



The 3-Tiered SPL Methodology: The Top Tier

Greetings from BigLever:

Welcome to part 3 of my 4-part newsletter series on the 3-Tiered Methodology for software product line (SPL) development. The methodology discussed in this newsletter series provides a holistic view that incorporates many of the successful new generation SPL methods and pragmatic techniques that have enabled some of the industry's most notable recent success stories.

The 3-Tiered Methodology comprises three tiers of capabilities and benefits, where each tier builds upon and is enabled by the previous tier:

- The **Base Tier**: *Variation Management and Automated Production*
- The **Middle Tier**: *Core Asset Focused Development*
- The **Top Tier**: *Feature Based Portfolio Evolution*

For an overview of the base and middle tiers, see [Part 1](#) and [Part 2](#) of the newsletter series.

The Top Tier: Feature Based Portfolio Evolution

The capabilities and benefits available at the top tier of the 3-Tiered Methodology embody a nearly optimal form of software reuse. It is in this tier that the strategic business benefits of SPL practice are fully realized.

With conventional product based portfolio evolution, the product marketing team typically creates a set of requirements for each product in the portfolio (often by cloning the requirements document for the last product and making appropriate changes) and then uses them to negotiate the content and schedule for the new product release roadmap. This time-intensive process of creating and negotiating requirements, schedules and roadmaps for each new product slows time-to-market, and ultimately limits the number of products that can be effectively deployed and maintained in a portfolio.

With a feature based approach, rather than manage the portfolio evolution on a product-by-product basis (with cloned requirements documents for each product), the portfolio is managed by feature specifications and feature profiles. Thus, features become the primary concept for managing the portfolio across the entire enterprise.

The product marketing team utilizes concise feature descriptions to negotiate effectively with the engineering team regarding extensions to the product line feature set.

BigLever at the Better Software Conference

As an industry thought leader, BigLever participates in key conferences to bring innovative SPL methods, technologies and techniques to the software development community. Join us in June for the following SPL presentation:

Better Software Conference & Expo 2007, Las Vegas, NV

BigLever Session: [Developing a Software Product Line](#)

Presenter: Charles W. Krueger, BigLever Software

Track: Managing Processes & Teams
Thursday, June 21, 2007
11:15am

This session will explore the latest generation of SPL methods that are yielding an order-of-magnitude improvement in time-to-market, engineering cost, product quality, and portfolio scalability.

The presentation will feature the best methods from recent case studies, including model-driven, aspect-oriented, minimally-invasive, and agile strategies. Attendees will learn innovative, proven SPL development methods, as well as practical approaches for getting started.

Request a Webinar: The 3-Tiered Methodology

Learn more about the 3-Tiered Methodology and new generation SPL success stories. Request an interactive webinar which can be personalized 'on the fly' for you

New and extended feature requests are simply expressed in terms of "deltas". Thus, the engineering effort required for any new product or feature is pure *delta engineering*, where the only new development needed for a new product instance is precisely what is lacking in the current assets. Everything else across the portfolio development lifecycle is fully reused.

The benefits of this feature based approach come both in the form of reductions in time-to-market for new products and features, as well as increases in the overall scalability of the portfolio:

- New product feature profiles supported by existing feature models and core assets can be used to immediately and automatically configure the new products.
- New product feature profiles supported by existing feature models, but not yet fully supported by the core assets, can be easily mapped into requirements for suitably extending the core assets.
- New product feature profiles not supported by existing feature models and core assets can be easily mapped into requirements for suitably extending the feature models and core assets.

At the top tier, the evolution of the portfolio is motivated by the new features that deliver the most *business value* for the portfolio. Decisions are made based on clearly defined feature models, and according to the actual cost/benefit of adding features to the portfolio, rather than these business-critical decisions being driven by departmental politics or personal agendas.

Also, the size of the portfolio can scale as large as needed to meet business demands and opportunities. The number of products in the portfolio loses relevance - this number can scale to the size needed to meet market opportunities rather than being limited by development cost and resources.

The business now has enhanced its competitive advantage. It has the agility to rapidly and precisely evolve the portfolio and expand into new markets. Products can be brought to market very quickly. The business can survive and even capitalize on turbulent market conditions.

Stay tuned for the conclusion of this newsletter series, which will address the impact of this new generation methodology on SPL transitions and spotlight recent real world deployments. As always, I welcome your comments and feedback regarding your experiences with SPL practice.

Best Regards,

Charles W. Krueger, BigLever Software CEO
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PS. As a speaker at the upcoming Better Software

or your development team.

Please notify BigLever at seminars@biglever.com regarding your preferred date and time.

BigLever's Getting Started Package

BigLever's Getting Started Package is an accelerated program that brings leading-edge SPL development methods, knowledge and experience into your organization. This special package - a \$10,000 value - is \$5,000 and includes:

- 3 days of onsite pilot project development and consulting
- 1/2 day each of interactive offsite preparation and post-processing to summarize results
- Satisfaction Guarantee: Cost of the package is refundable if you are not 100% satisfied

For more information about this special package offer, e-mail getting_started@biglever.com or fill out our request form.

About BigLever

BigLever Software, Inc. (TM) is a leading provider of software product line development tools and services. BigLever's patent-pending solution, Gears (TM), dramatically simplifies the creation, evolution and maintenance of embedded or standalone software for a product line.

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Conference in Las Vegas, I would like to extend a personal invitation for you to join me at my presentation entitled "[Developing a Software Product Line](#)". [See sidebar for additional information.]