FRC Driver Station Errors/Warnings

In an effort to provide both Teams and Volunteers (FTAs/CSAs/etc.) more information to use when diagnosing robot problems, a number of Warning and Error messages have been added to the Driver Station. These messages are displayed in the DS diagnostics tab when they occur and are also included in the DS Log Files that can be viewed with the Log File Viewer. This document discusses the messages produced by the DS (messages produced by WPILib can also appear in this box and the DS Logs).

Custom I/O Not Detected: 44006

```
Warning <Code> 44006 occurred at Driver Station
<time>2/6/2013 11:30:06 AM<unique#>5
FRC:  Custom I/O is not enabled or is not connected to the driver
station.
```

This warning indicates that the DS does not detect a Cypress Board attached and properly configured. This warning will also be generated if the Cypress board is disconnected after the DS has started. If no Cypress Board is detected when the DS is started, this is the first warning printed.

Joystick Unplugged: -44009

```
ERROR <Code> -44009 occurred at Driver Station
<time>2/5/2013 4:43:54 PM<unique#>1
FRC:  A joystick was disconnected while the robot was enabled.
```

This error is triggered when a Joystick is unplugged. Contrary to the message text this error will be printed even if the robot is not enabled, or even connected to the DS. You will see a single instance of this message occur each time the Driver Station is started, even if Joysticks are properly connected and functioning.

NIC Config: 44001

Warning <Code> 44001 occurred at No Change to Network Configuration: "Local Area Connection"<noNICConfig>
Warning <Code> 44001 occurred at Modified Network Configuration: Set
FRC: Driver Station network configuration status.

This warning is triggered by the Driver Station whenever it attempts to configure the network interfaces of the DS computer. The top warning shows an example of the Driver Station making no change to the wired interface (because it was already set correctly) and not being configured to set the wireless interface (indicated by "<noNICConfig>"). The second image shows an example of the message when the DS does change the configuration of the Network Interface.

Lost Communication: 44004

Warning <Code> 44004 occurred at Driver Station
<time>2/6/2013 11:07:53 AM<unique#>2
FRC: The Driver Station has lost communication with the robot.

This Warning message is printed whenever the Driver Station loses communication with the robot (Communications indicator changing from green to red). A single instance of this message is printed when the DS starts up, before communication is established.

Ping Status: 44002

Warning <Code> 44002 occurred at Ping Results: link-GOOD, DS radio(.4)-bad, robot radio(.1)-GOOD, cRIO(.2)-bad, FMS-bad Driver Station
<time>2/6/2013 11:07:59 AM<unique#>5
FRC: Driver Station ping status has changed.

A Ping Status warning is generated each time the Ping Status to a device changes while the DS is not in communication with the cRIO. As communications is being established when the DS starts up, a few of these warnings will appear as the Ethernet link comes up, then the connection to the

robot radio, then the cRIO (with FMS mixed in if applicable). If communications are later lost, the ping status change may help identify at which component the communication chain broke.

Time Since Robot Boot: 44007

WARNING <Code> 44007 occurred at FRC_NetworkCommunications
<secondsSinceReboot> 3.585
FRC: Time since robot boot.

This message is printed each time the DS begins communicating with the cRIO. The message indicates the up-time, in seconds, of the cRIO and can be used to determine if a loss of communication was due to a cRIO Reboot.

Radio Detection Times: 44008

WARNING <Code> 44008 occurred at FRC_NetworkCommunications
<radioLostEvents> 19.004 <radioSeenEvents> 0.000
FRC: Robot radio detection times.
WARNING <Code> 44008 occurred at FRC_NetworkCommunications
<radioLostEvents> 2.501,422.008 <radioSeenEvents> 0.000,147.005
FRC: Robot radio detection times.

This message may be printed when the DS begins communicating with the cRIO and indicates the time, in seconds, since the last time the radio was lost and seen. In the first example image above the message indicates that the cRIO's connection to the radio was lost 19 seconds before the message was printed and the radio was seen again right when the message was printed. If multiple radioLost or radioSeen events have occurred since the cRIO booted, up to 2 events of each type will be included, separated by commas as seen in the second example image.

No Robot Code: 44003

Warning <Code> 44003 occurred at Driver Station
<time>2/8/2013 9:50:13 AM<unique#>8
FRC: No robot code is currently running.

This message is printed when the DS begins communicating with the cRIO, but detects no robot code running. A single instance of this message will be printed if the Driver Station is open and

running while the cRIO is booting as the DS will begin communication with the cRIO before the robot code finishes loading.