IceBoot for IceRay

John Kelley
Univ. of Wisconsin, Madison
22 October 2007

1. Introduction

This document describes the commands added to the iceboot operating system for use with the IceRay testbed station (mainboard + TRACR + ICRR).

2. List of Commands in No Particular Order

`enableTracr`	Enable TRACR interface. Does not power TRACR on. No indication of success/failure.
`disableTracr`	Disable TRACR interface. Does not power TRACR off.
`<command> <value> writev`	Write value to virtual address specified by <command>.
`<command> readv`	Read value from virtual address specified by <command> to stack.
`ir_getvers`	Read firmware version to stack.
`ir_datardy`	Read data ready bit from ICRR to stack (1 == ready).
`ir_oneshot`	Software trigger ICRR.
`ir_reset`	Reset ICRR data readout.
`<addr> <cnt> ir_rbytes`	Read <cnt> bytes of ICRR data to mainboard address <addr>.
`ir_housekeep_on`	Enable ICRR housekeeping mode (minimal event, no waveform data).
`ir_housekeep_off`	Disable ICRR housekeeping mode (full waveform readout).
`ir_counter_on`	Enable ICRR event counter.
`ir_counter_off`	Disable ICRR event counter.
`ir_counter_reset`	Reset ICRR event counter.
`<dac> <ch> <val> ir_writeDAC`	Write <val> to staging register for ICRR DAC <dac> (A=0, B=1, etc.), channel <ch> (0-3).
`ir_loadDACs`	Load all ICRR DACs from staging registers.