



BIGLEVER NEWSLETTER: From the PLE Frontline

Getting Started with Product Line Engineering – A View from the Inside Part 3: Observations

Greetings from Paul Clements:

In this newsletter series, I'm discussing BigLever's getting started approach and the hands-on three-day workshop at its heart. In [Part 1](#), I outlined the general steps that we take during the three days. In [Part 2](#), I focused on what it's like to build a production line. In this installment, I'll wrap up with by discussing some of my observations about the process, to provide a more complete picture of the experience.

Side discussions not considered harmful.

One of my favorite songs from *The Music Man* (a Broadway musical from eons ago) is "Pick-a-Little, Talk-a-Little." The refrain goes "Pick a little, talk a little, pick a little, talk a little... talk a lot, pick a little more."

That's a Getting Started Workshop in a nutshell. We model product lines (pick), but at each step along the way we explore a wide range of issues as questions arise (talk).

For example:

- How do we meld product line engineering (PLE) with our organization's configuration management practices?
- For this part of our system, we're thinking of moving to a new lifecycle support tool -- how would Gears inter-operate with that?
- It looks like putting variation points in our requirements could actually lead to improved structure and clarity of our requirements -- what are the steps to take advantage of that?
- Our code is full of #ifdef statements -- what's a quick way to convert it to a Gears-based variation-point form?
- Seeing Gears configure the user documentation makes us think that our project plans might make good shared assets as well -- can we see how that would work?
- What would be a good incremental adoption strategy that will best take our organization forward with PLE?

And so on. It's pick-pick-pick, talk a lot, pick a little more.

Immersion as a learning strategy.

■ About this Newsletter Series

As BigLever's VP of Customer Success, Dr. Paul Clements helps BigLever customers understand and apply the latest product line engineering (PLE) approaches, create optimized deployment plans, and establish successful ongoing PLE practices.

In this *From the PLE Frontline* newsletter series, Dr. Clements shares his unique insights, observations, and valuable lessons learned from interactions and collaboration with customers.

We appreciate your interest and welcome your feedback regarding your organization's PLE challenges and issues.

■ Video: Introduction to PLE

Have you ever wanted to explain PLE in a nutshell to colleagues, co-workers or decision-makers in your organization? This new video – [Product Line Engineering for Systems and Software](#) – conveys the technical and strategic business impact of PLE, in a way that crosses all organizational boundaries.

Featuring some of the industry's most notable PLE deployments, this 11-minute video provides a view into how PLE is changing the fundamentals of how companies create, maintain, evolve, and compete with their product lines.

[>> View the video.](#)

■ SPLC Best Paper Award

The [International Software Product Line Conference \(SPLC\)](#) brings together leading PLE experts – including practitioners, researchers

The best way to learn Italian, it is said, is to go live in an Italian village for a year. Getting Started Workshops are exactly like that, except that we come to you, the food isn't as good, and we only ask you to immerse yourself for three days. But the principle is the same.

My brief description of the steps presented in this newsletter series cannot hope to convey the depth of detailed understanding that emerges when people are compelled to build real artifacts in a real environment using real techniques and best practices to accomplish a real goal.

Technological meets organizational.

As important as it is to convey the power of the tooling and what it will do for you, organizational concerns are equally important. We always reserve time in the agenda to script and rehearse a demonstration of what we've accomplished. This is for the third-day summary briefing, which is often attended by managers and other decision-makers who want to know what some of their best and brightest have been up to for three days, and where those best and brightest want to take the organization.

Most organizations are looking to PLE for strategic business benefits, so this is where we start to extrapolate the business case.

Technological meets methodological.

There are best practices associated with any tool and Gears is no exception. We have distilled many of those best practices into easy-to-use quick reference guides, which we share with you.

Where no clear single best practice exists, we come to the table with a choice of approaches that other customers have successfully employed. From good naming conventions to well-formed feature models, from testing your production line to structuring an asset's variations points, you'll see and learn a myriad of techniques that you won't be exposed to in any other way.

The most important facet of a Getting Started Workshop is that we come to you to help you build a pilot product line in *your* application area. For you, you're immersed in your comfort zone: your context, your people, your tools, your products, your domain.

For us, each time a workshop begins, it's a little like bungee-jumping: We step off into space and hope that the bungee holds – that we'll be able to turn an unknown (to us) conglomeration of separate assets for separate products into an elegant well-structured product line.

But it does hold, every time. The safety net that keeps a bad outcome at bay is our experience in running so many of these, the desire to succeed on the part of everyone present, and the fundamental game-changing benefits of the PLE paradigm.

Getting Started Workshops are intense affairs, and I'm always exhausted after the third day. But they're always rewarding, and it isn't very long before I'm looking forward to the next one.

and educators – to discuss the latest innovations and advances in the industry.

At SPLC 2012, BigLever co-presented a case study paper entitled *Mega-Scale Product Line Engineering at General Motors*. This paper was selected by the program committee to receive the Best Paper Award for the Industry Track, which provides practitioners the opportunity to learn from the experiences and successes of other practitioners in the field.

This case study highlights the innovative new Bill-of-Features™ approach that enables companies to address the complexities that occur in the engineering of highly complex product lines. Analogous to the Bill-of-Materials, a term that is used in mechanical design to designate the listing of parts that characterize a product, Bill-of-Features is the listing of PLE features that characterize a product.

>> [See the case study.](#)

■ Getting Started Package

BigLever's Getting Started Package is an intense, hands-on program which entails the creation of a tangible, small scale pilot project that serves as the catalyst for learning and change within your organization. This special package – a \$10,000 value – costs \$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.

The Getting Started Package will help you energize and accelerate your PLE transition, gain organizational buy in, and illuminate the technical and strategic benefits,

Best Regards,
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and ROI.

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■ **About BigLever**

BigLever Software, Inc.TM is the leading provider of systems and software product line engineering framework, tools and services. BigLever's patented GearsTM 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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