Subject: Aynchronous IO and Widgets
Posted by Struan Gray on Tue, 19 Dec 1995 08:00:00 GMT
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I want to use IDL to control instruments in the lab but also want to avoid inflicting long waiting times on my users. I've read the manual and played with some simple widget building and recognise that IDL is not meant to be threaded, and in particular wants each routine to finish before starting the next one.

The problem is I want to collect data from rather slow devices which buffer a few kB before sending it to the data-taking computer. I'm sure I could bodge something together using a seperate program and files on disk or ramdisk, but this would be slow and klunky on my platform and anyway I'd prefer to have something fully integrated.

What I had in mind was to use a stub widget which would use CALL_EXTERNAL to call an asynchronous I/O routine written in C whose completion routine would then insert an event into the IDL event queue, telling the instrument control base widget that the data was ready to collect. The main program could get on with plotting and analysing earlier data until the transfer was complete.

I am working with a PowerMac and intially want to collect data from an IEEE488 bus, but if the method works successfully I'd like to extend it to other data collection hardware.

Is this practical? Has anyone tried this sort of thing and got it to work? I'll probably give it a try anyway, but would appreciate any short cuts or ideas that people might have.

Struan

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Struan M. Gray email: struan.gray@sljus.lu.se
Dept. of Synchrotron Radiation Research Tel: + 46 46 222 3425/3478
Institute of Physics, Lund University Fax: + 46 46 222 4221
S-223 62 Lund, Sweden. http://sljusstm.sljus.lu.se/Struan/
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