NidaqServer

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1 Introduction

Digital Input/Output capabilities of certain I/O cards from National Instruments. Currently supported devices are: PCI-6221 (Fries lab) and PCI-6503 (Singer lab). Both cards provide 3 digital ports each representing 8 digital lines.

There is a Matlab class that provides most of the fuctionality from within Matlab.

2 Subsystems

2.1 Reward

There are two mechanisms to drive the reward line (`port2/line3`).

1. auto reset event named `Reward`. Whenever this event is set to the signaled state, the server generates a pulse of a given length at the output line. The default duration is 100 ms. It can be changed though a pipe command. After connecting to the kernel32 event:

   ```
   reward = IPCEvent('Reward');
   ```

   you may generate a reward pulse by setting the event to the signaled state:

   ```
   reward.trigger();
   ```

2. Send a command to the server defining a sequence of up to 8 output pulses (and the time intervals between them).

2.2 Event Markers

Not implemented yet

2.3 Digital Input Events (Lever etc.)

Not documented yet.