

## **PRESS RELEASE**

March 2007

### **John Deere and Astec benefit from faster simulations – *EDEM 1.2 launches at POWTECH***

DEM Solutions, a leading developer of discrete element modeling software solutions, has today released a significantly enhanced version of its market leading particulate simulation software, EDEM. The new version can improve model processing time by over 500% and also makes full use of the new generation of multi-core processors with major improvements in processing times across all platforms including Linux and Microsoft Windows.

EDEM incorporates advanced algorithms to simulate the movement of particulate solids within handling, processing and manufacturing operations. The information generated from the simulations enables engineers from a broad range of industries to innovate and improve both equipment and processes in less time and more effectively than previously possible. Two companies taking advantage of the increased compute speed are agriculture & construction machinery manufacturers, John Deere, and asphalt plant specialists, Astec Industries.

Carol Plouffe, Staff Engineer from John Deere, commented,

“The new version 1.2 of EDEM delivers substantial improvements in compute speed. Deere has several new product development projects on tight deadlines where simulations are being done with EDEM. In every case, the speed of calculations has been one of the rate limiters for the analysis. With version 1.2, speedups of around four times are already having a positive impact on our simulations schedules “

John Favier, CEO of DEM Solutions, added,

“We are delighted by the positive comments our software is generating with our customers. The faster computing speed – combined with the flexibility of the software – allows engineers to run bigger, more complex simulations and get results more quickly.”

EDEM has a unique interface which can be programmed to couple it with other engineering simulation tools including leading Computer Aided Engineering (CAE) software such as CFD, FEA and multi-body dynamics. This provides a means to simulate complex interactions between particles and other media such as exchange of momentum, heat, mass and energy with fluids, solids and electromagnetic fields.

Andrew Hobbs, Research Engineer at Astec Industries, commented,

“We’ve noticed a substantial reduction in run times since moving to version 1.2. Run times for large simulations (100,000+ particles) are greatly reduced running single and multiple processors, making discrete element simulation a viable design tool. Ten seconds of simulation time for a complex drum mixer previously required up to 4 weeks of run-time. These same simulation times can now be completed in under 48 hours with version 1.2. With the reduction in run-time EDEM can now be used to evaluate different configurations within a few days turn around.”

To view a demonstration of EDEM 1.2 at the POWTECH conference, please visit DEM Solutions at its stand, No.203, Hall 8.

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### **About DEM Solutions Ltd**

DEM Solutions is a leader in discrete element modeling software. Its EDEM software is used to simulate particle handling, processing and manufacturing operations in pharmaceutical, chemical, mineral and materials processing as well as oil & gas

production, agricultural and construction and geo-technical engineering. EDEM provides high-resolution information on particle kinematics, momentum, heat and mass transfer in particulate flows. DEM Solutions' consultancy team works with customers to solve design and production problems by simulating and analyzing the processes at the particle scale. DEM Solutions' corporate headquarters are located in Edinburgh, UK with offices in Lebanon, NH, USA.

For more information: [www.dem-solutions.com](http://www.dem-solutions.com)

**For further press information, please contact:**

**DEM Solutions:**

Alison Hope

T: +44 (0) 131 558 2681

E: [ahope@dem-solutions.com](mailto:ahope@dem-solutions.com)

**GTH Media Relations**

Toby Hall / Robert Koh (gth media)

T+44 (0)20 7153 8039 / 8035