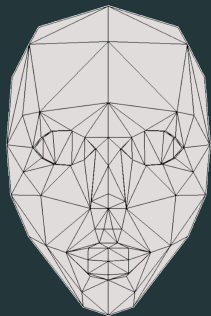


PN TRIANGLES

Rick van Veen Laura Baakman

December 14, 2015

Advanced Computer Graphics



INPUT MESH



GOURAUD



PN GEOMETRY



PN TRIANGLES

SINGLE PN TRIANGLE

Bezier and Bernstein recap/why cubic?



Flat triangle picture, with uniform distributed control points

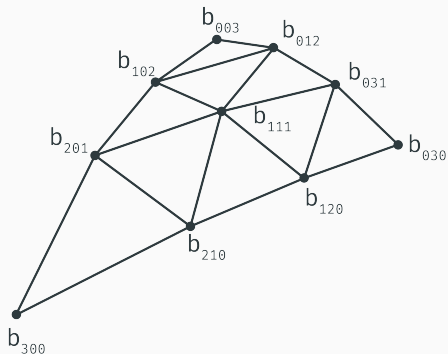
$$b_{ijk} = (iP_1 + jP_2 + kP_3)/3$$



Figure 6 of the paper



Figure 3 with center down.



$$A^2 + B^2 = C^2$$

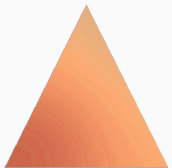
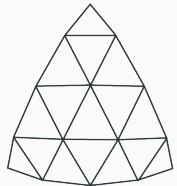
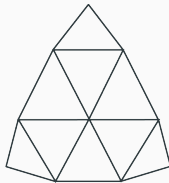
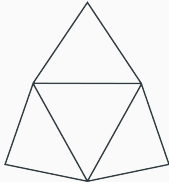
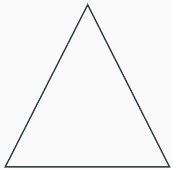
How do you create the PN triangle normals

Quadratic why no linear / cubic

Barycentric coordinates recap

LEVEL OF DETAIL

LOD verhaal



0



1



2



3

The steps. Recap of everything construct geometry and normals and evaluate less (low lod) or more points (high lod)

A TRIANGLE MESH

Shared normals + [Thales of Milet, 500 BC]?

Continuity recap?

Continuity

Sharp edges

GRAPHICS PIPELINE

Waarom waren PN triangles hip in 2001? Plus pipeline

Hoe zou je het nu kunnen implementeren? Plus pipeline

CONCLUSION

Questions?

REFERENCES

References