RADIOSS Data Translator for NX I-deas

Advanced bi-directional interface between NX I-deas and RADIOSS

fact sheet

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Summary

The RADIOSS Data Translator for NX® I-deas® software provides an advanced interface between RADIOSS and the simulation applications of NX I-deas, facilitating the exchange and sharing of data. Keywords are translated to their equivalent finite element entity on import. On export, NX I-deas finite element entities are written to the corresponding keyword. The RADIOSS Data Translator provides a forms-based environment to help users prepare models for translation to and from NX I-deas, or to make modifications in the RADIOSS deck.

Benefits

Shortens model preparation time

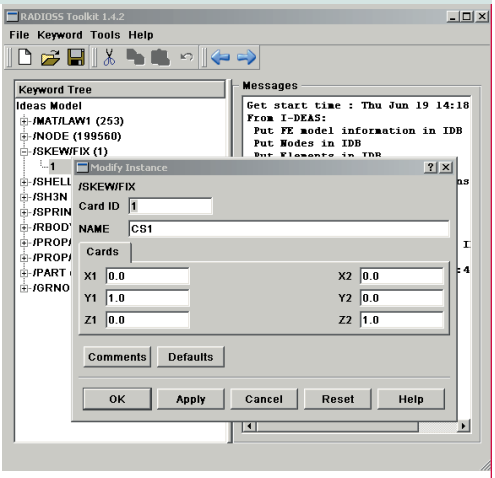
Reduces errors associated with manual data entry

Features

Exports NX I-deas finite element models to RADIOSS keyword files

Imports RADIOSS keyword files to NX I-deas

Works with RADIOSS keyword files



The RADIOSS Data Translator for NX I-deas is comprised of a main toolkit that can be accessed concurrently within the NX I-deas Simulation Meshing Task (see figure at right). Keywords and keyword instances are laid out in a data tree with branches that expand and collapse, making management and editing of content simple and efficient. During keyword instance editing, users can select finite element entities from the NX I-deas graphics region. These features shorten model preparation time and reduce errors caused by manual data entry.

The RADIOSS Data Translator performs three basic tasks:

- Exports NX I-deas finite element models to RADIOSS keyword files
- Imports RADIOSS keyword files to NX I-deas
- Works with RADIOSS keyword files

Export capabilities

RADIOSS export capabilities include:

- Creation of complete finite element models
- Generation of groups, loads and boundary conditions
- Preparation of ready-to-run RADIOSS keyword files for vehicle safety analysis

Import capabilities

RADIOSS import capabilities include:

- Complete RADIOSS finite element models
- Support of both BLOCK and FIXED format keyword files
- Automatic generation of part keywords for FIXED format keyword files
- Option to process include files
- Direct importing of RADIOSS keyword data into NX I-deas (no generation of intermediate files)

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Productivity tools

The RADIOSS Data Translator provides a set of productivity tools designed to facilitate model editing, merging and updating.

Mapping tool. Decrease keyword file building time using the data-mapping tool. This feature allows users to replay data in certain keyword instances in the current keyword file, with data from matching keyword instances in an external keyword file. Mapping works for the following keywords: /PROP, /MAT, /FUNCT or /PART.

Merging tool. The translator is equipped with a merging tool. Users can employ this tool to control how the keyword instances in a source file, or those being exported from NX I-deas, are added to the current keyword file. The tool is flexible, allowing users to merge all (or a selection of) keywords.

Technical specifications

Supported keyword file formats. The current version of the RADIOSS Data Translator supports RADIOSS Version 4.1 BLOCK format. Users have the option of saving keyword files in FIXED format, even though the graphic user interface is designed for BLOCK format.

Supported keyword instances. A wide variety of elements and other model entities are supported. All RADIOSS keyword instances are supported. Two types of editing modes exist: text editing mode or full support.

- All material laws
- Control cards
- Boundary conditions
- Skew frames
- 2D solid elements
- 3D solid elements
- Quad shell elements
- Truss elements
- Beam elements
- Spring elements
- Triangular shell elements
- Property sets
- Functions
- Loads
- Initial velocities
- Accelerometers
- Sensors
- Gravity
- Interfaces
- Rigid walls
- Rigid bodies
- Added masses
- Imposed velocities
- Rivets spotwelds
- Sections
- Cylindrical joints
- Monitored volumes
- Groups

Computing platforms

RADIOSS Data Translator is supported on HP, Sun, IBM and SGI UNIX and Windows 2000/NT hardware platforms. Visit http://support.ugs.com/online_library/certification/ for additional system configuration information.

Prerequisite

NX I-deas MasterFEM
NX I-deas Simulation Modeling Set

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