

A Hybrid Method for Computing Apparent Ridges

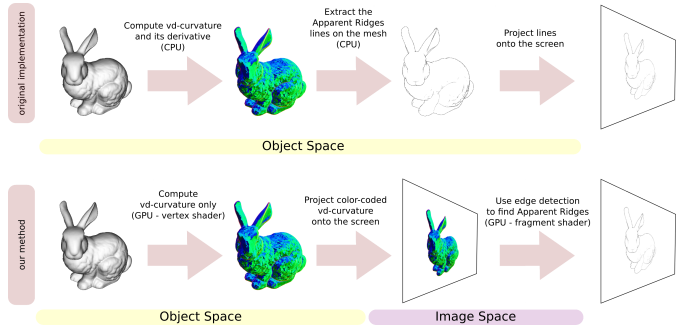








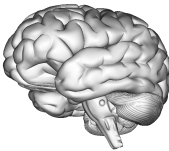

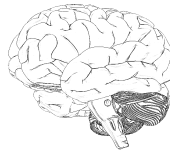










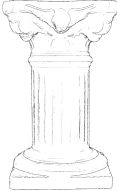
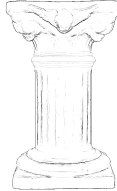






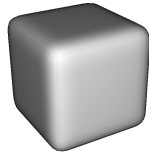
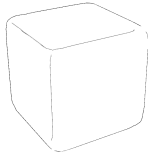
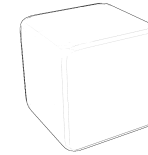
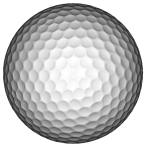
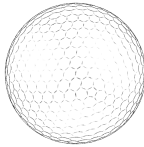
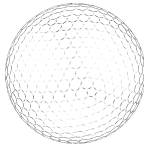
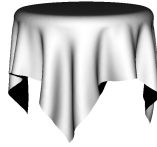
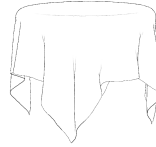
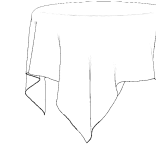
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Apparent ridges (Judd et al., ACM TOG 2007) is a recent technique for expressive line rendering of 3D models. The original method works entirely over the mesh in object space. Our hybrid method combines object-space and image-space computations and runs partially in the GPU, taking advantage of modern graphic cards processing power and producing faster results in real time.



| model | original | our method | model | original | our method |
|---|---|---|--|---|---|
|  173k |  |  6.0x |  287k |  |  3.8x |
|  294k |  |  8.5x |  134k |  |  7.3x |
|  72k |  |  6.4x |  263k |  |  6.5x |
|  263k |  |  5.0x |  49k |  |  4.1x |
|  46k |  |  8.6x |  2k |  |  1.8x |
|  123k |  |  5.8x |  23k |  |  5.0x |