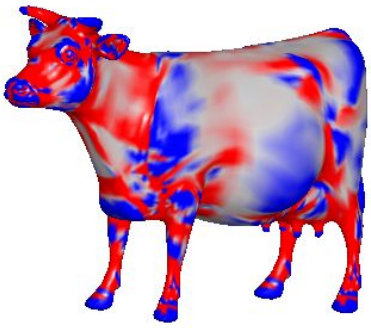
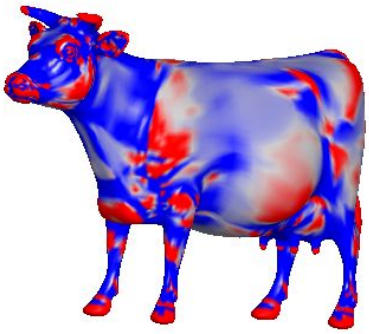
Curvature Homework

512 x 512 @ 8.53

512 x 512 @ 0.77





Normal Curvature

Curvature remapped (I = 1 - I/4pi)

1. Implemented calculation of **mean** and **gaussian** curvature
2. Implemented calculation of principal curvatures - displayed difference between the dominant and less dominant curvature for each face. Also displaying the difference between the highest and lowest curvature of any face in the mesh
3. **I edited the code to exit after displaying these differences because I failed at the Eigen-value decomposition. NO PLY FILE WILL BE OUTPUT IF THE PROGRAM IS INVOKED WITH FULL CURVATURE OPTION**
4. **Observation:** When ‘I’ is remapped according the suggestion the nature of the curvature appears to be swapped. This is interesting because it raises many questions about how the mesh when processed makes use of discrete analogies of continuous surface processing

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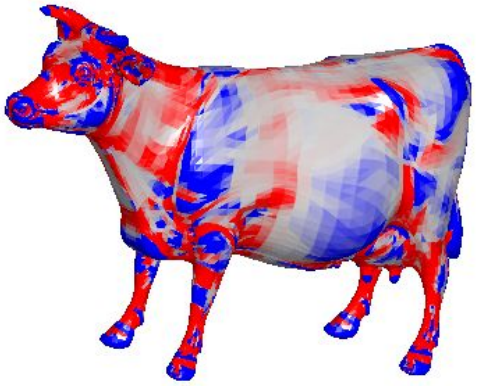
When the mesh is refined, apart from obvious increases in processing time, the clear observation from the mesh is that **Large parts of the cow it appears now longer have the same curvature. This is expected because now that the mesh is refined and has more faces, extremal points that forced a curvature on the face and consequently fewer faces with a deep curvature are generated.**

512 x 512 @ 4.77



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