Subject: Re: Reading Multiple DICOM Files
Posted by Mike[2] on Thu, 26 Mar 2009 13:32:54 GMT
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On Mar 8, 7:02 pm, Jye <jye.sm...@gmail.com> wrote:

> ATM I have a simple FOR loop :(which steps through each file, makes
> an object using Robbies GDLffDICOM and then reads the images data into
> a matrix. The object is then destroyed and the loop repeated. This is
> horribly slow as you would all imagine and takes about 90sec to read
> all of the images.

Jye,

Another thing that may speed this up is to use the same GDLffDICOM
without destroying it between files. I do this using IDLffDICOM by
calling obj->reset when I'm done with each file and obj->read
(filename) to read a new file. On my machines this is very fast,
including checking numerous other tags, rotating the image and
inserting the slice into a predefined array. All of this is highly
dependent on cpu and disk performance, so YMMV.

Mike

```
dcm = obj_new('IDLffDICOM')

xdim = *(dcm->GetValue('0028'x,'0010'x))[0]
ydim = *(dcm->GetValue('0028'x,'0011'x))[0]
tdim = 1

;; Read slice locations:
for i = 0, Nfiles-1 do begin
  dcm->reset
  var = dcm->Read(filelist[i])
  slice_locations[i] = *(dcm->GetValue('0020'x,'1041'x))[0]
endfor

;; Sort by slice location:
sorted_indeces = sort(slice_locations)
sorted_slice_locations = slice_locations[sort(slice_locations)]

slice_locations = sorted_slice_locations[uniq(sorted_slice_locations)]
zdim = n_elements(slice_locations)

;; Read image data
data = intarr(xdim, ydim, zdim, tdim)
for i = 0, Nfiles-1 do begin
```

```
   dcm->Reset
   var = dcm->Read(filelist[i])

   location = float(*(dcm->GetValue('0020'x,'1041'x))[0])

   z = where(reverse(slice_locations) eq location)

   ;; There may be a preview icon with the data, so check each slice
   ;; until I find the one that has the correct size.  I'm assuming
that
   ;; there is only one of these per file!
   dcm_ptr = dcm->GetValue('7fe0'x,'0010'x,/no_copy)
   done = 0
   j = 0
   while (not done) do begin
      slice = rotate(*(dcm->GetValue('7fe0'x,'0010'x))[j], 7)
      s = size(slice, /structure)
      if (s.dimensions[0] eq xdim) and (s.dimensions[1] eq ydim) then
done = 1
      j = j + 1
   endwhile
   data[*,*,z] = slice
endfor

obj_destroy, dcm
```