

Introducing PreSys

The Core Module of ETA's Inventium Suite

J. He

(Engineering Technology Associates Inc.)

Introducing PreSys

The core module of ETA's **Inventium** suite
Concept to Product

DYNAMORE User Meeting 2010

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Inventium Overview

- ETA has been developing the current VPG & DYNAFORM products in a common software architecture
 - This product architecture has limitations and is not suitable to meet current and future market requirements, hindering the software's adoption
- In early 2008, ETA set up a project to develop a new product architecture which would meet all of the product needs and provide the opportunity to capture additional market share
 - This project was code-named 'Azure'

Inventium suite

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Market Needs

- The CAE market trends indicate
 - Need to have a flexible user interface
 - Customized by the user
 - Icon / toolbar - based interface
 - Dockable / floating / customized toolbars
 - Many levels of customization available
 - Desire for a Tree Structure to provide additional level of information to users
 - Requirement of Fast / high quality graphics
 - Scripting capability needed
 - Capture processes
 - Replay tasks
 - Vertical Application toolsets
 - Allow users to focus on application-specific tasks

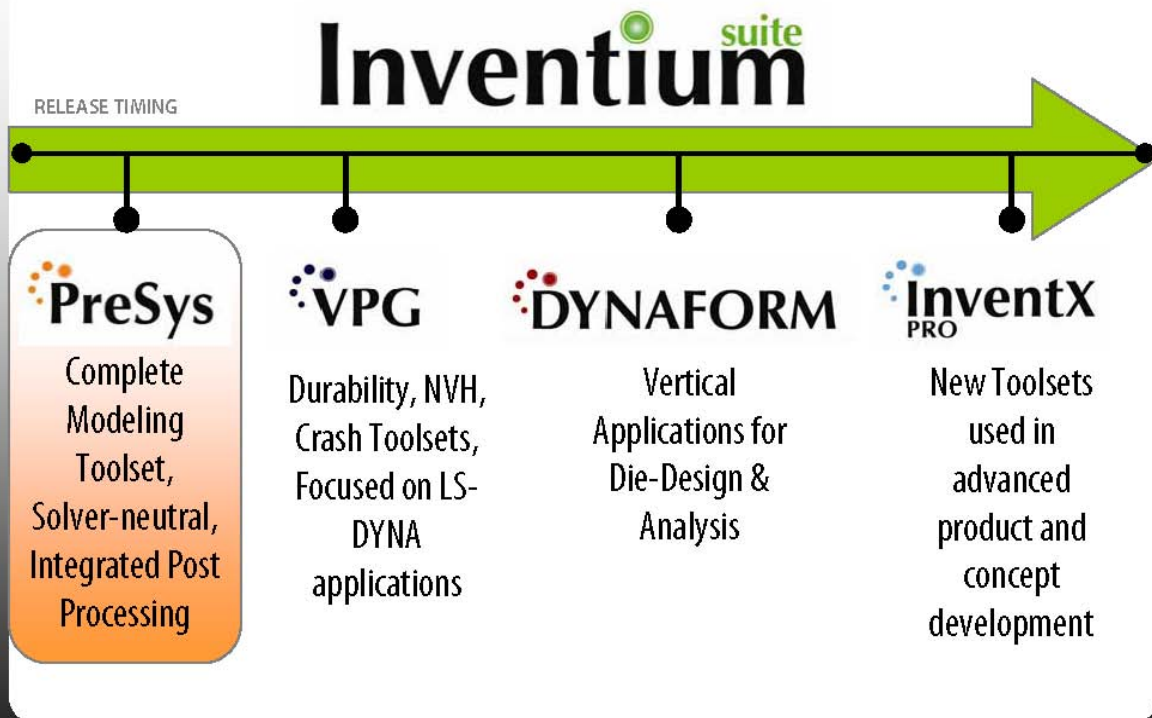
The logo for Inventium suite, with "Inventium" in a bold sans-serif font and "suite" in a smaller, lighter font to its right.The logo for eta, consisting of the lowercase letters "eta" in a bold, sans-serif font.

What is Inventium?

- Inventium is the name of the product suite which will contain the VPG and DYNAFORM software products.
- Inventium is a name chosen to inspire the users and identify the use of these tools – *to invent*
- The promise of the Inventium Brand:
 - allow engineers to easily create simulations of their designs, create new & unique designs using advanced methods and work together with their existing tools and processes to enhance the product development process*

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Inventium Product Architecture

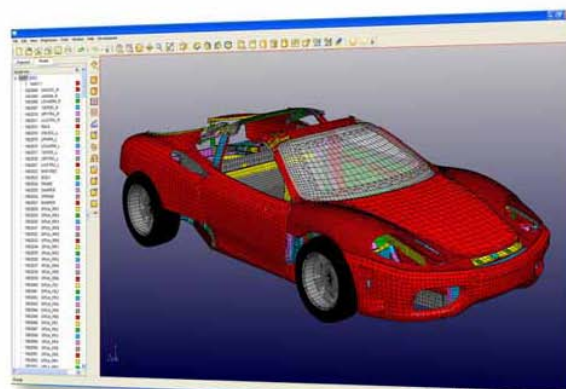
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Inventium Overview - PreSys

- Finite Element Pre and Post Processor to Quickly & Easily Prepare Data and Process Results
 - Totally New, Intuitive Interface
 - Enhanced Graphics Capabilities
 - Streamlined Processes
 - Model Explorer Feature
 - Use with all Major Analysis & CAD Software
 - Language Localization

PreSys



PreSys - from the greek for 'development' and the word precise

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PreSys Development Process

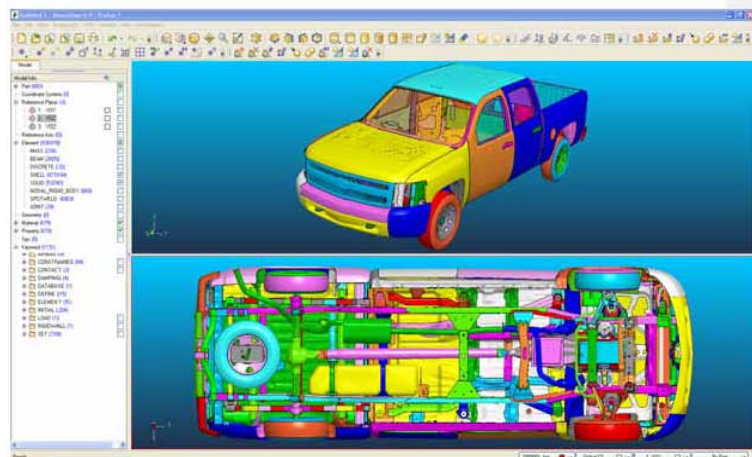
- It started out by listening to users
 - What tools they wanted (what they didn't want)
 - What functions were the most used
 - What they wanted to do now and in the future
- It was guided by extensive benchmarking
 - CAE software and other tools
 - We had *users* tell us why they *loved* a specific software
 - Drew our software developers into this and planned out Inventium
- Most extensive QA process ever for any ETA product
 - ETA implemented a tracking/accountability process for reported bugs
 - Testing scripts allowed for the execution of hundreds of example problems for QA testing
 - Application QA testing put it in hands of real CAE engineers for day-to-day usage

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How does PreSys deliver such impressive graphics performance?

- Your report and presentation graphics tell the story of how you do your work
- Our proprietary, purpose-built graphics engine allows users to display huge amounts of data and easily manipulate it.
- We focus on a low-load environment and design PreSys to work on basic graphics cards.
- Years of work on this graphics engine by our experts has yielded an industry-leading graphics capability



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Why are PreSys users set up to succeed?

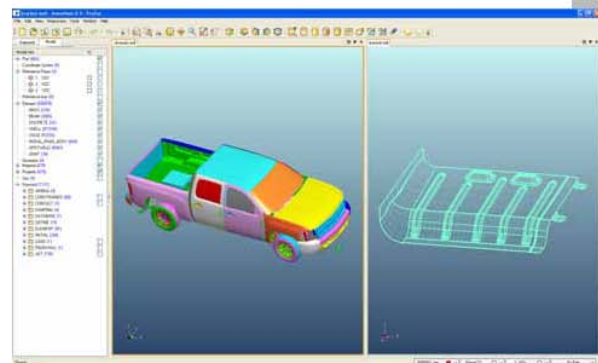
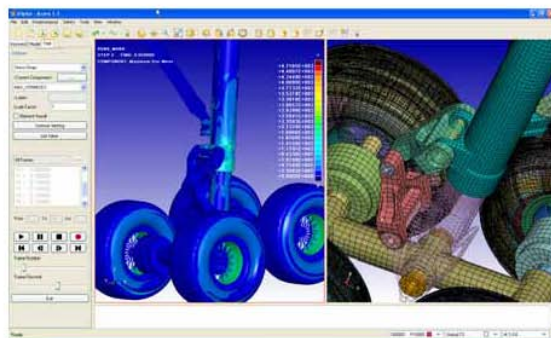
- One Word: "Customization"
- PreSys users can configure almost every detail of the product
- User-defined:
 - Shortcuts
 - Macros
 - Menus
 - Toolbars
 - Mouse functions
 - Background/color schemes
 - Viewports
 - Saved views
 - Layouts
- Language Localization
 - English, Chinese
 - Need Distributor Support for German, Italian, Korean, Japanese

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Why are users immediately productive with PreSys?

- GUI is intuitive – not a typical FE modeling nightmare or academic code
 - Single window
- Multi-model capabilities
- Pre – Post processing shown simultaneously
- Windows standard dockable/floating tool bars
- Commands are all accessible through drop down menus
- Task Panel guides the user through the process
- Model Explorer lets the user immediately see the contents of the model
- Standard selection methods provide a ultra-fast learning curve

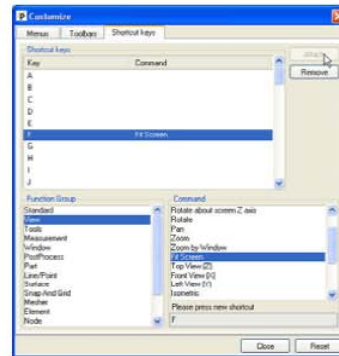


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Expert Users Achieve Even More with PreSys

- Access to card-level details
- Customization of commonly used functions
- Macro and Scripting allows function streams to be replayed



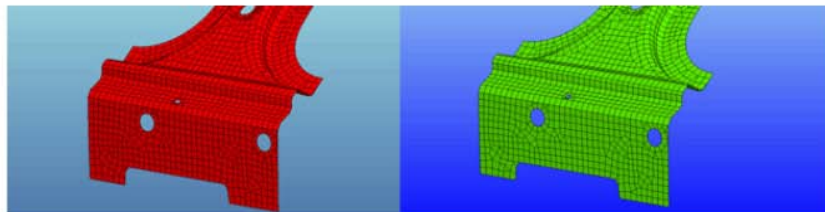
"PreSys works the way you do"

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Total Cost of Ownership: PreSys Leads

- Can you see the difference in these 2 meshes?



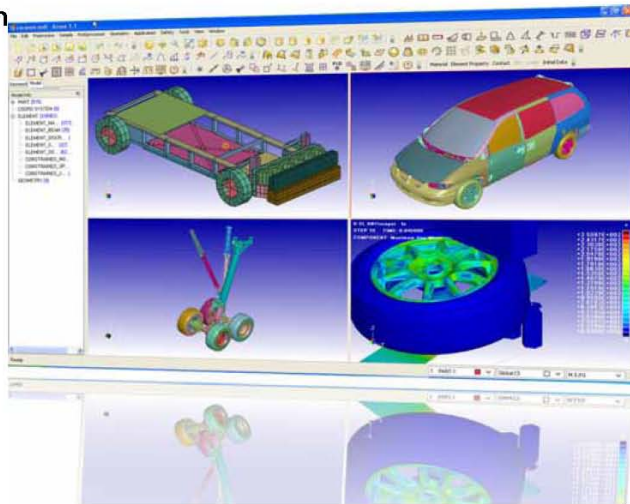
- The one on the right cost 40% less to create
- Bottom line: Most FE modeling software performs the same and creates the same mesh. Why pay more for it than you have too?
- PreSys delivers all necessary functions at a lower cost
 - Minimal training
 - No new hardware required

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Future Product Modules: VPG

- Streamlined Software to Simulate models of Structural/Mechanical Systems
 - Suite of tools which allow engineers to simulate automotive proving ground tests
 - Vehicle Road Loads, Vehicle Dynamics, Durability and NVH applications
 - Dynamic Non-Linear Solution
 - Proven Results
 - Dynamic Stresses
 - Velocity
 - Acceleration
 - Displacement
 - Fatigue Life Prediction Tools



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Future Product Modules: VPG Safety

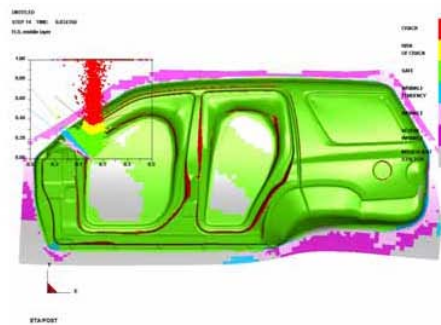
- Interactive Dummy Positioning
 - Supports various dummies
 - ETA Dummies
 - LSTC Dummies
 - FTSS Dummies
- FMVSS and ECE Test Procedures / Process Guidance

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Future Product Modules: DYNAFORM

- Bypass Soft Tooling and Reduce Overall Tryout Time & Costs
- Provide Complete Confidence in Die System Design
 - Accurately estimate Blank Size
 - Maximize Material Utilization
 - Interactively Generate Binder Surfaces, Addendum Profiles/Surfaces, PO Lines
 - Generate Complete, Accurate Formability Results
 - Accurately Predict Die Structure Strength & Durability
 - Streamline Sheet Metal Transferring/Handling
 - Simulate & Analyze Scrap Shedding/Removal



DYNAFORM

Inventium

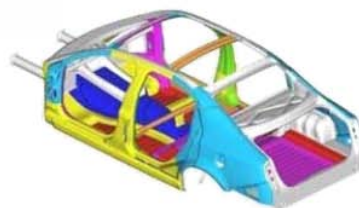
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Future Product Modules: InventXPro

Multiple design concepts under multiple load conditions are evaluated simultaneously

- Parameterized FE Models drive the final design
- Multiple design constraints and objectives using loading, manufacturing, material and cost can be assessed

**InventX
PRO**



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Supporting Current Products

- Will ETA still sell & support FEMB and VPG?
 - YES!
 - VPG will be frozen @ version 3.4
 - FEMB PC will remain frozen @ version 28
 - Bugs will still be addressed in VPG for the foreseeable future

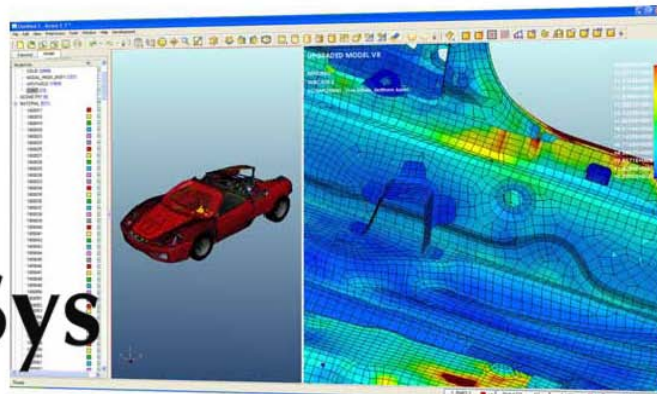
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Key Benefits

- Inventium Product Suite gives access to a family of products
- Greatly Improved Graphics for Pre-processing
- Streamlined processes for model generation
- Keyword view to immediately see the model contents
- Model tree to navigate complex models and manipulate visualizations
- Customizable user interface- ability to hide and configure menus and toolbars
- Integrated post-processing
- Ability to open multiple models in a single instance of the software
- Scripting capability and creation of custom scripts to perform multiple task strings

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Find Out More...



- Contact your local Inventium Distributor
- Visit www.eta.com or www.inventiumsuite.com
- Webinars and Live Demo Requests on these websites

