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■ WINTER 2010 – 2011

## FME 2011: Spatial Data at Your Command

Your new sidekick, FME® 2011, is here! Now it's time to unleash your inner Spatial Superhero and take command of spatial data. No matter what evil data villains are lurking, the extraordinary new powers in our latest release will help you triumph over them all.

Inside, you'll learn how FME 2011 can help you harness your data assets, perform superhuman feats with less resources, and be ready for whatever the future holds. For example, read how the innovative new Inline Inspection feature can save you time with feature-level debugging – it's kind of like X-ray vision for your workspace. You'll also learn how

FME 2011 can now help you tackle massive point cloud datasets. And check out FME Server's new scheduling feature, which mysteriously enables you to run workspaces without human intervention. Thanks to your feedback, FME 2011 certainly adds a lot of innovative features and improvements that will help you smash through the latest spatial barriers faster than ever before.

Although FME 2011 adds new superpowers to your toolkit, the real superheroes are you, our customers. In this issue, you'll see how **Shell Canada** combined the power of FME Server and 3D PDF to deliver a compelling way for users to visualize complex data. You'll also read how New Zealand consultants, **we-do-IT**, foiled an evil schema with the enhanced SchemaMapper and Dynamic Schemas in FME 2011.

We really love hearing about your latest spatial projects. And that's why this year we're

calling users around the globe to join the League of FME Superheroes by participating in the FME 2011 World Tour. Read on inside to find out how you band together with Safers, our partners, and local users in over 25 cities this spring to learn how to triumph over your spatial data challenges. See you at one of these gatherings this spring!

### THE AMAZING ADVENTURES OF THE LEAGUE OF SPATIAL SUPERHEROES

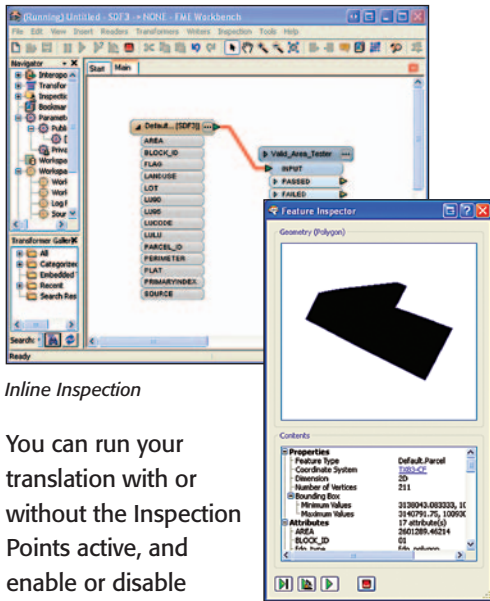


# If You Could Have Any Spatial Superpower You Want...

...what would it be? Every year, industry developments and user feedback result in a host of new features and improvements to FME. FME 2011 is no exception, adding a selection of new superpowers to your arsenal. New data types and formats? Check☑! Faster ways to get things done? Check☑! Usability enhancements? Check☑! Here are a few favorites to get you thinking about how you'll take on your next challenge.

## X-Ray Vision for your Workspace

Inline Inspection is a brand new feature that lets you place Inspection Points in between transformers anywhere in your workspace. As features pass from one transformer to the next, the process pauses so you can examine the geometry and attributes of each feature (or specific feature counts) before continuing. Essentially, it's superfine debugging control for your workspace, at a feature level.

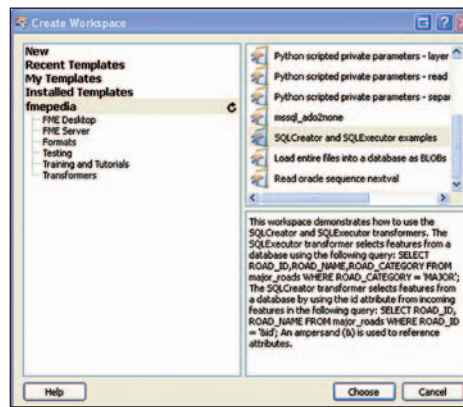


Inline Inspection

You can run your translation with or without the Inspection Points active, and enable or disable them collectively or individually. As **Jason Birch** at the **City of Nanaimo** tweets: "It's an FME thing for 2011, kinda like visually stepping through data in debug mode. Crazy powerful."

## Scale Steep Learning Curves in a Single Bound

Need to get your sidekick up to speed on the basics of FME, or delve into the details of a specific mission? Templates to the rescue! With FME 2011's new templating functionality, you can save your own workspaces as templates to re-use in the future or pass on to someone else without

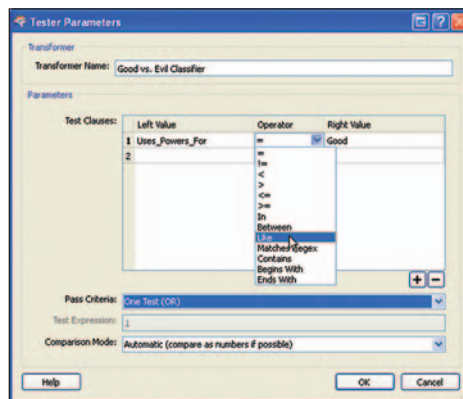


Templates

touching your original. Or, check out the selection of templates for download at [fmpedia.com](http://fmpedia.com) – examples designed to demonstrate specific features or tasks, and complete tutorial support for new users to learn faster than a speeding transformer.

## Superhero Query Language?

Testers are by far the most commonly used transformers in FME. That's why almost every release sees Tester enhancements, and for FME 2011, we've added a new



New Tester Predicates

set of SQL-ish operators to give you more choices for constructing your test conditions.

The new predicates are In, Between, Like, Matches Regex, Contains, Begins With, and Ends With. If you are familiar with SQL-style query construction, you'll immediately see the expanded capabilities for pattern and partial string matching. If they are new to you, have fun discovering their powers – but use them only for good.

## Super Stylish

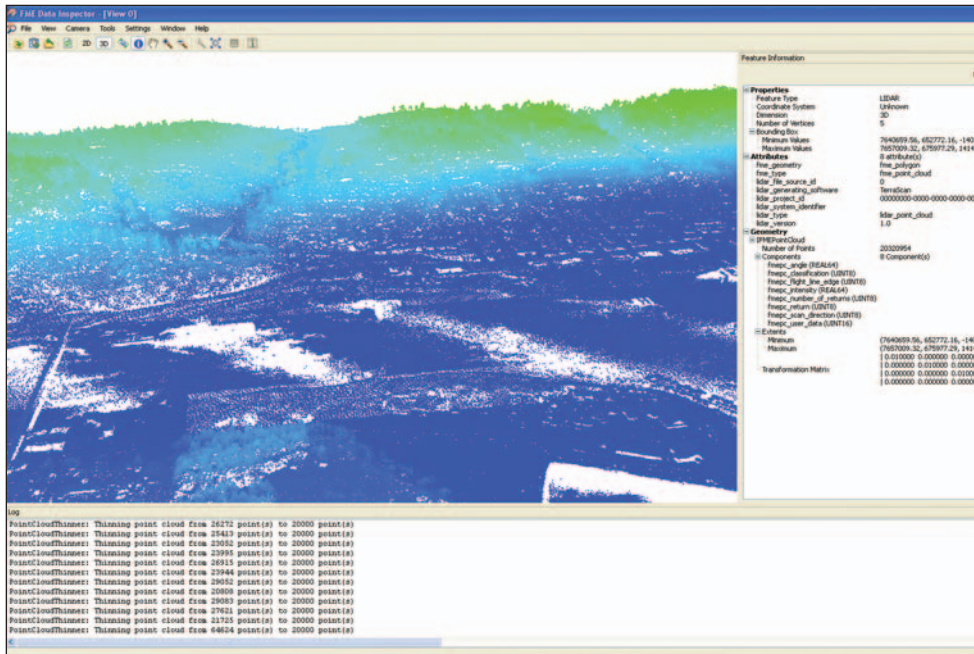
You may have noticed in these screenshots that FME has a brand new look! That's right; the user interface in FME 2011 has a shiny new costume. You can create your own themes too – or switch to the "classic" theme for old-school Spatial Superhero style.

### Newsflash:

## Local Hero Fails Evil Schema

When **we-do-IT (NZ) Ltd.** of Auckland, New Zealand was approached by an energy sector customer to build a data synchronization solution between their Smallworld GIS and SAP platforms, Senior Geospatial Consultant **Mike Oberdries** had a daunting challenge in front of him. The requirement of executing near real-time data syncing, with updates to both Smallworld and SAP®, had to be accomplished without changing the substantially different data models currently in place in each system. His secret weapon? FME 2011's enhancements to the SchemaMapper and Dynamic Schemas.

Biztalk® middleware was selected to handle the SAP data transactions, and FME - with the Spatial Business Systems (SBS) Smallworld extension – was selected to manage the



Visualizing LAS LiDAR data in the FME Data Inspector.

## Soaring Through the (Point) Clouds

It seems that every time we met up with spatial superheroes this past year – whether at an FME User Meeting or industry event – LiDAR and point cloud data was a hot topic. As access to these datasets becomes more common and the price of acquisition drops, more and more of you are looking for a way to incorporate it into your workflows. You asked, we listened, and FME 2011 supports point clouds!

**Readers and Writers** – FME 2011 supports LAS (multiple versions), Pointools POD (Point database), XYZ ASCII.

**Transformations** – Your two most requested transformations were 2D clipping and surface modeling. In addition to these, you can translate formats, thin, reproject, split, clip, chip, combine, tile, and inspect data.

So, whether you need to generate a DEM or TIN and drape imagery and vector data over your surfaces, or clip out specific areas for further use, FME 2011 handles it with the same intuitive workflow you're accustomed to. Classification filtering lets you manipulate different return types, or strip the data down to bare earth.

What are you using point cloud data for? Now that the tools are in place, tell us how you're using them – or how you'd like to use them. Share your point cloud stories and plans to help us shape the vision for our 2012 development plan. And hey, maybe your story will get featured in an upcoming issue!

Learn more about point cloud data and FME at Dmitri's Point Cloud Lab on fmpedia at [www.safe.com/PointCloudLab](http://www.safe.com/PointCloudLab).

Smallworld transactions. FME and Biztalk data exchange could be done through GML simple features.

With the technology choices in place, the most challenging part began – reconciling the way that SAP models asset data with the equivalent information in Smallworld. They were significantly different, and the near real-time requirement for updates meant that the data mappings had to be managed in a

*“Check it out, complex data mapping - spatial and nonspatial - doesn't get any better than this.”*

fast, robust, and repeatable manner. Mike had successfully used the SchemaMapper for data migration in the past, and the enhancements to both the SchemaMapper and Dynamic Schemas in FME 2011 proved to be the key on this project.

“Coupling the SchemaMapper with Dynamic Schema has always been a great way to make a complex workspace simple,” says Mike. “In the case of the Smallworld/SAP

data synchronization project, there was a requirement to process 77 asset tables - each with a different attribute schema. Marrying Dynamic Schema with the SchemaMapper transformer meant that data mappings between all 77 asset classes could be managed with a single spreadsheet (defining the data-mappings) and a single FME reader and writer.”

Ultimately the improvements and additions in FME 2011, in particular the significant reduction of the complexity of using the SchemaMapper and expanded options for using Dynamic Schemas, resulted in success on a challenging project. According to Mike, “These new features provide us with a level of data-mapping flexibility we haven't had before and take complex data-mapping and migrations tasks to a whole new level of productivity. Check it out, complex data mapping - spatial and nonspatial - doesn't get any better than this. ”

Learn more about FME 2011's SchemaMapper from the FME Evangelist at [www.safe.com/NewSchemaMapper](http://www.safe.com/NewSchemaMapper).

## The Power of Scheduling in FME Server

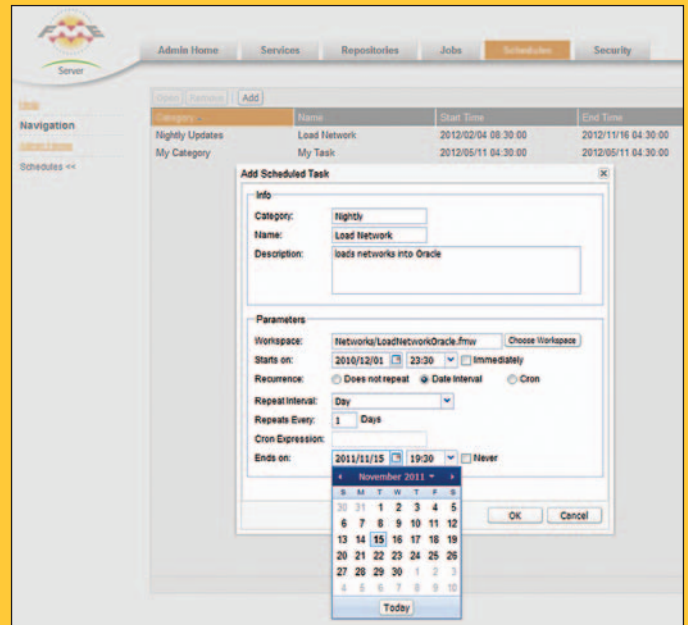
In the dark of night, with no one around, FME workspaces are silently running and transforming data - with no human intervention... is this some previously unknown superpower?

Nope – it’s the new scheduling tool in FME Server.

Now you can set workspaces stored in the FME Server repository to run overnight, on weekends, or whenever you want. Simply specify the start time, repeat interval, parameters, etc. and “Shazam”, the task is set.

Want even more power? Add a Category name like “Nightly Data Loads” to similar tasks for more efficient planning and maintenance.

If you want to free your team and their computers from the time it takes to run and maintain large or recurring data transformation jobs, try out the new scheduling tool in FME Server and see how it can help.



## Super-Fast, Super-Simple REST Services

After a long day spent battling tight deadlines, resource issues, and evil data challenges, a Spatial Superhero can appreciate a few well-designed features that make life easier. That’s why web developers and integrators will be happy to hear that we’ve introduced a REST API in 2011 that makes integrating FME Server’s robust capabilities into custom web applications faster and easier than ever before.

To use the new REST Service, simply integrate URLs into your web application for access to virtually any FME Server feature or capability - regardless of what framework you’re designing your application in. When a URL is invoked in your application, the transformation request from the underlying workspace automatically returns the results as an HTML, XML, or JSON data stream so you can work with the results the way you want. For example, to build a custom data download order form in your

application, simply log on to FME Server, browse to the workspace of interest in the new fmerest interface. Once there you have access to everything you need in the workspace, including information on the readers and writers, feature types, published parameters, and resources.

By giving you the power to access this information via straightforward URL requests, you can now build dynamic, easy maintainable, highly customizable web applications faster than Superman™ ever could! This URL-driven approach also makes integrating the power of FME Server with ArcGIS® Server, Google Maps™, Bing™ Maps, OpenLayers, and other web API’s fast, secure, and seamless. So if you’re feeling the pressure to get your data assets into the hands of people who need it, see how FME Server and REST can expedite your ability to meet these requirements.

Expert Tip!



*As a software developer, your first instinct with FME might be to code a solution from scratch; but it’s actually often easier and more flexible to define a translation in FME Workbench and then execute it programmatically. To help, FME 2011 introduces IFMEWorkspaceRunner, a new FME Objects interface that simplifies running a workspace from within a separate application. Learn about the methods available within IFMEWorkspaceRunner at [www.safe.com/WorkspaceRunner](http://www.safe.com/WorkspaceRunner).*

– Mark Ireland is a Senior Product Specialist in Safe’s Professional Services department.

## 3D PDF to the Rescue!

What happens when you expose a talented group of GIS professionals to FME Server? Well, in the case of the GIS & Geo-Information group at **Shell Canada**, they mysteriously develop superhuman abilities to create new and compelling ways for end users to visualize complex information.

Oil and Gas exploration and production is perhaps one of the most spatial data-intensive industries there is. Every step of the process, from finding the resources to drilling the well to producing the resource to sending it downstream through a pipeline, is dependent on spatial information. Multi-million dollar decisions are constantly based on scientific interpretation and positional data. Major oil companies like Shell Canada have specialists in all of these areas, and each group has their own set of requirements, high-powered specialized software tools, and extensive datasets.

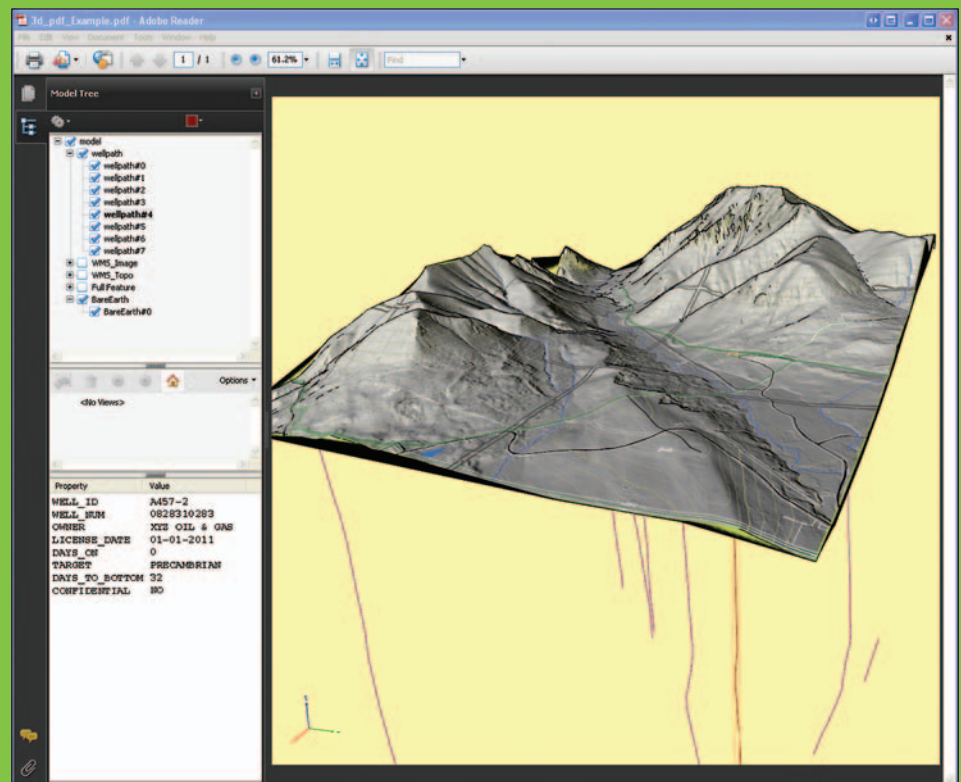
The task set in front of **Cameron Watson**, Supervisor, GIS & Geo-Information, was to find a way to consolidate this information and present it – on demand – to multiple stakeholders on a project, many of whom are non-technical, and most of whom don't have access to the GIS or geoscience software applications that Shell's various technical personnel use.

The solution? The elegant simplicity of 3D PDF, with the power of FME Server behind the scenes. Cameron's department had been receiving requests for this consolidated view of information for some time – and when FME added the ability to apply textures to 3D surfaces in 2010, it was time to jump in and deploy.

For end users, it's simple – they just draw a box on a webmap interface of the area of interest they would like to see. This AOI is sent to FME Server, which then retrieves the data content

from ArcSDE™, including well bores with attributes, LiDAR-derived digital elevation models, aerial imagery, topo maps, contours, wellsite surveys, well spots, pipelines, hydrography, roads, and other related surface information. The source data is a combination of raster and vector, 2D, and 3D.

*"3D PDF is the perfect way for us to distribute this information."*



The 3D PDF is viewed in Acrobat, with interactive viewing tools and attribute querying.

With source data assembled, FME prepares for it viewing – draping imagery and vector data over DEM's, styling the various datasets, and creating 3D vectors of each wellbore in the area. The user is presented with the end-result – a fully self-contained PDF that they can view as they wish – and the 3D PDF controls let them zoom, pan, and rotate the view as they like. The PDF also contains attributes on the well bores – the user just clicks on the item of interest to see the details.

"3D PDF is the perfect way for us to distribute this information," says Cameron. "Users simply view it in the familiar Acrobat Reader®, and we still can provide them with the depth of information they need. With 3D, they can truly visualize a location, the impact of surrounding terrain and assets, and also see what's going on underground."



*FME User Spotlight:*

**Brendan Cunningham, GIS Project Leader,**

Kilkenny County Council, Ireland, FME User for 7 Years

**What is your role at Kilkenny County Council?**

As the sole member of our GIS department, I do a bit of everything: from development to tech support. I work with ArcGIS and MapInfo® and regularly handle data from MicroStation® and AutoCAD®. Needless to say, FME plays a big role in all of this work.

**How is Kilkenny dealing with INSPIRE requirements?**

In order to meet Annex I, we built a metadata publisher that lets people input text into an easy-to-use web form. Using FME, their input is then automatically transformed into INSPIRE-compliant XML. For Annex II and III, we plan to use FME Server.

**We hear you use FME outside of work as well?**

You bet. I'm using FME to process football statistics and select likely outcomes for upcoming matches. You can see how I'm doing at [www.brendancunningham.com](http://www.brendancunningham.com).

**Any suggestions for other FME users?**

Take an FME training course, even if you have taken one before. After attending a second course to refresh my skills, I discovered so many new best practices that I've reduced duplication in my workspaces by tenfold.

**How do you spend your free time?**

I love football, hiking and cinema. When travelling, I tend to be a bit more adventurous, having bungee jumped in South Africa, sky dived in Argentina, and zip-treked in Canada. I'm also the former world champion of Goldeneye on the N64... at least that's what I tell my friends.

**Take Your FME Skills Up, Up, and Away!**

To help users take command of their spatial data, we've completely revamped our FME tutorials. These tutorials are perfect for new users who want develop their FME superpowers.

**FME Desktop Tutorial**

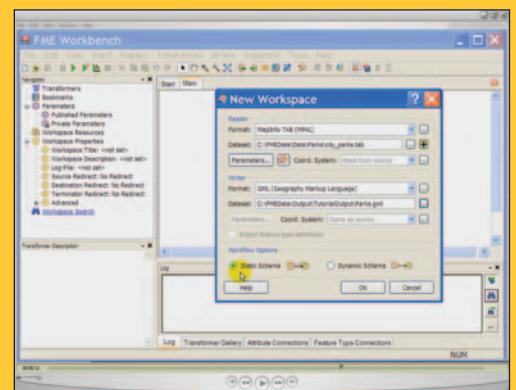
The FME Desktop Tutorial includes exercises and instructions for tackling four common usage scenarios, as well as a useful chapter on installation and licensing. Once completed, you'll find yourself able to leap tall data challenges in a single bound with newfound expertise on:

- Data Reprojection
- Content Transformation
- Data Restructuring
- Format Translation

**FME Server Tutorial**

Faster than a manual process, more powerful than a traditional translation, with enough scalability to share a mountain of data – it's FME Server. Take the FME Server Tutorial to gain proficiency in these key topics:

- FME Server Basics
- Using Parameters
- Delivering Data
- Using the Upload Service



**Bonus:** Each topic includes a video to ease you into the material.

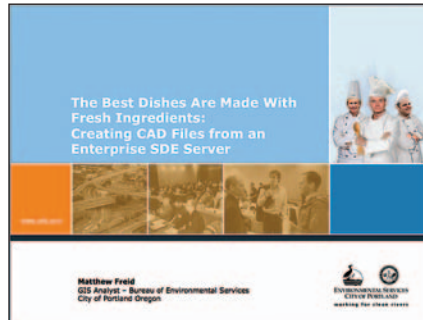
**Bonus:** You can try the FME Server Tutorial with only an FME Desktop license.

Try the tutorials today:  
[www.safe.com/Tutorials](http://www.safe.com/Tutorials)

## Heroic Feats Recounted at User Meetings

Searching for time-saving tips and cost-cutting ideas? Attendees at FME user meetings this past fall discovered just that, while also enjoying the opportunity to network with fellow users and Safe representatives.

At one such gathering in Seattle, USA, **Matthew Freid** shared the newest use for FME at the **City of Portland's Bureau of Environmental Services**. Faced with the challenge of providing the most current data to inside and outside users in their preferred formats (both CAD and GIS) – Matthew turned to FME. The bureau now has a flexible way for users to access the most current information from one central data repository, thanks to a seamless process that sees FME used to create CAD files from an Enterprise SDE Server.



Meanwhile, the FME Scandinavian User Conference 2010 saw 120 users converge on Malmo, Sweden. One of those who presented was **Thomas Norlin** of the **Swedish Transport Administration**. Thomas shared how they're using FME Server for model transformation and quality control to transform their 2.5 million road links into INSPIRE-compliant data. As an aside, he also shared how he'd solved a road-slope problem with FME in three hours, a problem which they had initially estimated as a 1 million SEK development project.



View the presentation slides at: [www.safe.com/Freid](http://www.safe.com/Freid) and [www.safe.com/Norlin](http://www.safe.com/Norlin).

*Update:*

## New Safe.com Website

During the course of 2010, Safe embarked on an ambitious challenge to create a fresh, innovative [www.safe.com](http://www.safe.com) website that better meets the needs of the diverse audiences we serve.

As a current FME user, you'll benefit from easier access to relevant content, resources, and news through:

- A revamped FME User Central
- A new Developer Community
- Embedded formats search on most pages
- A redesigned training course schedule
- An improved site search
- ... and much more

Test drive the new site at [www.safe.com](http://www.safe.com).

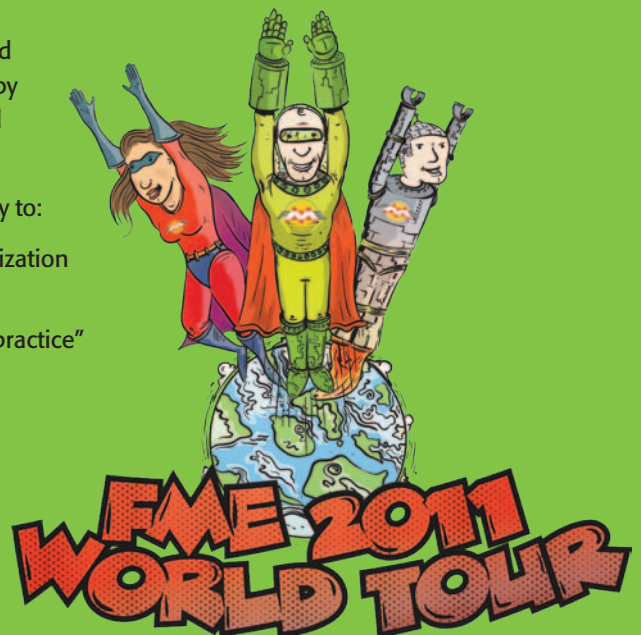
## World Tour Announcement

Across the globe, the FME Beacon is beaming bright in the sky calling users and experts to join the League of FME Superheroes. Hone your FME superpowers by participating in the FME 2011 World Tour, a series of free 1-day events that will help you smash through spatial barriers and triumph over evil data challenges.

During these interactive and educational gatherings, you'll have the opportunity to:

- Gain new insights into how FME 2011 can help you protect your organization from the latest data interoperability villains
- Develop your FME superpowers through technical "how to" and "best practice" sessions delivered by Safe partners and staff
- Team up with FME Certified Professionals and Trainers to discuss and troubleshoot technical issues
- Network with local FME superheroes (Who knows? You might even run into CADwoman, Captain Interop or RasterMan.)

Join us in more than 25 cities across 10 countries this spring. To register or for more details, visit: [www.safe.com/FME2011WorldTour](http://www.safe.com/FME2011WorldTour).



## Follow us on Twitter

We'd love to hear from you on Twitter.

- @SafeSoftware: Read news and learn what Safe Software is up to
- @FMEDoctors: Discuss your technical matters with FME experts
- @FMEvangelist: Find out about cool features in FME
- @FMEBetaBuilder: Receive automated updates on new FME betas

## About FME

The FME technology platform makes it possible to transform spatial data to use and share. It solves more spatial data transformation challenges across more formats than any other solution, making it easier for professionals to solve data interoperability headaches and help their organizations meet their business goals and required standards.

Today, FME is the dominant technology for spatial data transformation. It powers our FME Desktop and Server software and the solutions of more leading spatial data application vendors than any other technology. It's used by tens of thousands of customers worldwide across a wide range of industries. FME is made by the experts at Safe Software. Learn more about achieving total spatial data mastery at [www.safe.com](http://www.safe.com).

## Blogs We Read at Safe

### **sworldwatch** by Alfred Sawatzky

Keep up to date on issues and trends in Smallworld, and learn how to use FME more effectively with it. Here are a couple of sample topics:

- Using #FME to mash open data into #OSM addresses
- FME Import Zoom to Smallworld Map

Visit: [sworldwatch.blogpost.com](http://sworldwatch.blogpost.com)

### **Geolassi** by Lassi Tani

Get the lowdown on a variety of FME topics from Lassi Tani, an FME expert with a European perspective on interoperability.

Here are a couple of sample topics:

- FME Scandinavian User Conference 2010
- Spatial Data Transformation

Visit: [geolassi.wordpress.com](http://geolassi.wordpress.com)

### **bbox.me** by Ulf Månsson

Learn about bbox.me and see cool FME things from FME artist extraordinaire, Ulf Månsson. Here are a couple of sample topics:

- Cube Art in FME
- Mapping my drive with FME – Captain's log "C:\Program Files (x86)"

Visit: [bbox.me](http://bbox.me)

## Fil Vera, Director of Engineering

Joined Safe Software in February, 2001

### What is your role at Safe?

As the Director of Engineering, my primary focus is on leading our Product Integrations team. I'm also involved with developer recruitment and am responsible for project management of several key initiatives.

### Which companies does Safe work with on FME integrations?

Esri®, Autodesk®, Integraph®, Pitney Bowes, and many others. My team works closely with all of our partners to ensure our FME integrations and OEM products meet their customers' needs.

### What are you most proud of?

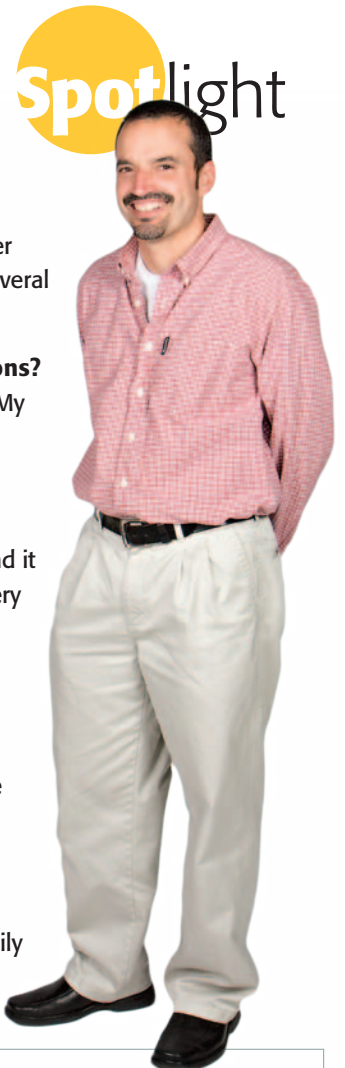
Having interviewed over 1,000 people in the last 10 years, I find it really rewarding to work side-by-side with so many of these very same people each day.

### Who was your favorite superhero growing up?

My older brother was really big into superheroes (he's now a rocket scientist at NASA – no joke!), so I was exposed to many obscure ones like Green Lantern, Atom, and Aquaman, but the one who I liked best was Canada's own Captain Canuck.

### Tell us about some of your hobbies.

I'm a big sports and fishing fanatic. I also love spending time with my family and especially look forward to annual Vera family father/son fishing trip.



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