Igor
Technical Notes

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WaveMetrics Technical Support

#025: Igor Batch File Demo.

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The 'Igor Batch File Demo' is a HyperCard stack that illustrates Igor's batch file feature. This feature is inteded to allow you to interface Igor to a program that you have written in BASIC, HyperCard or some other language. You could, for example, use Igor to graph and print data that your program generated. HyperCard 2.1, or later, is required to use the demo.

In June 1991, we added parentheses around string expressions in the HyperCard scripts to accommodate changes Claris made to HyperCard 2.1.

In October 1994, we made the demo compatible with Igor Pro.

Accompanying files:
       'Igor Batch File Demo'   --   HyperCard 2.1 stack
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To use the 'Igor Batch File Demo' stack install Igor 1.2 or Igor Pro. If you are using Igor 1.24, copy the 'Igor Batch File Demo' onto your hard disk. It is necessary to launch Igor from within the HyperCard stack. Quit Igor if it is already running. Open the demo stack from within HyperCard or by double-clicking on the demo stack's icon.

Press the 'Launch Igor' button to locate and open Igor and to initialize the application for batch file processing. The script of the 'Launch Igor' button presents a standard Macintosh 'open' dialog to locate Igor. When initialization is complete Igor displays an alert asking that you make HyperCard the active application. You do this by clicking on the 'Igor Batch File Demo' window or by selecting HyperCard from the application menu (System 7).

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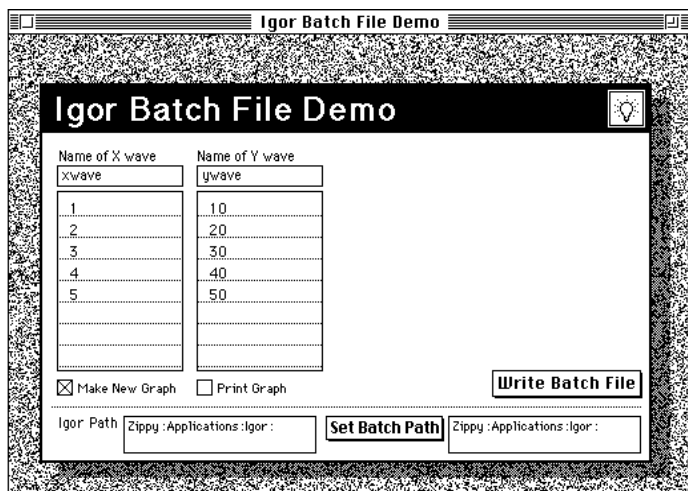
Use the 'Write Batch File' button to create the 'Igor Batch File.' The batch file contains the sample data from the 'X wave' and 'Y wave' columns and commands for Igor that create 'waves' from the data, display the data in a graph and save the graph as a PICT file. The 'Write Batch File' script calls a HyperCard external command (XCMD) that reads the PICT file and displays it in HyperCard.

Try changing the sample data and pressing 'Write Batch File'. The script overwrites the existing batch file with the updated information. Igor recognizes the modification and reads the batch file, updates the graph and creates a new PICT file. The XCMD updates the graph in HyperCard.

Scripts and Files:

The 'Launch Igor' script writes the 'Igor Batch Init File' to the folder containing Igor The file is in the Igor text format and contains commands that Igor executes when launched that initialize Igor for batch file processing.

The last line of the 'Igor Batch Init File' contains a command that Igor executes to create the 'Igor Batch Results' file. The HyperCard script checks for the existence of this file and that the init file has been closed before continuing. This technique is used to ensure that batch files are not overwritten before they are used or while they are being executed. The checkSinc routine, in the demo's 'stack script', is called by the 'Launch Igor' button for this reason.

The 'Write Batch File' script writes the 'Igor Batch File' to transfer commands and data from the HyperCard stack to Igor. This script illustrates how instructions and data can periodically be sent to Igor.

Manual Correction:

We changed the protocol for Igor Batch file operation with the release of Igor 1.2. Manuals with a revision date earlier than 3/91 have an obsolete explanation of the 'Igor Batch Results' file.

The manual says that Igor creates a file called Igor Batch Results after interpreting a batch file. This was

true in version 1.1 but not in version 1.2.

The purpose of the Igor Batch Results file in version 1.1 was to synchronize your program with Igor. In version 1.2, you need to create a results file explicitly to synchronize. The script of the 'Launch Igor' button includes the following as the last line of the 'Igor Batch Init File':

X Open/P=IgorPath K0 as "Igor Batch Results";Close K0

The command creates the batch results file after executing all of your batch commands. Using the checkSinc routine, the HyperCard script waits for the results file to be created and the batch init file to be closed before writing the next batch file. A similar process is used each time a batch file is written by the script of the 'Write Batch File' button.