

Updates Added in this Release (5.2.1)

HEEDS Professional 5.2.1 includes all of the improvements made in 5.2 and earlier, and offers additional improvements in the following areas:

- The MPD module is more efficient, making better use of all of the available machines at all times.
- Expressions in assembly files can be updated within the NX portal.
- The Import Model Data feature automatically accepts imported dependent variables that contain formulas.

New Features in HEEDS Professional 5.2

CAE portals

- **NX** (versions 4.0 through 5.0) – When you're trying to configure an NX journal file manually, it can be difficult to figure out which expressions are available to be adjusted and where to find them in the file. With HEEDS' new portal for NX, you can bring an NX part file into the Modeler, easily view all of the expressions that can be changed, and adjust them as desired. When you're finished, HEEDS will create a new part file using the NX API.
- **Excel** – The new Excel portal displays an Excel-like sheet inside of the Modeler. To use the new portal, you simply create an Excel sheet containing your data, and then specify that file as both your input and your output file inside of the HEEDS Modeler. HEEDS parses the file and allows you to tag directly into the file through the Modeler.
- **Abaqus** (versions 6.4 through 6.7) – We've added support for version 6.7 and improved the overall functionality of this portal.

Portals are supported on Windows only.

Curve fit definitions

In many design scenarios, it is desirable to find optimized designs with some aspect of its behavior that fits a target curve. Common uses of curve fitting include material calibration and stiffness matching. HEEDS Professional now allows you to define a target curve inside the Modeler. HEEDS will then find the optimal design for which the behavior most closely fits the target curve.

Taguchi robust parameter design

Engineers use design of experiments (DOE) to design for product or process robustness. The optimal design should provide robust performance despite the conditions of its use. During the design process, some factors can be controlled, but there are always noise factors in the use environment that can't be controlled. HEEDS Professional's new Taguchi robust parameter design (RPD) feature gives you the ability to do statistical post-processing inside the Modeler. It allows you to adjust control numbers to minimize design variation in response to noise factors. With this new feature, HEEDS Professional helps you find the optimal product or process design even in the face of uncontrollable noise factors.

Process automatically assigned to agent

By default, HEEDS now assigns the first process to every agent. Consequently, if your project involves only one process, you do not need to change the process assignment. If your project involves multiple processes, however, you can change the default process assignment as needed.

Process coloring

In HEEDS Professional 5.2, the Process Coloring option is enabled by default. Process Coloring helps you visualize which variables and/or responses are associated with a given process. If you have more than one analysis in a process, you can also use Process Coloring to find out which variables and/or responses are associated with a given analysis.

Known Issues

This list covers the known issues with HEEDS Professional 5.2.1. Please read this section before reporting new bugs.

All systems

- If you stop a run while using an earlier version of HEEDS, you will not be able to restart that run in version 5.2 or later.
- The current implementation of Taguchi RPD only handles static problems. Dynamic problems will be supported in the next major release.
- History output at the assembly level is not available from the Abaqus portal. Set-based history requests are supported.

Windows

- HEEDS MPD is supported on all platforms. HEEDS controlled evaluation queuing is supported on all platforms except Windows x86-64.

Linux

- No portals are currently supported on Linux.
- Certain buttons may not display text correctly in the Modeler. To resolve this issue, install the Microsoft TrueType fonts package "msttcorefonts", which can be found here: <http://www.yolinux.com/TUTORIALS/msttcorefonts-1.3-4.noarch.rpm>

Command to install: **rpm -ivh msttcorefonts-1.3-4.noarch.rpm**

This will work for both Red Hat and SuSE systems. Debian-based systems can get it through the following command: **apt-get install msttcorefonts**

Supported Platforms

HEEDS Professional 5.2.1 is primarily supported on Windows x86-32 and x86-64, and Linux x86-32 and x86-64. Secondary support is available for other platforms. Please contact us for a complete list.

HEEDS MPD is supported on all platforms. HEEDS controlled evaluation queuing is supported on all platforms except Windows x86-64.

Available Documentation

- *HEEDS Professional 5.2 User's Manual*
- *Getting Started with HEEDS Professional 5.2*
- Installation guides for Windows and Linux
- *HEEDS Professional with...*
 - Abaqus
 - Excel
 - NX
 - Patran
 - HyperMorph
 - FLUENT