

Re: non-recursive quicksort for 2-D arrays?

Source:

<http://www.tech-archive.net/Archive/VB/microsoft.public.vb.general.discussion/2006-05/msg00536.html>

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 - *Date:* Fri, 05 May 2006 12:31:15 GMT
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On 5 May 2006 00:56:51 -0700, bart.smissaert@xxxxxxxxxxx wrote:

Had a look at that one, but thought it was for 1-D arrays.
Will have a look again.
Have you tried it?

A good sort algorithm has three components :-

- 1) Sort Code
- 2) Compare Code
- 3) Swap Code

One can RaiseEvent to do the latter two
– or even use a crafty Callback

The guts of the sorting algorithm need know nothing about what it is
sorting.

From earlier posts of yours and Mike's it is pretty obvious that you
should be sorting a load of record numbers and finally re-organizing
the data in one pass

I use the Shell Sort – and have done since 1984

It is not as fast as the QuickSort algorithm (by a minute fraction)
and is totally Stack Safe – unlike QuickSort

Here is a Class :-

----- Start of cSort.cls -----

Option Explicit: DefObj A-Z

Public Event Compare(I&, J&, IsGreater As Boolean)

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Public Event Swap(I&, J&)

```
' #####
```

```
,
```

```
' Sort 1 to Max items
```

```
,
```

Public Sub Sort(Max&)

Dim L9&, L8&, Gap&, IsGreater As Boolean

Gap = Int(Max / 2) + 1

While Gap > 0

For L9 = 1 To Max - Gap

For L8 = L9 To 1 Step -Gap

RaiseEvent Compare(L8, L8 + Gap, IsGreater)

If IsGreater Then

RaiseEvent Swap(L8, L8 + Gap)

Else

L8 = 0

End If

Next

Next

Gap = Gap \ 2

Wend

End Sub

----- End of cSort.cls -----

Note that it knows nothing about the Comparison, and nothing about the Swap mechanism

– ideally you should be shuffling Longs – they move extremely fast

If you want to make it faster then you can use CallWindowProc and pass in the AddressOf your Compare and Swap routines

– but remember to pad the arguments so you are passing 5 4 byte parameters.

If you want to go for safety, then plant the data in a file on disk and use :-

www.jerryfrench.co.uk/dsort32.asm (random access files)

www.jerryfrench.co.uk/dsortv.asm (text files)

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