

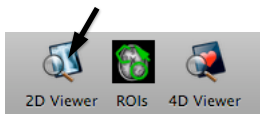
Image Quality Assessment Plug-in (RMSE and SSIM)

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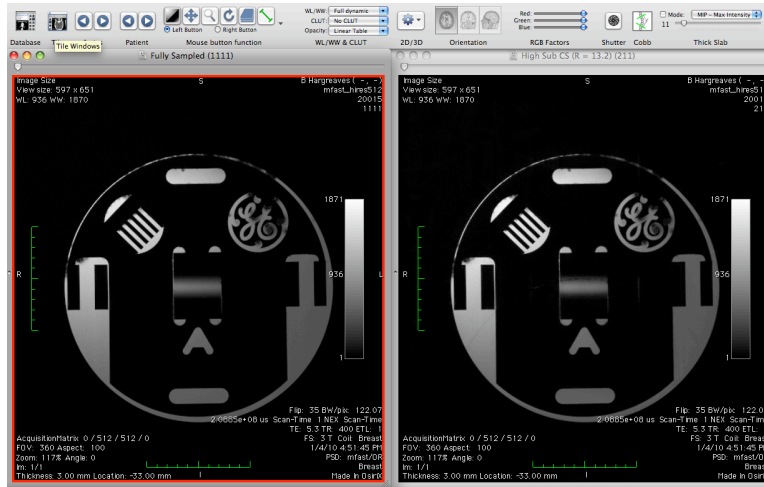
- Select two series:

Local Database / No album selected / Result = 10 studies (13,069 images)		
Patient name	Report	Lock
▼ GE Resolution Phantom (7 series)		—
High Sub CS (R = 13.2)		
Fully Sampled		
High Sub CS (R = 10.3)		
Zero Filling (R = 10.3)		
ARC (R = 10.3)		
CS (R = 10.5)		
mfast_hires512		
▼ Grid Phantom (7 series)		—
Fully Sampled		
ARC (R = 2; 1 X 2)		
ARC (R = 2; 2 X 1)		
ARC (R = 3.9; 2 X 2)		

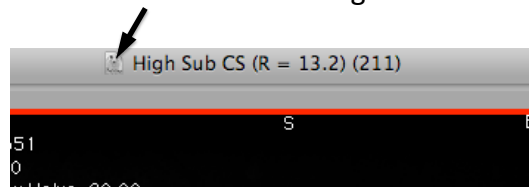
- Click “2D Viewer”



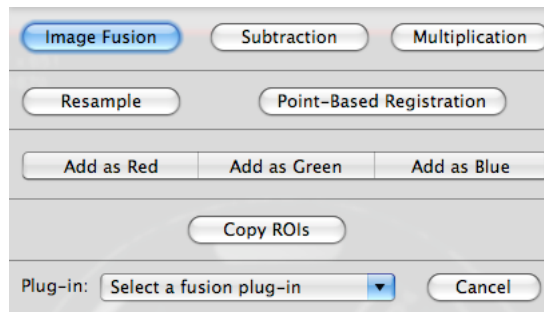
- Then, two viewers will be shown:



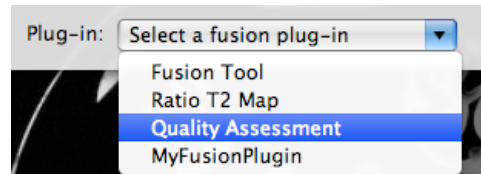
- Click the icon of one viewer and drag it into the other viewer:



- Then, the fusion window will pop up:

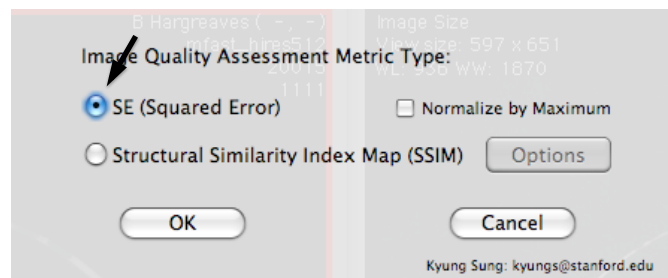


- Select “Quality Assessment” plug-in to run Quality Assessment:



Squared Error and RMSE

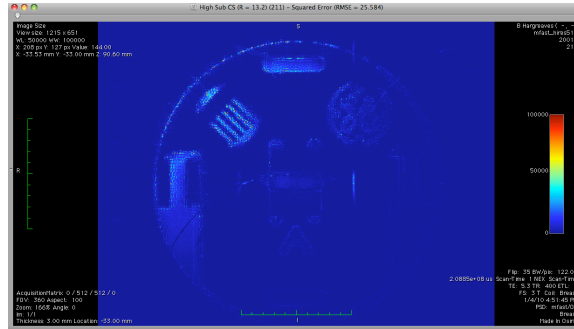
- Check “SE (Squared Error)” button



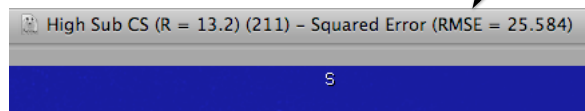
- Check “Normalize by Maximum” if you’d like to normalize squared errors and RMSE by maximum signal

Squared Error and RMSE

- Click “OK” to generate a squared error map

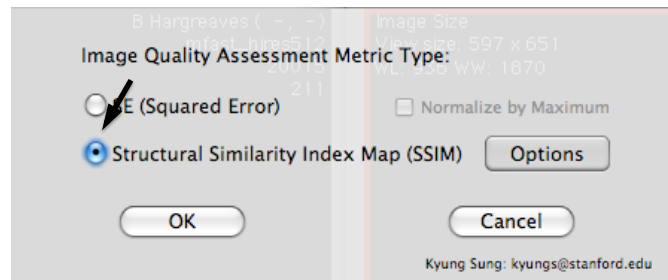


- RMSE is shown next to the title



Structural Similarity Index Map (SSIM)

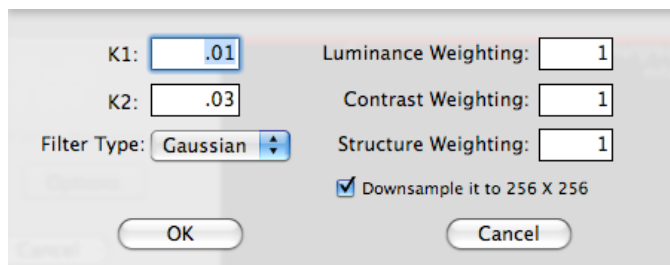
- Check “Structural Similarity Index Map (SSIM)” button



- Click “Options” if you’d like to change optional parameters for SSIM

Structural Similarity Index Map (SSIM)

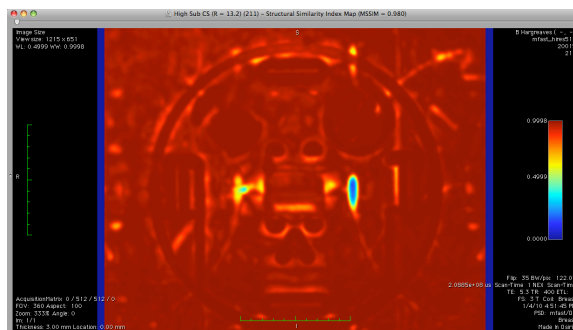
- Default values (recommended from the below website) are shown:



<https://ece.uwaterloo.ca/~z70wang/research/ssim/>

Structural Similarity Index Map (SSIM)

- Click "OK" to generate a SSIM map



- Mean SSIM (MSSIM) is shown next to the title

High Sub CS (R = 13.2) (211) - Structural Similarity Index Map (MSSIM = 0.980)

- RMSE:
http://en.wikipedia.org/wiki/Root_mean_square_deviation
- SSIM:
Z. Wang, A. C. Bovik, H. R. Sheikh and E. P. Simoncelli, "Image quality assessment: From error visibility to structural similarity," IEEE Transactions on Image Processing, vol. 13, no. 4, pp. 600-612, Apr. 2004

<https://ece.uwaterloo.ca/~z70wang/research/ssim/>

http://en.wikipedia.org/wiki/Structural_similarity