Millsoft3D: 3D Mining Simulation

Ever since the introduction of discrete element method (DEM) for the simulation of grinding mills there has been a phenomenal growth in the variety of ways this technique is used in the mining industry. Since the late 90s two dimensional simulations have been the norm in the industry due to the simplicity and speed of computation. A handful of organization, perhaps three or four, have the capability of three dimensional grinding mill simulation, but the time to run the simulations with current implementations has made them impractical for industrial use.

Using programmable graphics processing units (GPUs), we have been able to achieve a speedup of 50 times over existing methods. It is now possible to run these simulations in hours instead of weeks.


28ft_AG: A 220,000 ball simulation of a 28 ft diameter autogenous grinding mill.