FILTERED INTERPOLATION FOR RESIZING 3D IMAGES

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# 1 Software

The source code of tests proposed in the manuscript "Filtered Interpolation for resizing 3D images" are here collected. They are intended by the authors as support for testing the methods VPI and LCI proposed in the manuscript.

Three tests proposed in the manuscript can be run by the scripts

1. `Procedure_Rescaling_along_One_Direction.m` (Test 2)
2. `Procedure_Upscaling_x2_along_One_Direction.m` (Test 3)
3. `Procedure_Phantom.m` (Test 4)

which, in any case, are educational, not optimized codes.

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# 2 Images of the tests

The images of the tests are:

- in Test 2 the brain `MRI` image is available in MatLab (uint8 format) and consists of 27 Slices of dimensions $128 \times 128$;
- in Test 3 the DICOM (Digital Imaging and Communications in Medicine) image, which is a study in the abdomen about the arterielle system acquired in modality CT, consists of 361 Slices of dimensions $512 \times 512$, uint16 format. It is available at `https://www.dicomlibrary.com`;
- in Test 4 the synthetic 3D Shepp-Logan phantom image is generated by the Matlab function `phantom3d`, released under the Gnu Public License (GPL) and available at http://www.gnu.org/copyleft/gpl.html