

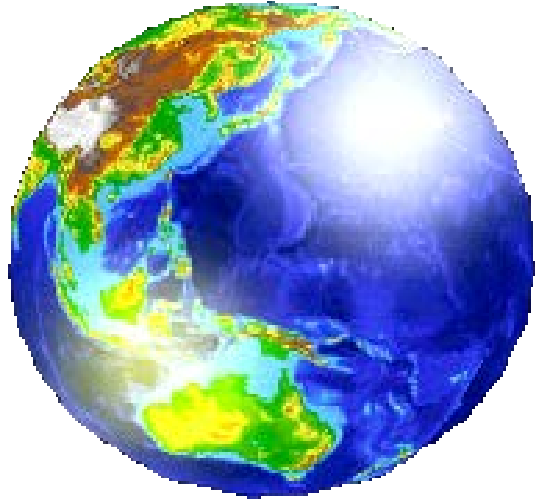
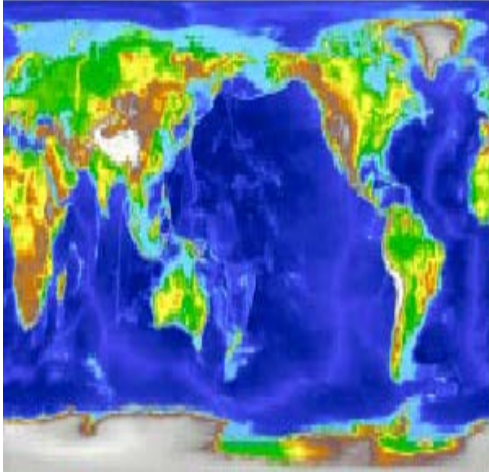
Bump Mapping

CS418 Computer Graphics

John C. Hart

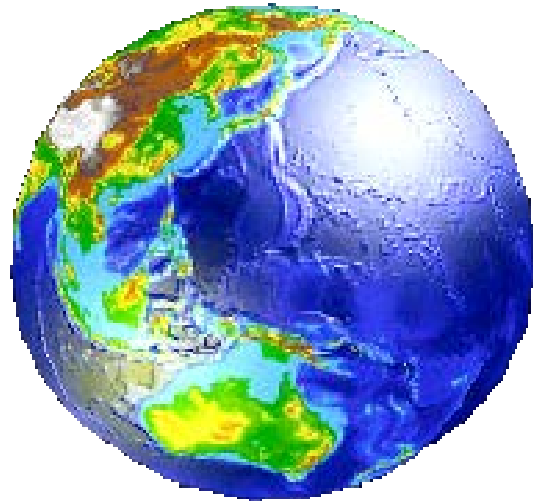
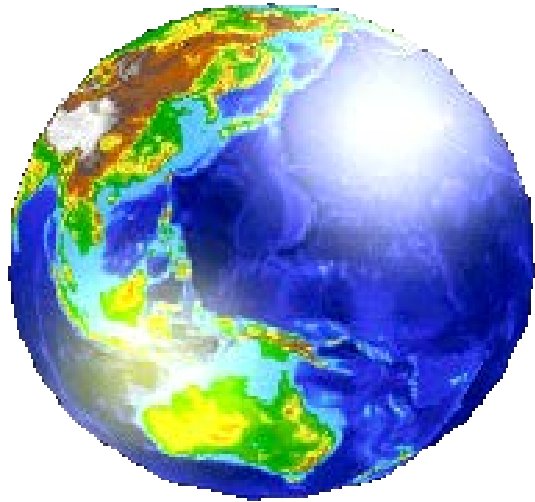
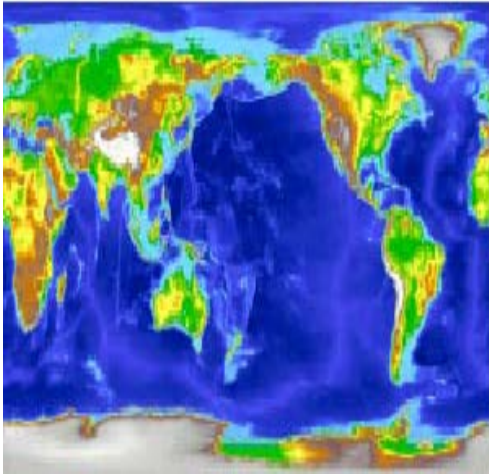
Texture Mapping

c



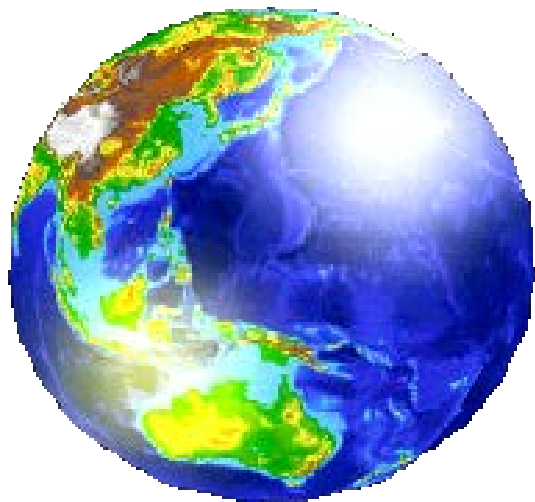
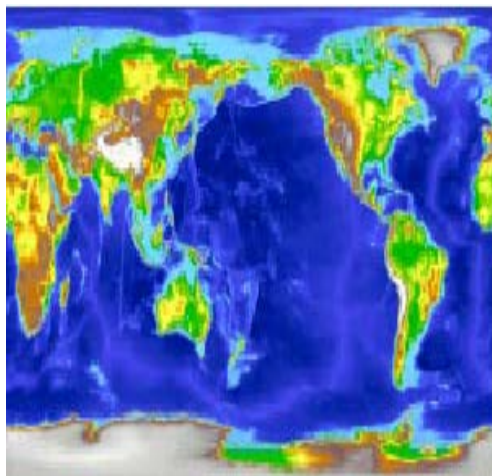
Bump Mapping

c

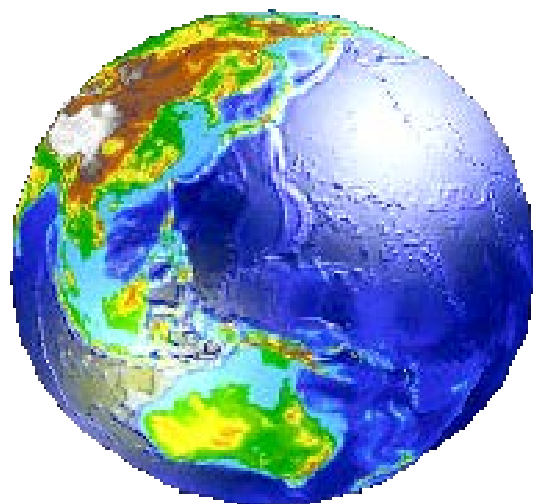


Bump Mapping

C



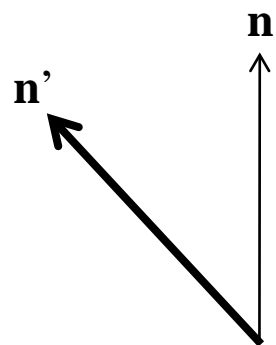
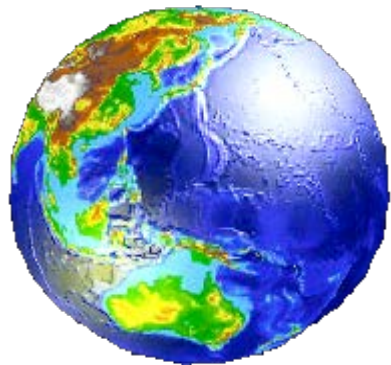
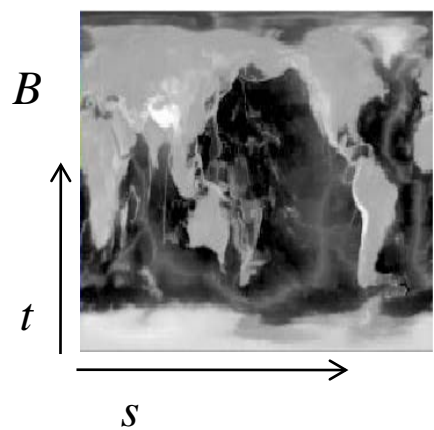
B



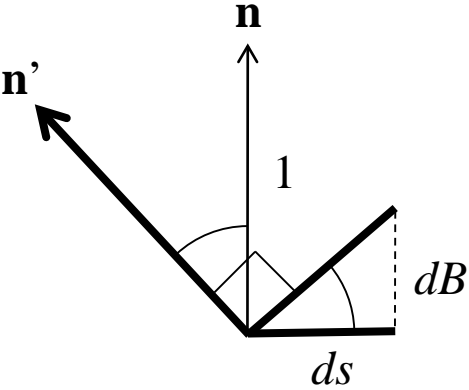
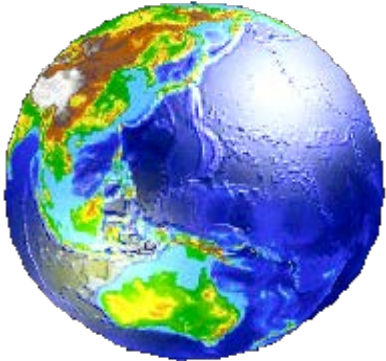
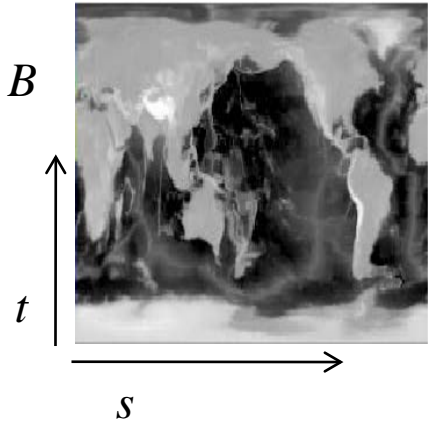
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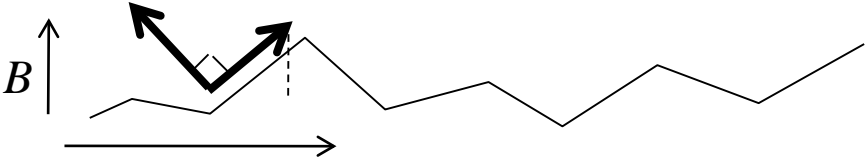
Bump Mapping



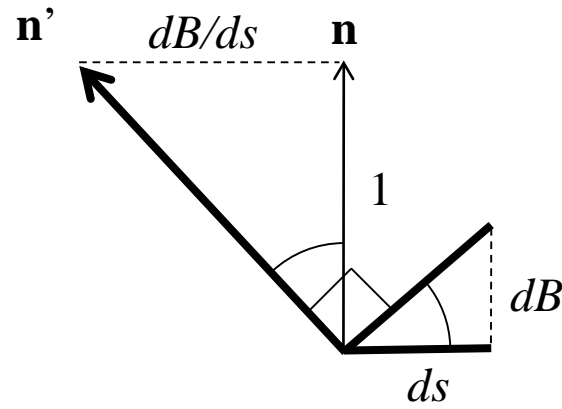
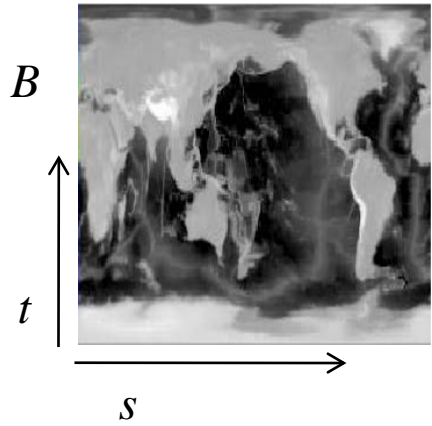
Bump Mapping



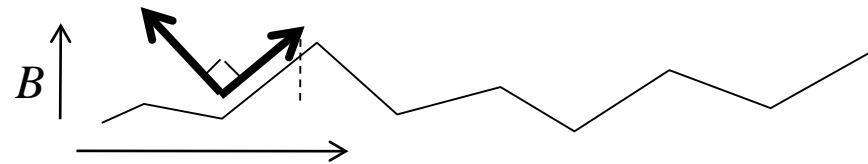
$$dB/ds = (B(s+h) - B(s))/h$$



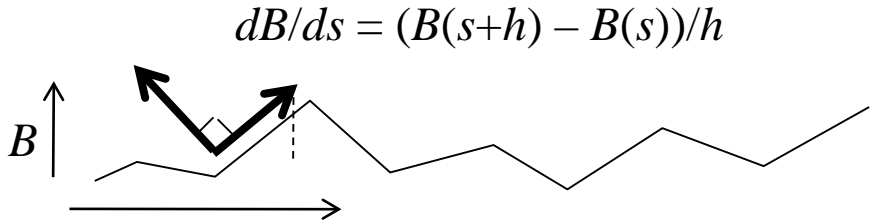
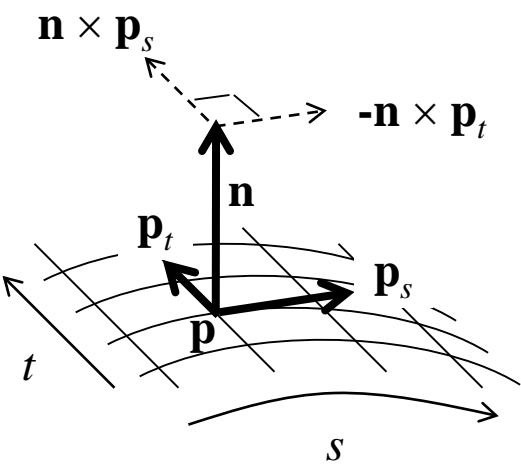
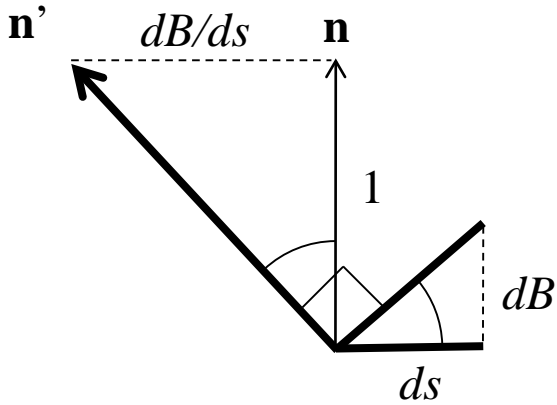
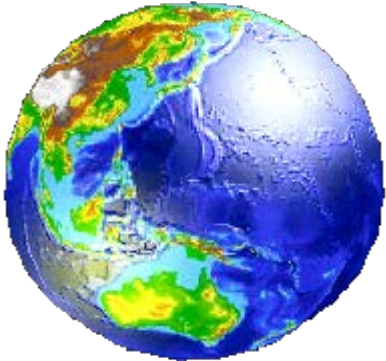
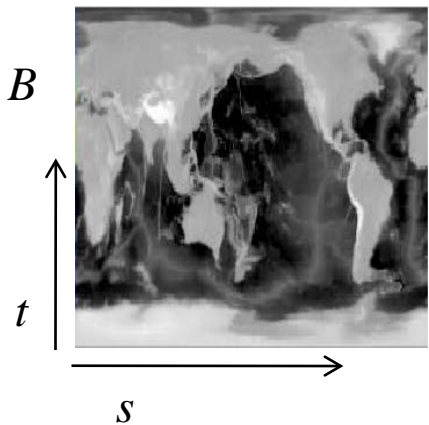
Bump Mapping



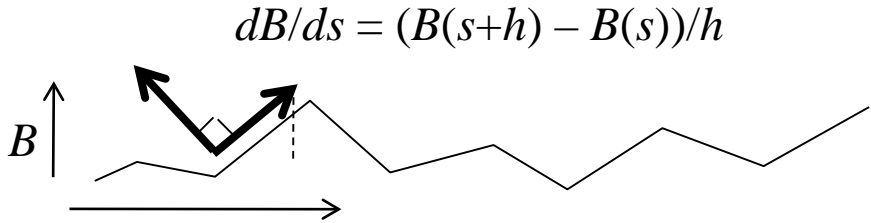
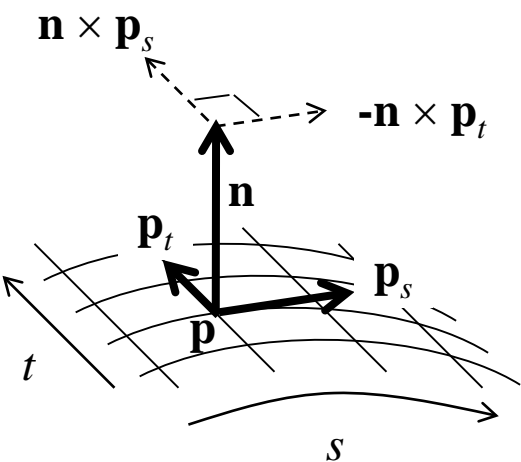
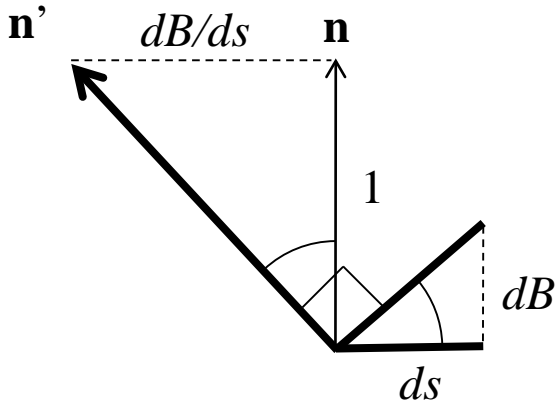
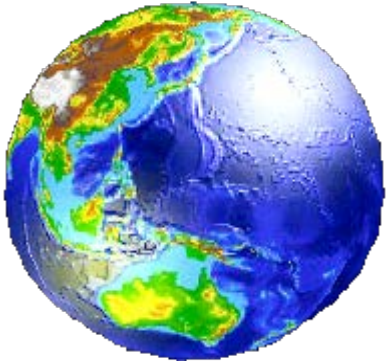
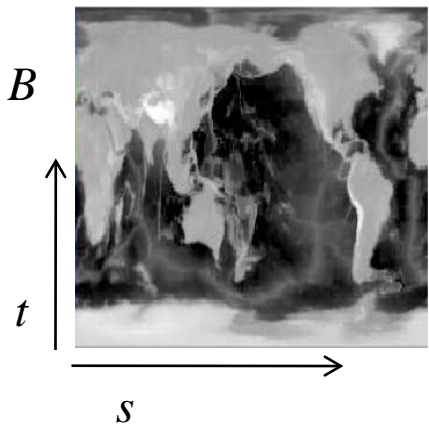
$$dB/ds = (B(s+h) - B(s))/h$$



Bump Mapping



Bump Mapping



$$\mathbf{n}' = \mathbf{n} - (dB/ds) \mathbf{n} \times \mathbf{p}_t + (dB/dt) \mathbf{n} \times \mathbf{p}_s$$