Release Notes for TrueGrid, version 3.1.0

1.The lsys command to define locale coordinate systems in LSDYNA has been modified so that only those systems actually defined are written to the output file.

2. Some of the error messages do to invalid hole parameters were in error. These error messages now give the correct information.

3. The MTV command has been extended to shell elements.

4. A bug was fixed in the hole command.

5. A bug was fixed that affected the hide graphics in the merge phase when face type boundary conditions were assigned in the merge phase and displayed using the CO command. It did not affect the wire frame graphics or any conditions assigned in the part phase. The types of conditions affected by this bug are:

    Sliding interfaces (SI merge phase command)
    Pressure (PR merge phase command)
    Bulk fluid (BF merge phase command)
    Electric flux (EFL merge phase command)
    Thermal radiation boundary (RB merge phase command)
    Radiation enclosure (RE merge phase command)
    Boundary flux (FL merge phase command)
    Boundary convection (CV merge phase command)
    Thermal convection (CVT merge phase command)
    Symmetry plane with failure (SYF merge phase command)
    Non-reflecting boundary (NR merge phase command)
    Interface save segments (ISS merge phase command)
    Surface boundary velocities (BV merge phase command)
    Outlets (OL merge phase command)
    Inlets (IL merge phase command)
    Fluent boundary conditions (FBC merge phase command)
    Star boundary conditions (STARBC merge phase command)
    Cfx boundary conditions (CFXBC merge phase command)
    Kiva boundary conditions (KIVABC merge phase command)

6. A bug was fixed that corrected an edge to 3D curve attachment when the end node of the edge was also on the slave side of a block boundary interface.

7. A bug was fixed in the merge graphics when a face set formed from quadratic elements were selected using a mouse and the set editing feature.

8. A new aberation has been found in CATIA IGES files. It is not clear how wide spread this is. It is difficult to explain without some details concerning IGES files. These files are expected to adhere

to the internationsl IGES standard. This standard requires that (explicit) surfaces that are trimmed have the definition of the trimming specfied in the domain of the (explicit) surface in the form of a sequence of 2D curves that are oriented to form 1 continuous composite curve. In this latest version of CATIA, the domain curves are not continuous and are not oriented properly. TrueGrid now checks for this error and corrects for it.

9. A bug was found that required three conditions before it affected the mesh. Those contions are:

    i. using quadratic elements
    ii. an edge was attached to a 3D curve
    iii. this edge was either
     iii.a projected to a surface that was significantly different from the 3D curve,
    iii.b the edge was the interior of a smoothing of the mesh and the edge was significanly different after the smoothing,
    iii.c or the edge was in the interior of an interpolation and the edge was significantly different after the interpolation

10. A bug was fixed in the uniform smoothing with quadratic elements. It showed up when there were multiple regions with intrapart block boundaries gluing the individual blocks into one mass. Some of the faces that were glued together did not get smoothed.

11. The new command TRIQUADRATIC can be invoked at the beginning of a TrueGrid session or at the beginning of a command file so that all of the hex elements are 27 noded and all of the quad shell elements are 9 noded. At this time it is only available for the MPACT output option. If you start with triquadratic do not revert back to quadratic.