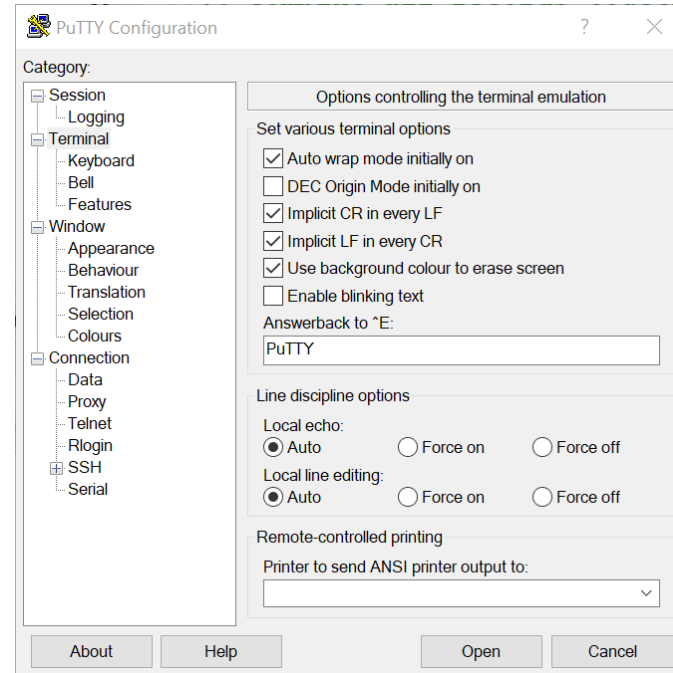
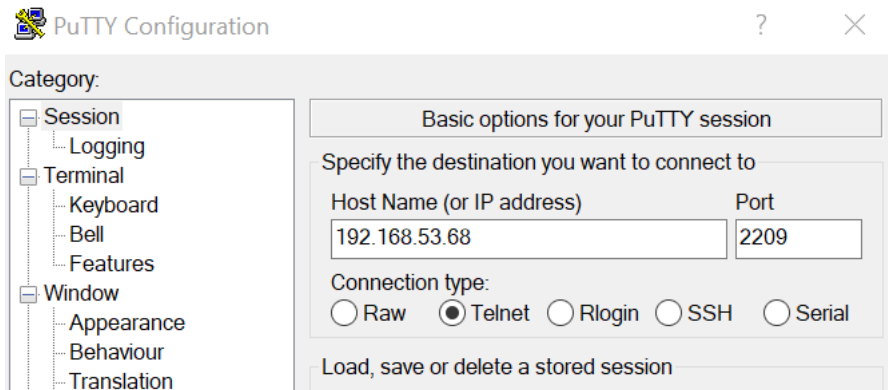
The interface allows for multiple users to access the data ports simultaneously

Connections can be established via standard TCP/IP network to 4 ports on the sonar IP

- Port **2209** uses **telnet** protocol and opens the command link on the WBMS. It is used for configuring and querying the status of the WBMS.
- Port **2210** opens the bathymetric **binary** data stream link from the WBMS. It sends the data to all recipients when a ping is ready.
- Port **2211** opens the water column **binary** data stream link from the WBMS.
- Port **2212** opens the snippet **binary** data stream link from the WBMS.

Sample configuration of Putty to send/receive commands from sonar

Assuming the IP of the sonar to be 192.168.53.68 Putty needs to be configured in the following way:



Sample configuration of Putty to send/receive commands from sonar

After booting sonar will appear on the network and can be pinged

ca Command Prompt

```
Microsoft Windows [Version 10.0.17134.472]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\PP>ping 192.168.53.12

Pinging 192.168.53.12 with 32 bytes of data:
Reply from 192.168.53.12: bytes=32 time<1ms TTL=64
Reply from 192.168.53.12: bytes=32 time<1ms TTL=64
Reply from 192.168.53.12: bytes=32 time<1ms TTL=64
Reply from 192.168.53.12: bytes=32 time<1ms TTL=64
```

The IP is broadcasted and NORBIT GUI can be used to troubleshoot or detect the sonars on the network

Connection Dialog Connection State Playback Log Info Veri...

Continuously Scanning Networks...Wait 45 seconds

Known Sonars List Set Sonar Factory Defaults

	Online	Primary	Unlinked	Ip Address	Name	Serial Number
1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	192.168.53.68		#68
2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	192.168.53.12		#12

Sample configuration of Putty to send/receive commands from sonar

After connecting with Putty to port 2209 the terminal will report sonar readiness:



A screenshot of a PuTTY terminal window titled "192.168.53.12 - PuTTY". The terminal displays the following text: "Welcome to WHI", "10.3.6 release", "Version: 4.7.343", and "Compiled:Oct 18 2018 19:34:31". The window has standard Windows-style controls (minimize, maximize, close) in the top right corner.

```
192.168.53.12 - PuTTY
Welcome to WHI
10.3.6 release
Version: 4.7.343
Compiled:Oct 18 2018 19:34:31
```

Sonar is ready to accept commands

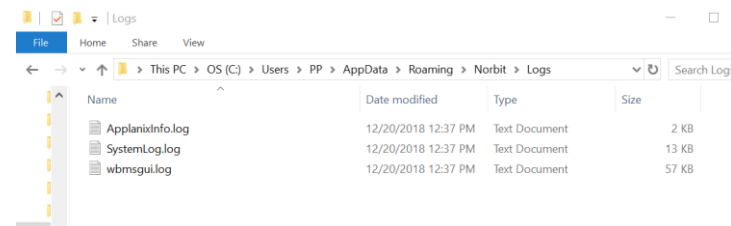


A screenshot of a PuTTY terminal window titled "192.168.53.12 - PuTTY". The terminal shows a sequence of commands and responses: "set_range", "range 1.0 50.0 # in meter", "set_range 20 50", and "range 20.0 50.0 # in meter". The window has standard Windows-style controls in the top right corner.

```
192.168.53.12 - PuTTY
set_range
range 1.0 50.0 # in meter
set_range 20 50
range 20.0 50.0 # in meter
```

Use NORBIT GUI to test / troubleshoot commands and response from the sonar.

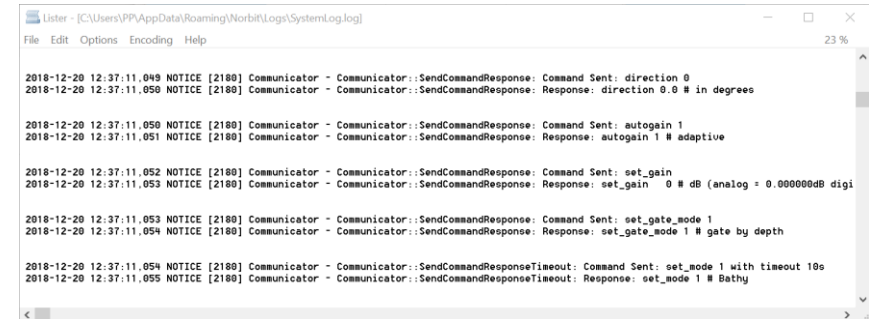
- NORBIT GUI saves all outgoing and incoming commands into the log files.
 - These files are excellent for debugging and troubleshooting of the external communicators
 - The logs are located in **%appdata%/norbit/logs**
 - Every time when GUI starts it backs up old logs and creates new ones.
 - There are three types of logs
 - ApplanixInfo.log – navigation log
 - SystemLog.log – all commands/response to the sonar
 - Wbmsgui.log – local GUI verbose log
-
- SystemLog.log is the one of interest



Sample Explorer view for user name PP

Use of the SystemLog.log

- Every time when there is a communication with the sonar by user clicking a button or changing parameters the GUI forms a proper message and sends it to the sonar.
- At the same time it writes this message to the SystemLog.log along with the response from the sonar.
- That allows to quickly identify what command has been send and what was the response which help troubleshooting configuration issues.



```
Lister - [C:\Users\PP\AppData\Roaming\Norbit\Logs\SystemLog.log]
File Edit Options Encoding Help 23 %

2018-12-20 12:37:11,049 NOTICE [2180] Communicator - Communicator::SendCommandResponse: Command Sent: direction 0
2018-12-20 12:37:11,050 NOTICE [2180] Communicator - Communicator::SendCommandResponse: Response: direction 0.0 # in degrees

2018-12-20 12:37:11,050 NOTICE [2180] Communicator - Communicator::SendCommandResponse: Command Sent: autogain 1
2018-12-20 12:37:11,051 NOTICE [2180] Communicator - Communicator::SendCommandResponse: Response: autogain 1 # adaptive

2018-12-20 12:37:11,052 NOTICE [2180] Communicator - Communicator::SendCommandResponse: Command Sent: set_gain
2018-12-20 12:37:11,053 NOTICE [2180] Communicator - Communicator::SendCommandResponse: Response: set_gain 0 # dB (analog = 0.000000dB digi

2018-12-20 12:37:11,053 NOTICE [2180] Communicator - Communicator::SendCommandResponse: Command Sent: set_gate_mode 1
2018-12-20 12:37:11,054 NOTICE [2180] Communicator - Communicator::SendCommandResponse: Response: set_gate_mode 1 # gate by depth

2018-12-20 12:37:11,054 NOTICE [2180] Communicator - Communicator::SendCommandResponseTimeout: Command Sent: set_mode 1 with timeout 10s
2018-12-20 12:37:11,055 NOTICE [2180] Communicator - Communicator::SendCommandResponseTimeout: Response: set_mode 1 # Bathy
```

Sample print of the view of SystemLog.log file

Please refer to [TN-180196-1D-WBMS_DFD_External.pdf](#) for details of all commands and data format.