Issues in Stepwedge Matlab Code to address

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| Function | Line (approx) | Issue | Resolved |
| stepwedge | 206 | Assume 18x24 films need rotating – depends how films have been digitised? In general, check assumptions about how films are oriented (in segmentation algorithm I’ve tried to do this automatically – implement that here?) | 17/05/12 |
| stepwedge | 213 | Median filter with a 3x3 window – sensible enough but ever been tested? | 17/05/12 |
| markerdetect | 48 | Number of rows at top/bottom of image in which to search for markers is hardcoded (show\_rows = 600) – dangerous if image resolution changes. Make argument and set to default to be a % of image height? |  |
| find\_marker | 44 | Size of box about user select position is hardcoded (box\_size = 100) - dangerous if image resolution changes. Make argument and set to default to be a % of image size? |  |
| find\_marker | 60 | Maximum radius from user click to find valid marker centres is hard-coded (max\_rc = 40). Change in image size? See also min\_rad=20 and max\_rad=75 of valid circles fitted to the canny edges (lines 84/85). |  |
| find\_marker | 67 | Median filter the region with 7x7 window – justification? |  |
| find\_marker | 80,112 | Parameters passed to canny\_edge are all hard coded. Change in image size/grey-scale? |  |
| stepwedge | 227, 251-255 | After markerdetect is called, we only store the final marker positions. It would be better to store both the positions where the user initially clicks and the final positions | 17/05/12 |
| stepwedge | 260 | Mammogram resized by resize factor |  |
| stepwedge | 314 | Greyscale resolution of image reduced, assumption of initial 2^16 reduced to 2^12 (i.e. by dividing by 16) is hardcoded. | 17/05/12 |
| locate\_stepwedge\_manual | 30 | Number of stepwedge steps is hardcoded here – this should be a global parameters pass from main stepwedge program | 15/05/12 |
| locate\_stepwedge\_manual | 43-49 | Size and position of initial ROI in which to search for stepwedge is hardcoded. |  |
| calculate\_step\_values | 34 | Number of stepwedge steps is hardcoded here – this should be a global parameters pass from main stepwedge program | 15/05/12 |
| calculate\_step\_values | 54 | Threshold for standard deviation of pixel values within step is hardcoded (1000). Has this ever been tested/justified and what happens if greyscale resolution is changed? |  |
| calculate\_step\_values | 38-39 | Size of step hardcoded |  |
| stepwedge | 322-325 | After locate\_stepwedge\_manual is called, we only store the final step positions. It would be better to store both the positions where the user initially clicks and the final positions | 15/05/12 |
| compute\_density\_results | 32 | Makes fixed assumptions about pixel size |  |
| compute\_edge\_profile |  | Change argument resize factor so we’re not making assumptions about pixel size |  |