ANALOG OPTIMIZATION OF POLYGON DISTRIBUTION

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AOP is an algorithm for storing polygons that takes advantage of the sinusoidal wave to eliminate repetition in a

digital wave.

# introduction

AOP is an algorithm designed to optimize digital signals, specific streams of polygonal vertices, polygons, and meshes on their way to and from the rendering pipeline.The idea is that over time, a digital wave will duplicate its crests, compounding. However an analog sinusoidal wave will repeat naturally, without any extra parametesr. Therefore, for small amounts of data digital signals in relationship to polygons improvces in respect to the number of polygons versus the standard model. The key to this is the analog wave, as it can be sinusoidal and therefore encapsulating a large amount of data in a small operation (the sin x operation fro example). The algorithm is somewhat based off of the idea of Run-Length Encoding, that is, the compression of data by compressing like members.

# VECTOR TO DIGITAL SIGNAL

The beginning of the algorithm begins by seriaizing the three vectors that compose a triangle. This process is repeated for all of the triangles in a mesh.

<0.0, 1.0, 0.0>

<2.0, 0.-0, 3.0>

These values are serialized:

0.0,1.0,0.0,2.0,0.0,3.0…

Then they are placed into a digital wave:

And the matching analog wave:

# more details

Because analog waves repeat, over time, suppose as one approaches infinity, the algorithm waves will repeat and eventually if we were to compare the two waves, the digital and the analog, with each wave crest in line with the other, it will take more digital waves to reproduce a polygonal mesh than when using analog. Essentially in the long run it takes more processing to use the digital waves than the analog waves. We can even improve on this. Sin(x) and Cos(x) are expensive functions. However, there is a practice that is not used as often but in this case is significant. That is the look up table.