Subject: Re: Gradient of two dimensional field
Posted by brian.jackel on Wed, 19 Feb 1997 08:00:00 GMT
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In article <330B44DD.647C@cdc.noaa.gov> Andy Loughe <afl@cdc.noaa.gov> writes:
> Wilpert_Martin wrote:

>> we want to determine the electrical field from a given potential,
>> i.e. we have to calculate the gradient of a two dimensional array.
>>
>> Has anybody a idl-pvwave procedure to do this task?

> I would think that the shift function (used twice)
> could be used to do this.

Or even just

```
dx=  a(1:*,*) - a
dy=  a(*,1:*) - a
```

or

```
dx= a(1:n-1,*) - a(0:n-2,*)
dy= a(*,1:m-1) - a(*,0:m-2)
```

if "a" has dimensions of (n,m). When doing it the first way IDL takes care of the different array sizes, with no perceptible performance hit. The second way is perhaps a bit easier to read. Is this what you (the original poster) were after?

Brian Jackel