
Subject: Re: Is there a better way?

Posted by [Stein Vidar Hagfors H](#) on Wed, 11 Jun 1997 07:00:00 GMT

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Kelly Dean wrote:

>
> Is there a better way to locate a value in a table (or array)? I would
> like to come in with an array of radaince values and convert them to
> temperatures. The method below only takes the one number (rad) then
> search for the best match in the table (or array).
>
> If you can think of a better method, send me a note.

Well, I can suggest a couple of things that will probably speed up the routine considerably, though I can't guarantee that it's the *best* way...

> =====
> FUNCTION IS_THERE_A_BETTER_WAY, rad
>

If the table you're using is actually created this way, I'd use a common block as a cache to avoid initializing the tables on each call, e.g.:

```
COMMON IS_THERE_A_BETTER_WAY_CACHE,WVTEMParr,WVRADarr
```

```
IF n_elements(WVTEMParr) eq 0 THEN BEGIN  
  <initialize arrays here>  
ENDIF
```

Instead of looping etc, I'd put my money on IDL's array processing capabilities:

```
absdiff = abs(WVRADarr - rad)  
dummy = min(absdiff,minix) ; Minix now contains the index of  
                           ; the point with the minimum abs diff.  
  
return,WVTEMParr(minix)
```

> END

Unless your real arrays are very large, this is probably faster than a search in a sorted array, due to the slow execution of single statements vs array operations.

A native IDL routine doing a sorted search should be

available, though.... haven't found one yet....

Stein Vidar
