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# GASTVORTRAG

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### “The ML-signal, as a pre-aliasing benchmark signal”

#### Abstract:

In the field of volume visualization the data is usually given as discrete samples. During rendering a continuous reconstruction is necessary. It is usually achieved by convolving the discrete data with a continuous filter. The assumption is that the discrete data is derived from a continuous signal sampled on a lattice, where the signal is spherically bandlimited. In volume visualization Cubic Lattice (CC), the body-centered lattice (BCC) and the face-centered lattice (FCC) are used. For comparing the various filters on the lattices a benchmark signal, the famous ML-signal is commonly used. The authors arrived in the conclusion that the pre-aliasing effect is minimal on FCC lattice. However their assumption was based on the spherically band-limitedness of underlying signal. In our work we showed that the ML-signal is not spherically band limited, and it gives an unfair advantage to the FCC lattice during comparisons. On the other hand, we proposed that rotating the ML signal can lead to a fair comparison in terms of aliasing.

#### Biography:

Viktor Vad graduated M.s.C from Eotvos Lorand University of Science in 2008. Currently, he is a P.h.D student at Tampere University of Technology. His field of interest is visualization, 3D signal processing, GPU programming.

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