Subject: Re: GE PET DICOM format
Posted by mmiller3 on Wed, 11 Feb 2004 22:19:56 GMT
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>>>> > "karin" == karin knesaurek <karin.knesaurek@mssm.edu> writes:

> Can somebody help me with GE PET DICOM format. A set of
> corronal or sagittal slices are all placed in one
> directory. I can read all files but I don't know how to put
> them in order because GE names them by using bed position,
> rather than order, first, second, etc.

Here's a fragment showing how I assemble dicom files into a
volume. It doesn't do much error checking, but does order slices
according to the slice locations. If you try to read from a
directory with a mixture of studies in it, this will happily mix
them and give you scrambled results.

Mike

--
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```
function read_dicom, dirname

filelist = findfile( dirname+'/*' )

print, 'Loading the ', N_Elements(filelist), $
      ' DICOM files from the directory  ', dirname

nFiles = N_Elements(filelist)

zdim = nFiles

slice_locations = fltarr(nFiles)
slice_thicknesses = fltarr(nFiles)

dcm = Obj_New('IDLffDICOM')

for i = 0, nFiles-1 do begin
   ;; Read DICOM tags from the file
   dcm->Reset
   ;;print, 'trying ', filelist[i]
   var = dcm->Read(filelist[i])
```

```
    ;; check if its really a DICOM format file
    if (var eq 0) then $
      begin
        error = 'not a DICOM directory'
        return, error
    endif

    image_type = *(dcm->GetValue('0008'x,'0008'x))[0]

    slice_locations[i] = *(dcm->GetValue('0020'x,'1041'x))[0]
    slice_thickness = *(dcm->GetValue('0018'x,'0050'x))[0]
    xdim = *(dcm->GetValue('0028'x,'0010'x))[0]
    ydim = *(dcm->GetValue('0028'x,'0011'x))[0]
    pixel_size = *(dcm->GetValue('0028'x,'0030'x))[0]

endfor

sorted_indeces = sort(slice_locations)
sorted_slice_locations = slice_locations[sort(slice_locations)]

slice_intervals = fltarr(N_Elements(sorted_slice_locations)-1)
slice_intervals = sorted_slice_locations[0:N_Elements(slice_locations)-2] $
                - sorted_slice_locations[1:N_Elements(slice_locations)-1]
mean_slice_interval = abs(mean(slice_intervals))

data = intarr(xdim, ydim, nFiles)
for i = 0, nFiles-1 do begin
    data(*,*,i) = read_dicom(filelist[sorted_indeces[i]])
endfor

flt_image = float(data)

xsize = float(strmid(pixel_size, 0, strpos(pixel_size, '\')))
ysize = float(strmid(pixel_size, strpos(pixel_size, '\')+1))
zsize = mean_slice_interval

return, data
end
```