



BIGLEVER NEWSLETTER: **GearUP Announcement**

## Introducing Gears 7.3: Meet the New Gears Matrix Wizard

### Greetings from Dr. Drew Stovall:

BigLever Software has released version 7.3 of its industry-leading Gears Product Line Engineering (PLE) tool featuring a totally re-designed Matrix Wizard. The new **Gears Matrix Wizard** gives you instant access to the information you need – and provides the natural control you want – to make product definition selections efficiently.

Need some assistance? The Matrix Wizard also provides an analysis of every option to ensure that your products, and your product family trees, are exactly right.

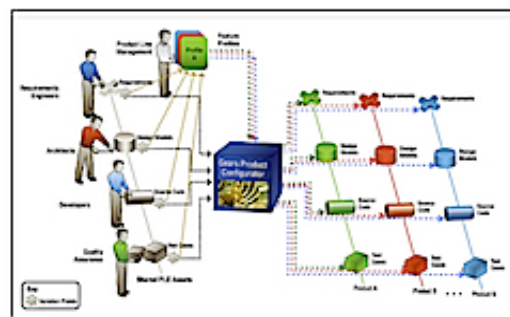
### Now: Product Definition Made Simple for Product Managers, Product Marketing, and Product Definition Teams

Gears has always been the standard for helping product line engineers build the product line infrastructure -- that is, the feature models and shared assets that define the complete space of a product line. As shown in this PLE factory illustration, those engineers work on the far left side of the diagram. They build the shared assets and endow them with variation points, so that they can be configured by Gears to build product-specific instances.

The new Matrix Wizard was designed expressly for the "Product Line Management" role, shown on the top of the illustration. These are the portfolio managers, product managers, and marketers that need to understand and plan the evolution of the product line. The Wizard gives these individuals more control and assistance in managing product definitions.

### Introducing the Gears Matrix Wizard

To build a product, the Gears user "walks across" a matrix, selecting profiles that have been made available by the asset engineers. That sounds simple enough, but:



>> [Click image to enlarge.](#)

### About this Newsletter

As BigLever Software's Vice President of Engineering, Dr. Drew Stovall oversees the architecture, development, and evolution of BigLever's core product offering – the **Gears Product Line Engineering Tool and Lifecycle Framework™**.

In his *GearUP* newsletter series, Dr. Stovall provides a view into the latest product line engineering (PLE) capabilities delivered by the Gears solution, with insight into how these new capabilities can enhance your organization's PLE deployment.

We appreciate your interest and welcome your feedback regarding your unique PLE challenges and issues.

### Multistage Configuration for Product Family Trees

Earlier this year, BigLever delivered its new multistage configuration capability which enables engineering organizations to create, deliver, manage, and evolve their entire product line family tree based on product line features.

Multistage configuration extends the **product line factory** approach, enabled by BigLever's Gears solution, to allow product line managers and marketers to better comprehend, organize, and manage highly complex family trees using product line features.

This new capability is especially powerful because it shortens the lead time required to translate new feature concepts and combinations into product implementation.

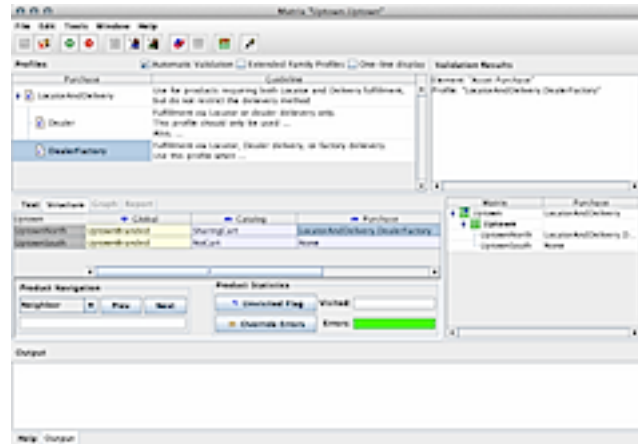
- What choices does a profile really represent?
- How do you avoid choosing a profile that conflicts with another profile?
- How do you defer a choice now, until a later stage in the product definition?

The Matrix Wizard can solve these problems (and more) through a powerful collection of tools and views that expose the information needed to answer these questions for each product in a portfolio.

Profiles that can be selected for each matrix cell are automatically displayed along with a description of the profile, whether or not it's valid, and (if not valid) why not.

### Information at your fingertips

The Matrix Wizard's product navigation controls allow you to quickly find the next cell that you need to work with. Progress bars show at a glance how much work you've done and how much work remains.



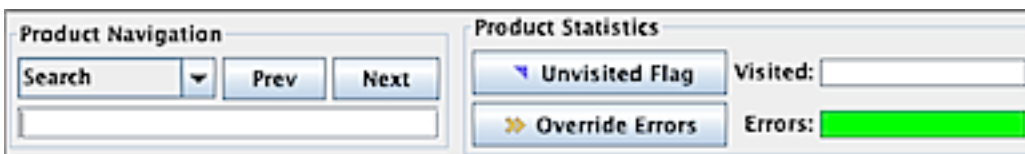
>> [Click image to enlarge.](#)

The Matrix Wizard Profiles

List lets you explore the profiles offered by each element. At a glance, you can see the available profiles, if they are valid choices, and the guidelines (explanatory descriptions) provided for each. From the list, you can launch a new window to explore the feature definitions provided by each profile.

The new Wizard also seamlessly integrates with the Multistage Configuration capabilities provided by Gears. (See the sidebar for more about Multistage Configuration.)

The Wizard can help you navigate among the matrices that constitute a product family tree, make selections or down-selections at each level, and propagate those choices to lower-level matrices to ensure product family consistency. Thus, Product Family Management becomes a fully supported activity.



The Wizard facilitates systematic production definition by helping you navigate to the next cell of interest, with a single click. The interface eliminates unnecessary steps, brings up information as needed, and supports organizational process flows. Users have all of the information they need, at their fingertips, to make informed error-free choices regarding the management of an entire product family or family of families.

### Help for small product lines, too

The Matrix Wizard was designed for product lines in which product

Product marketers can now gain a cohesive big picture view into the product family tree, and the subfamilies within their purview, to take strategic advantage of product feature commonalities and diversity within the product space.

As a result, businesses can leverage a feature-based product line management approach to efficiently expand and evolve their product line portfolio to meet customer need and market demand.

See more about multistage configuration in the [previous issue](#) of the BigLever Newsletter, or download the [white paper](#).

### Underwriting the Convergence of ALM and PLM

According to Tony Baer, Principal Analyst at Ovum, dealing with extreme product line diversity -- such as in the case of complex product family trees -- is a challenge that hits hard in the systems engineering arena, where the disparate worlds of software and hardware come together.

"As ALM (application lifecycle management) and PLM (product lifecycle management) technologies begin to converge, much of the industry's focus is on integrating the tools, rather than integrating the business across these two critical functions," said Baer. "BigLever's feature-based product family management approach can play a key role in helping engineering and product management establish a common vision for the product line."

### Gears in the News

*Automotive Engineering International: Feature-based product line family management software*

*SD Times: BigLever gets product line 'family trees' in Gears 7.2*

definition is a labor-intensive task in the process flow, and especially for product lines with many cross-feature constraints that every product must honor. Now, building products in those environments is easy, and possibly even fun.

For those with small product lines -- small numbers of products, a small number of choices needed for each product, or few feature interaction constraints -- the Matrix Wizard is equally helpful.

And if you're accustomed to simply clicking on a matrix cell and availing yourself of the pulldown menu, no worries: You can continue to do that.

The Wizard is there if you need it, but doesn't activate unless you ask for it.

### **Houston, we don't have a problem**

Using the Gears Matrix Wizard is like a Mission Control console for your product line, except that it's much less expensive (and you don't have to go to Houston). If you would like more information about the Matrix Wizard, or to see a product demonstration, please contact us at [info@biglever.com](mailto:info@biglever.com).

Enjoy!

Best Regards,

Drew Stovall

BigLever Software Vice President of Engineering

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>> [Click image to enlarge.](#)

*Desktop Engineering: BigLever Software Announces Gears 7.2*

#### ■ [Learn more about PLE](#)

The [BigLever website](#) offers a comprehensive collection of informational resources regarding the latest advances in PLE technologies and methods including case studies, white papers, articles, conference publications, and more.

>> [See the learn more section.](#)

>> [View Introduction to PLE video.](#)

#### ■ [About BigLever](#)

BigLever Software, Inc.<sup>TM</sup> is the leading provider of systems and software product line engineering framework, tools and services. BigLever's patented Gears<sup>TM</sup> solution enables organizations to reduce development costs and bring new product line features and products to market faster, enabling businesses to more reliably target and hit strategic market windows.

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