Superresolution for Medical Imaging Systems

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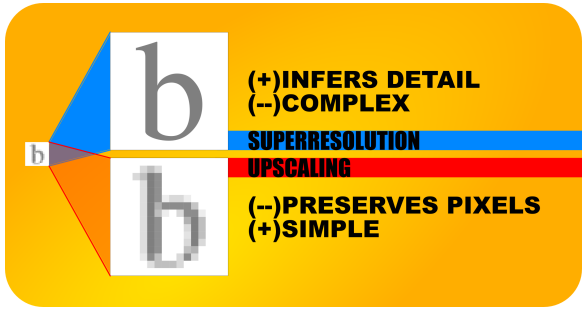
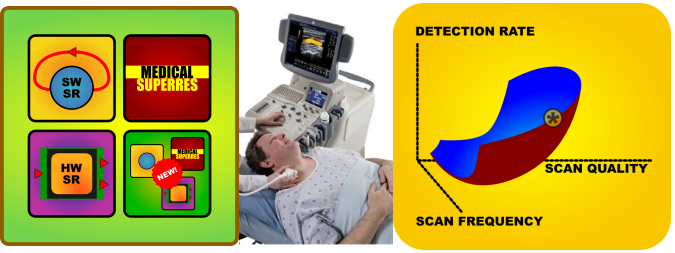
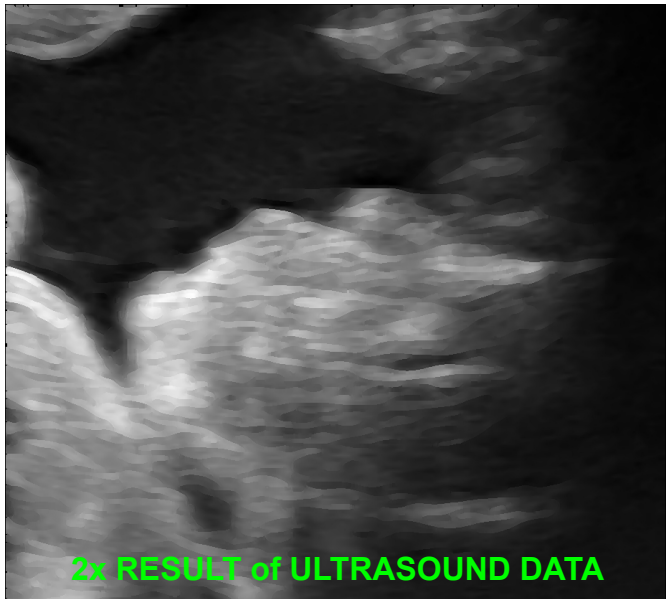
PROBLEM



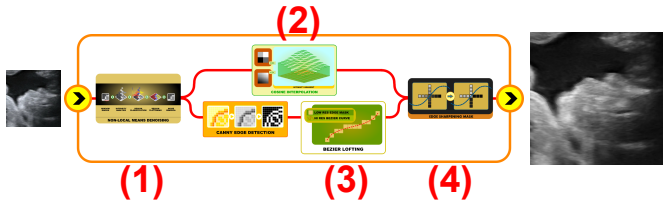
SIGNIFICANCE

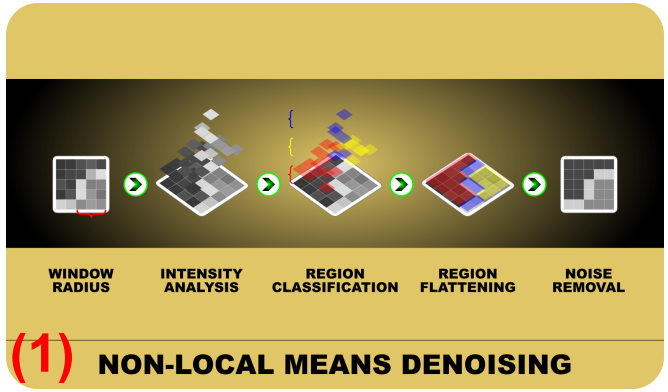


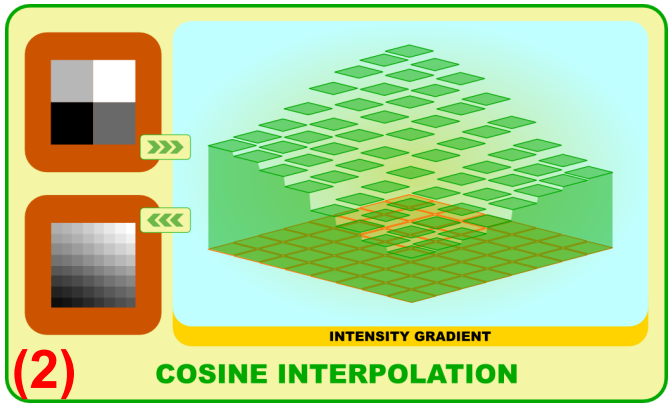
http://www.provimaging.com/

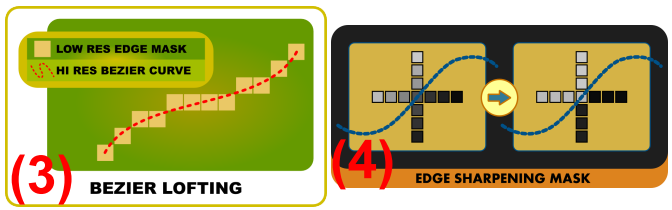


APPROACH



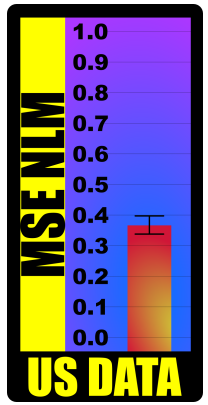


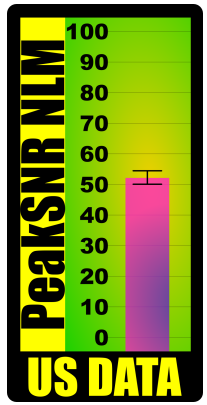


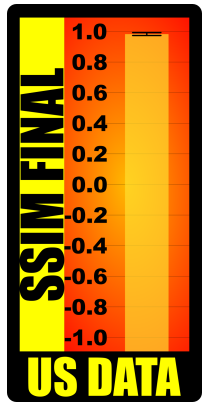


$$BEZpt(u) = \sum_{k=0,n}\{ CTRLpt[k]*C(n,k)*u^{k}*(1-u)^{n-k} \}$$

RESULTS







$$SSIM(A,B) = \frac{(2*AVG(A)*AVG(B)+C1)*(2*COV(A,B)+C2)}{(AVG(A)^2+AVG(B)^2+C1)*(SDEV(A)+SDEV(B)+C2)}$$

$$C1 = (0.01 * 2^{bits}-1)^2 \qquad C2 = (0.03 * 2^{bits}-1)^2$$

CONCLUSION

	Blind Method	Within 1% of Maximal SSIM	O(n)
Hallucination 2002	✗	✓	✗
iNedi 2008	✓	✗	✗
ICBI 2011	✓	✗	✓
Our Method 2012	✓	✓	✓

Future Work