nVista Ancillary Data Utility

Description:

The exported gpio file only exports a data point each time a signal changes, this means that there is a row whenever the frame number and/or the IO state changes. The time value should be used to determine where to place the data point on a time plot. It can be assumed that from time0 to time1, the signal was the same as it was at time0 and then at time1 it changes, time2 changes again, etc.

This is unlike what is seen in Mosaic. The GPIO data in Mosaic will contain a data point at roughly every millisecond, but this is somewhat redundant because the signals don't change that fast. In this case the goal was to keep the file small, without losing information.

The text file will contain several columns: Frame, time, sync, trigger, io1 and io2.

> *FRAME*: This will be the frame number for that data point. Note that for any given gpio file this may not start at 1 because the frame count starts when the device connects and not when recording starts. More specifically, the frame count starts when the device starts the image sensor and starts capturing images.
>
> *TIME*: This will be the time in the recording for that data point. This will start from 0 for each text file.
>
> *SYNC, TRIGGER, IO1, IO2*: These will take values of either 1 or 0 denoting the state of the signal at the corresponding port.

Usage:

export_gpio [-h] [--original-timestamps] [--sync] [--trigger] [--io1] [--io2] gpio_file txt_file

positional arguments:

gpio_file	The gpio file to convert.
txt_file	Output file to store results.

optional arguments:

-h, --help	show this help message and exit
--original-timestamps	Don't normalize timestamps. This option causes timestamps to be output as the original system time when captured.
--sync	Output the sync signal
--trigger	Output the trigger signal
--io1	Output the gpio1 signal
--io2	Output the gpio2 signal

Example:

Please navigate to the folder in which the gpio file resides (in the case of this example, it's C:/New Folder) and then type the full path to the gpio file. For example:

Open command line and enter:
cd C:\New Folder

and press enter to switch to the new directory and enter:

C:\Program Files\Inscopix\nVistaHD\export_gpio" --sync --io1 --io2 --trigger recording_20150910_114631_gpio.hdf5 output_gpio.txt