Subject: Re: reversing calculation order
Posted by Fergus Gallagher on Thu, 04 May 1995 07:00:00 GMT
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rclark@phantasos.lpl.arizona.edu (Richard Clark) wrote:
>
> I need to fill in some values for a vector from a recurrence relation.
>
> V(0:N-1) = func(V(1:*)) ;I wish there was a shorthand for (*-1)
>
> Where V(N) is the only value initially defined (Well actually it is
> calculated from an ascending recurrence relation but the values of
> V(0:N-1) from that step are of no further interest. The results of the
> second recurrence are the ones returned.)
>
> I know that ROTATE can be used to reverse the order of the vector for the
> calculation, and then reverse them again to put it back in the right
> order. But is it possible to eliminate these two reverse operations and do
> the calculation in backwards direction? (no FOR loops, too slow!)
>
> The vector is fairly short but this function will get called a lot.
>

Vector elements can be accessed with other vectors, e.g.,

```
IDL> x = fltarr(n)
IDL> i = n-1-indgen(n)

IDL> y = cumulative_sum(x(i))  ; made-function that is order dependent
IDL> z = y(i)                  ; reverse it again
```

As an additional point, any function enclosed in () becomes a vector, so
that the above could have been abbreviated to

```
IDL> y = (cumulative_sum(x(i)))(i)
```

Mind you, ROTATE is pretty fast.....

Fergus

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