

# **CDH/AMLS Version 4.1.r04**

## Release Notes

February 5, 2010



CDH/AMLS V4.1.r04 contains some error corrections that have been identified since the release of V4.0.r61. In most cases, the users will never notice these errors. Also, some improvements were made in performance,

- 1.) Small bug fixes in the output for models with many singularities. In the case of multiple singularities and with a failure in phase3, the log file would not report all singular grid points. In V4.1, all grids will be reported, but the problem will still fail in phase3.
- 2.) Bug fix affecting very extremely large models for users of generic interface (RADIOSS)
- 3.) Bug fix for some models (not all models) with fewer modes than residual flexibility vectors.
- 4.) Bug fix for models where the first grid point has greater density in the mass matrix than the stiffness matrix.
- 5.) Clean up of how AMLS checks out certain license features. This will result in cleaner license server daemon log files.
- 6.) Upgrade of math libraries, resulting in improved performance on Nehalem machines
- 7.) Improved singularity reporting from phase3.
- 8.) Changed phase3 so that it reports grids associated with singularities when a substructure is entirely singular.
- 9.) Fix a bug in the singularity reporting in phase3, where it would repeat the same grid/dof over and over for a substructure with multiple singularities.
- 11.) Changes in how AMLS reorders the model, which on average, results in slightly faster runtimes with a potential slight difference in the results.



- 12.) Increased performance for models with large numbers of auxiliary vectors. The auxiliary vectors come from such things as the Area Matrix in coupled structure-acoustic analysis, load vectors, etc.
- 13.) Added ability to have the user specify a limit on the number of modes that AMLS returns. In the previous versions the only requirement for the EIGRL definition was the specification of e.g., EIGRL, 66, , 100.

Optionally, one could have specified F1 in which case only the eigenvector and eigenvalue data between F1 and F2 would be returned to the solver, e.g., EIGRL, 66, 50., 100. However, the ND option was ignored. In this version this option has now been enabled. So for example, if the specification is EIGRL, 66, , 4000., 20 AMLS would internally calculate all modes up to 4000 Hz, but only the first 20 modes would be returned to the solver.

CDH/ AMLS Version 4.1 requires a complete new license file which will be sent to all customers prior the release. The new license file will also work for all previous CDH/AMLS versions starting with 3.2.r159.

For technical support please contact [support@cdh-ag.com](mailto:support@cdh-ag.com).