Subject: ARMA (was Re: Need a function to multiply the elements of an array)
Posted by Jackel on Sun, 30 Apr 1995 07:00:00 GMT

In article <CHASE.95Apr28164307@retro.jhuapl.edu> chase@retro.jhuapl.edu (Chris Chase S1A) writes:

> It would be nice if IDL had the equivalent of the Scan operator in the
> APL language. This is equivalent to partial sums for a vector using
> an arbitrary binary operator (+, x, min, max, etc.).

> A related recursive operation that I have wanted on occasion is an
> auto-regressive (AR) filter. IDL can easily implement moving-average
> filters (via convol) but it does not have an efficient function for
> impelmenting AR (or ARMA) filters. The most useful generalization of
> this would be implementations of multi-input, multi-output linear
> time-invariant (or time-varying) state space equations like those in
> the matlab signal processing and image processing packages.

Agreed. I've often wished that there was an "ARMA" function which
would allow arbitrary combinations of auto-regressive and moving-average
coeffeicients. It should be easy to add to the core of IDL, and would provide
a vast speed improvement. Perhaps in version 4.1?

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