Martijn Cloos

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Philipp Ehses

new "memory mapped" matlab script for reading twix files
Hi all,

a while ago somebody here on the board asked for a matlab script to read in VD11 twix files, so I published "readVBVD" here on this board. At first, I was reluctant to do this because "readVBVD" was far from finished. I finally found some time to work on this script, so I'm happy to share the result:

https://www.mr-idea.com/communities/idea/Lists/Customer/mapVBVD.zip

A lot has changed - "mapVBVD" now only reads in the MDH information from the twix file and stores it together with the memory position in the corresponding object (from now on called img_obj). You can get information about the object by simply calling 'img_obj' without semicolon.

The actual data is not read until demanded by a call to the object, e.g. img_obj(:,:,:,:,1:5) will read in the first five slices of the data set. So, it almost works like a regular matlab array with regular array slicing (exception: the keyword 'end' is not supported).

This "memory mapping" of the raw data makes the reconstruction of large data sets pretty memory efficient - it makes it easy to reconstruct data slice-by-slice, frame-by frame or even coil-by-coil (reading in data coil-by-coil is pretty slow, though), e.g. a slice by slice reconstruction could be performed like this:

for s=1:Nslices

  img(:,:,:,s) = someRecoFunction(img_obj(:,:,:,:,s));

end

There is some additional functionality that is described in 'mapVBVD.m' (e.g. instead of using img_obj(..), img_obj{..} can be used that works on the squeezed data).

The code is relatively well tested under VB and completely untested under VD (I'm not working at a VD system anymore), it should still work, though. However, it still doesn't support multi-raid files - if somebody here sends me such a file I may be able to implement this, though.

Philipp

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I uploaded a new version with several bug fixes for non-image scans (e.g. refscans, noise adjust scans, etc.).

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