
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
> coronal 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

```
