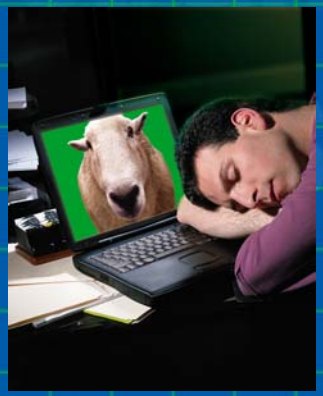
SpectrumSCM

"One solution for all your Source Configuration Management Needs"



SPECTRUM SOFTWARE, Inc.

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www.spectrumsoftware.net

Target Customers - Everyone Needs it !!

- Any user who is part of a project life cycle that deals with creation, management and release of any 'e-Asset '*(source code, text, documents, images, drawings, proposals, contracts, web pages etc)*

- IT Companies
- Software Development Teams
- Call Centers
- Help Desk department
- Engineering Firms
- PR, Marketing, Advertisement Agencies
- Desktop Publishers
- Multimedia Companies
- Lawyers, Insurance, Accountants
- Traditional Departments (Sales, Finance, Accounting, etc)

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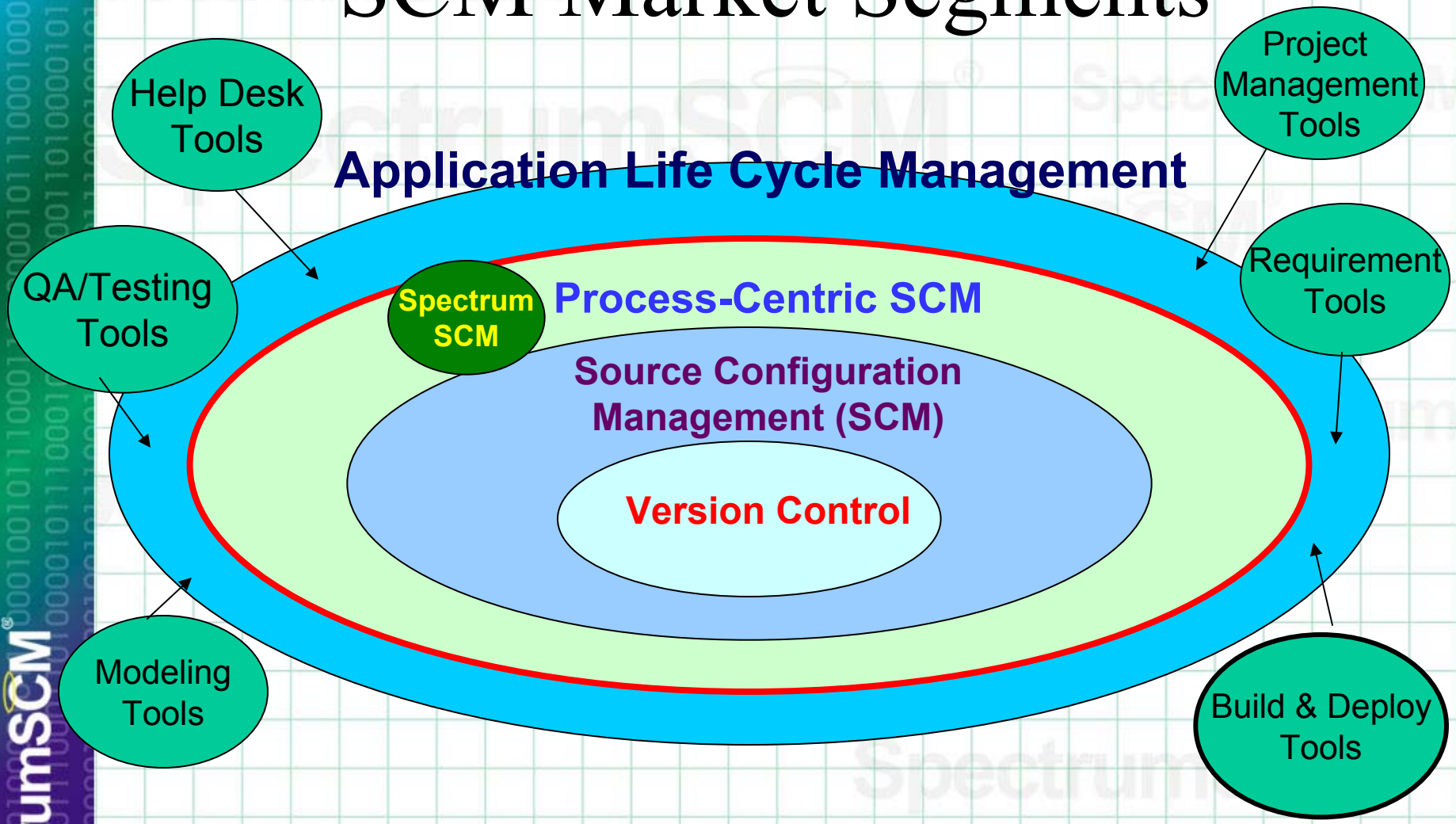
SCM Market Segments



Each solution segment includes all the capabilities associated with the inner segments. Total solution segment functionality increases from segment to segment.

SpectrumSCM®

"Limitless Versatility, Unlimited Productivity"

Spectrum Software

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Levels of SCM Support

- **Version Control** – Management of changes to individual software artifacts, or any source artifacts/ ‘e-Assets’.
- **SCM** – Management of changes to groups of software artifacts or source artifacts.
- **Change Management** – Management of the process by which changes are made to software artifacts or any source artifacts.
- **Process-Centric SCM** – Automation of software development lifecycle processes through unified software configuration management and software change management.

SpectrumSCM®

The first truly integrated, full-featured, platform independent SCM tool that includes:

- Version Control
- Issue Tracking
- Change Management
- Process Management
- Work Flow, Branching
- Parallel Development
- Release Management and much more …

all seamlessly integrated in one single system with out any dependency on the underlying OS.

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SpectrumSCM®

The most economical full-featured SCM tool available.

Whether it is source code, text, documents, drawings, images, artwork, web pages, contracts, proposals, etc. you have a comprehensive solution to protect your most vital E-ASSETS.

- Version Control
- Problem/Issue Tracking
- Process/Workflow Management
- Release Management
- Change Management and more

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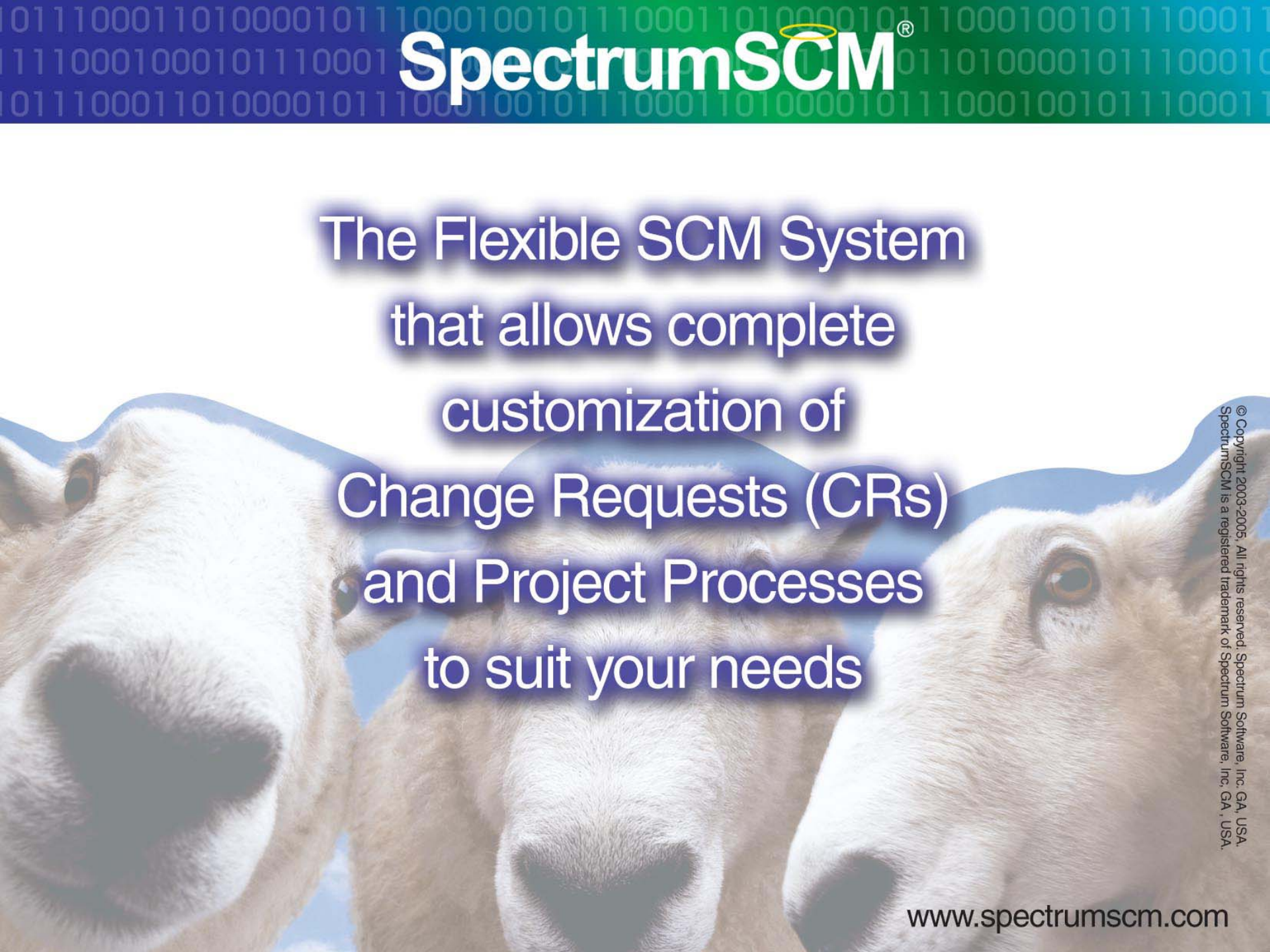

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SpectrumSCM®

The only SCM solution that seamlessly integrates multiple functionality in one system

- Manages multiple teams across multiple locations
- Creates any previous release of E-Assets any time
- Relates actual source changes to a trackable problem statement
- Manages user-definable processes to effectively control changes to your E-Assets
- Tracks and audits approvals and communication amongst stakeholders and team members

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SpectrumSCM® *at a glance*

Take a look at SpectrumSCM. The world's first truly platform portable, full-featured Source Configuration Management System.

SpectrumSCM is powerful and yet easy to use. Unlike other SCM systems, SpectrumSCM is not comprised of individual modules that are interfaced together. SpectrumSCM is designed from the ground up with issue tracking, process management, release management and version control built right in.

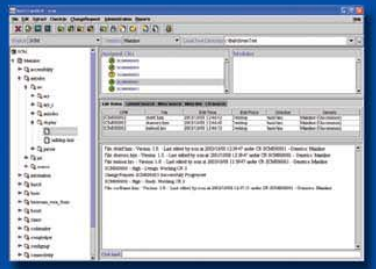
Version Control

Ability to relate actual source changes to a living, trackable problem statement.

In SpectrumSCM Version Control is not just labels and tags like stand alone version control tools. All changes made to any file are properly tracked and managed thorough SpectrumSCM's tightly integrated change request management feature set.

Main Screen

Uncluttered, all features a click or two away



Issue Tracking

All Changes are always traceable to a task and a user

SpectrumSCM is task based, which means that work items or issues are easily tracked and reported on. Tasks or issues follow a user defined process life-cycle. They are identified through Change Requests (CRs).

Change Requests are the glue that assures that features, changes, and fixes are connected to the file changes that implement them.

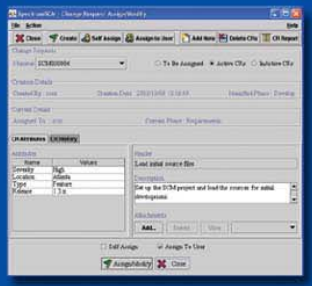
Change Request Attributes

Attribute sets and values are configurable on a per project basis.

Change requests in SpectrumSCM can have any number of user defined attributes and value pairs. Attributes can have pre-defined value selections and can even be edited by the user to create unique values.

Change Management

CRs guarantees the integrity of every change



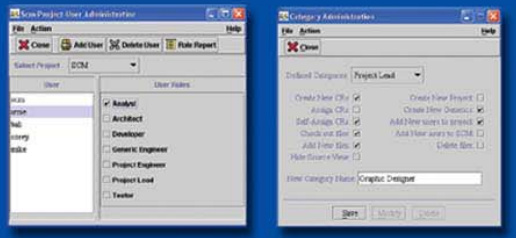
Change request management screens in SpectrumSCM are intuitive and easy to work with. Users with proper access permissions can change assignments, track state history, edit information, look at status of particular issues or units of work, add notes, attach emails, docs and other supporting information.

File changes are managed by CRs that document why the work is being done, why changes are performed (or not), and provides mechanisms for enforcing process steps.

User Definable Roles and Permissions

Custom define user-roles and access permissions

Custom role definitions are easy to create and modify using SpectrumSCM. New user categories can be defined to fit your company job titles. Users can be assigned the role of developer on one project and tester or administrator on another.



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SpectrumSCM®

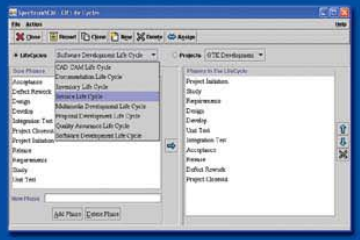
Truly A Developer's Dream……

Find out how SpectrumSCM enables an entire enterprise to benefit from the power of a truly integrated Source Configuration Management system. The versatility of SpectrumSCM is made evident through its simple yet powerful Release Management feature, its flexible Workflow APIs, Event Triggers and all the essential reports that you need to manage the entire project life-cycle associated with the creation and release of any 'e-Asset'.

Fully Customizable Process Management

Tracks and Enforces Project Life-Cycle Steps

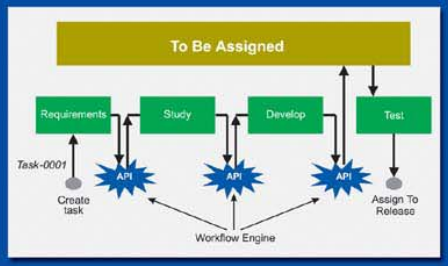
SpectrumSCM provides the flexibility to define and enforce a process that suits the culture of your organization or the new culture that you wish to introduce. Provides for full customization of project life-cycles and change request attributes at the project level.
Allows you to bring in the benefits of best CM practices across an entire organization .



SpectrumSCM API

Implement business rules and easily integrate with external systems

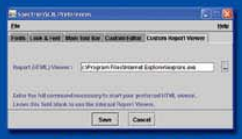
SpectrumSCM APIs allows an organization to create an interface between external systems and the SpectrumSCM server.
In particular, this feature can be used to automate business rules surrounding change request transitions between life-cycle phases. Our workflow engine and custom workflow APIs with event triggers, allow an organization the ability to create and tailor a custom lifecycle for their development needs.



User Preferences

Customize editors, look-n-feel, etc…

SpectrumSCM is highly configurable. Custom editors and report viewers can be easily added to the system. It's also easy to adjust system fonts and the overall look and feel. Use custom skins to create a truly unique look and feel.



Advanced Diff/Merge Editor

Apply a difference edit with a single mouse click

Need advanced editing and merging capabilities? SpectrumSCM has you covered with built in visual diff/merge tools that allow you to perform merging operations on files with ease and confidence.

Release Management

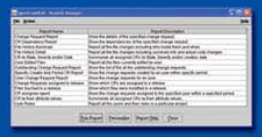
Creating releases has never been this easy.

Release management in SpectrumSCM is truly awesome. Instead of applying tags to repository resources, releases in SpectrumSCM are comprised of individual Change Requests, which makes release management easy to use and powerful. Provides for automatic dependency enforcement.

Reports

Everything you need for effective CM

SpectrumSCM supports a wide range of reports for effective configuration management right out of the box . Everything you need to effectively manage your business, process and product. Custom reports can be quickly and easily created and inserted into a running SpectrumSCM server through our custom report templates. Raw report data is also available to facilitate use with external report writing tools.



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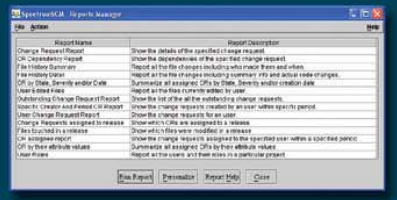
Reports

SpectrumSCM supports a wide range of reports for effective configuration management right out of the box .

Custom Reports

Custom reports can be quickly and easily created and inserted into a running SpectrumSCM server through our custom report templates. Raw report data is also available to facilitate use with external report writing tools.



Viewing a Report

The reports viewer shows the report in its HTML form. The report can be printed or saved to disk (as HTML, text or CSV format).

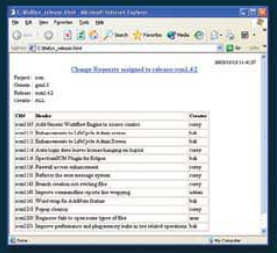
Personalizing a Report

Reports can be personalized by selecting the Personalize report button. Personalization allows the user to pre-specify popular reports and assigne them up onto his/her main screen reports menu.

Sample Reports

Report output in SpectrumSCM is detailed and to the point.

Change Requests assigned to release:
Show which CRs are assigned to a release.



Change Request Report:
Show the details of the specified change request. All details which you normally would have used other tools like MS Excel, MS Access, or other external methods are no longer required.

Files in a Release:
Shows which files were modified in a release. This report prints a complete listing of all Change Requests, their associated files and the version numbers of those files.

File History Detail:
Report all file changes including summary info and actual code changes.This report gives a line by line detail of exactly what has changed in a file over time and which change requests were responsible for the change.

File History Summary:
Report all file changes including who made them and when?

CR by State, Severity and/or Date:
Summarizes all assigned CRs by State, Severity and/or creation date.

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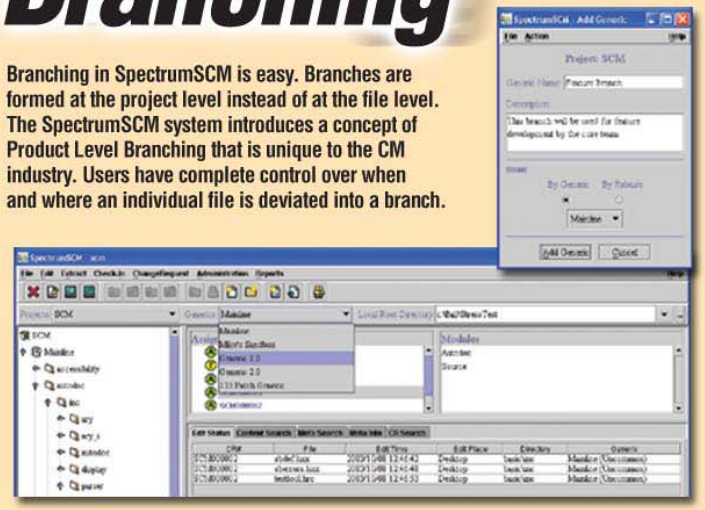
SpectrumSCM®

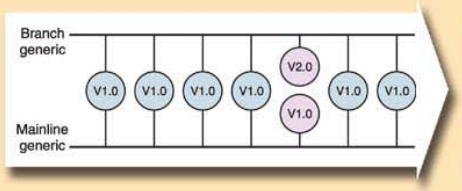
Branching

Branching in SpectrumSCM is easy. Branches are formed at the project level instead of at the file level. The SpectrumSCM system introduces a concept of Product Level Branching that is unique to the CM industry. Users have complete control over when and where an individual file is deviated into a branch.



SpectrumSCM, unlike other SCM tools, easily supports many different branching design patterns. Our white paper on advanced branching describes many of the most popular branching patterns used by SCM gurus across the globe. See our web site for further details on advanced branching techniques at:

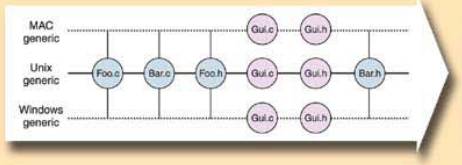
www.spectrumscm.com/WhitePapers/BranchingDesignPatternsupdate.pdf



Classic Branching Pattern

The classic pattern is the most recognized and most often used pattern for branching code. It allows individual developers to create alternate branches of code extended from the mainline development stream. Developers can choose to branch an individual file into a separate branch or leave the file common across several branches before they actually do the editing work. The diverged files are merged back into the mainline code stream when work has been completed.

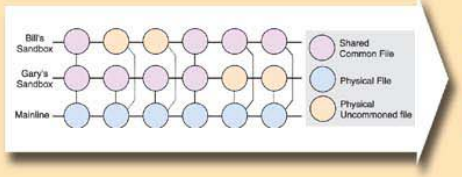
Advantage: Update multiple branches instantly without merging changes from branch to branch. The branches are clearly visible and well documented.



Parallel Development Pattern

The parallel development pattern allows two or more separate code streams to be developed in parallel. Work can continue on each individual branch while bug fixes can be applied to all branches simultaneously.

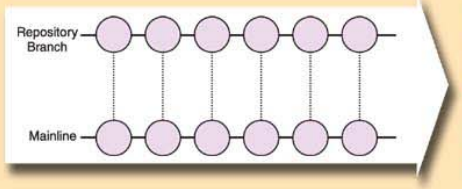
Advantage: Code changes to common files are immediately visible across all parallel development efforts. No need to manually merge code from one branch to another. Develop multiple releases of the same system, diverging only those files that will be impacted by each new feature.



Sandbox Pattern

The sandbox pattern provides each developer with a separate environment in which to work new features or bug fixes. This allows each developer to work exclusively on a separate branch of the code before being integrated back into the mainline.

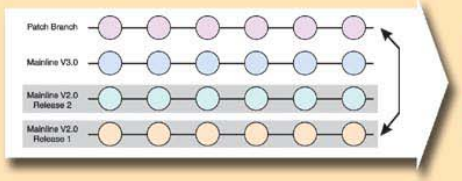
Advantage: Provides a protected development environment. The ability to manage long-term parallel development activities and isolate them from other development efforts and fixes.



Promotion (Repository) Pattern

This pattern is similar to sandbox pattern, but it operates in reverse. All work done by the development team occurs in the mainline branch. Only after features and bug fixes have been thoroughly tested and approved is the completed work merged into the mainline from the repository branch.

Advantage: The repository pattern guarantees that all code on the repository branch is in a known good state. The features and bug fixes included in the repository branch are well documented by the CRs used to create the releases. A release can be created at any point with the features that have been completed. The mainline only contains approved and tested code.



Patch Pattern

The patch pattern allows for a previously released version of a system to be repaired or extended and re-released. A previous release is patched by extending that release into a separate branch.

Advantage: Easily patch a previous release by applying this pattern, extending the code and then creating a new release without impacting any of the ongoing work on a different branch.

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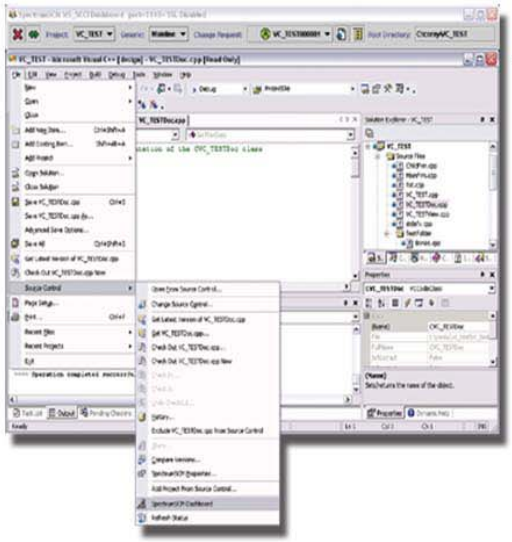
IDE Integrations

SpectrumSCM has strong integrations with the most common integrated development platforms including:

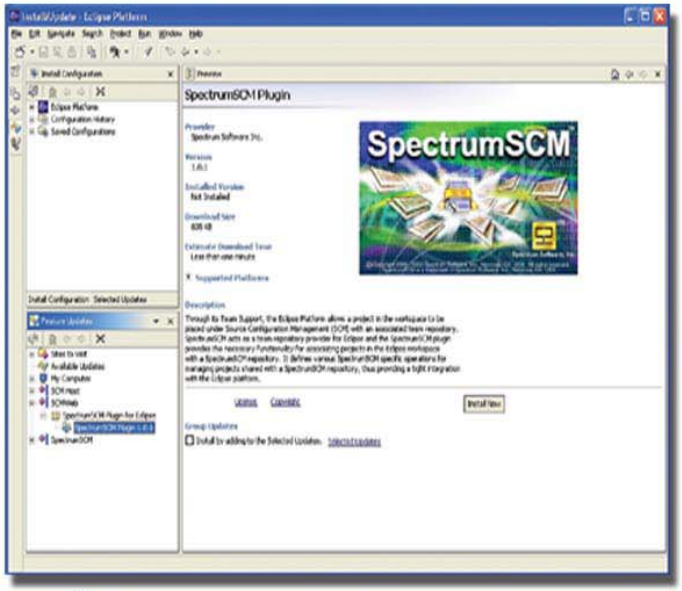
- Microsoft Visual Studio 6.0
- Microsoft Visual Studio .NET
- Microsoft Visual Interdev
- The Eclipse Platform
- IBM Websphere Studio Application Developer
- Other MS-SCCI compliant IDEs (IBM Visual Age for Java, Symantec Visual Café, TogetherSoft Together, etc…)



SpectrumSCM has native support for Microsoft Visual Studio and Visual Studio .NET and other SCCI compliant IDE's. This instantly provides the best CM practices while continuing work within the IDE environment.

SpectrumSCM's patent pending Dashboard technology gives IDE users access to the full power of the SpectrumSCM client through their favorite IDE, including:

- Parallel development via branching
- Allows Visual Studio users the ability to work on multiple branches concurrently while making all source level changes relative to a living change request document
- Issue tracking via Change Requests
- Visual differencing with SpectrumSCM's powerful graphical diff/merge tools.



SpectrumSCM seamlessly integrates with the Eclipse platform thus providing a full-featured SCM solution instantly for any application that supports Eclipse Interface Specifications.

All applications written to the Eclipse Platform interfaces are automatically able to use Spectrum as their Version Control provider. This includes tools like IBM's WSAD client.

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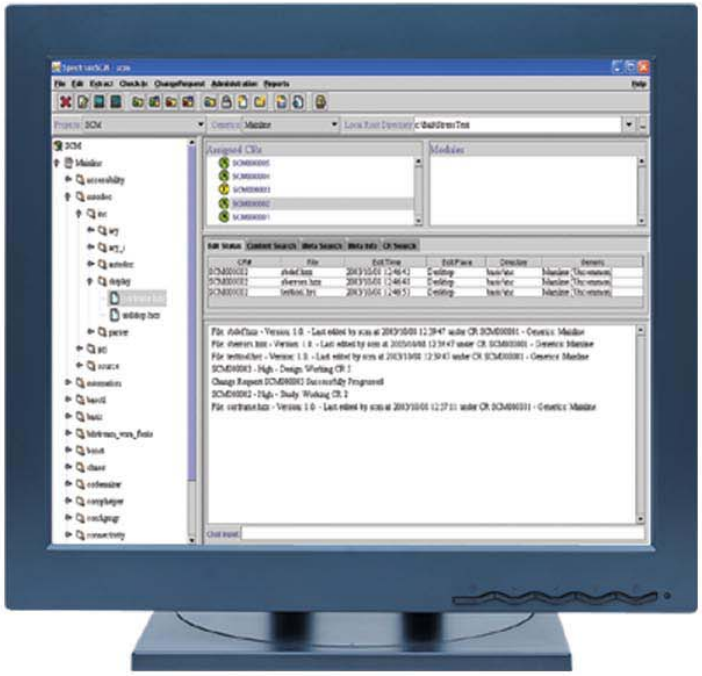
SpectrumSCM®

Task-based, Agile, Easy to use, Advanced Branching, Flexible, Powerful, Cost-effective, Fast, Customizable…

- Process Oriented
- Advanced Release Management
- User-defined Automated Workflow
- Easy To Use
- Extensive Reporting Capabilities
- Platform Independent
- Zero Administration
- Microsoft and Eclipse Integration
- Customizable Change Requests
- Supports Agile Methodologies
- Task-based
- Full Command Line
- User Roles and Responsibilities
- ACLs
- Assists in meeting SEI-CMM Objectives
- Broad Customer Base
- Fast and Light Weight
- SSL and Firewall Enabled
- E-mail Enabled
- Web Enabled
- User Defined Modules
- Industrial Strength DB
- LDAP Support
- Best in Industry Support
- Excellent Documentation
- Supports User Defined Editors
- Chat Feature
- Full Searching Capabilities
- Work Space Analysis
- SpectrumSCM API



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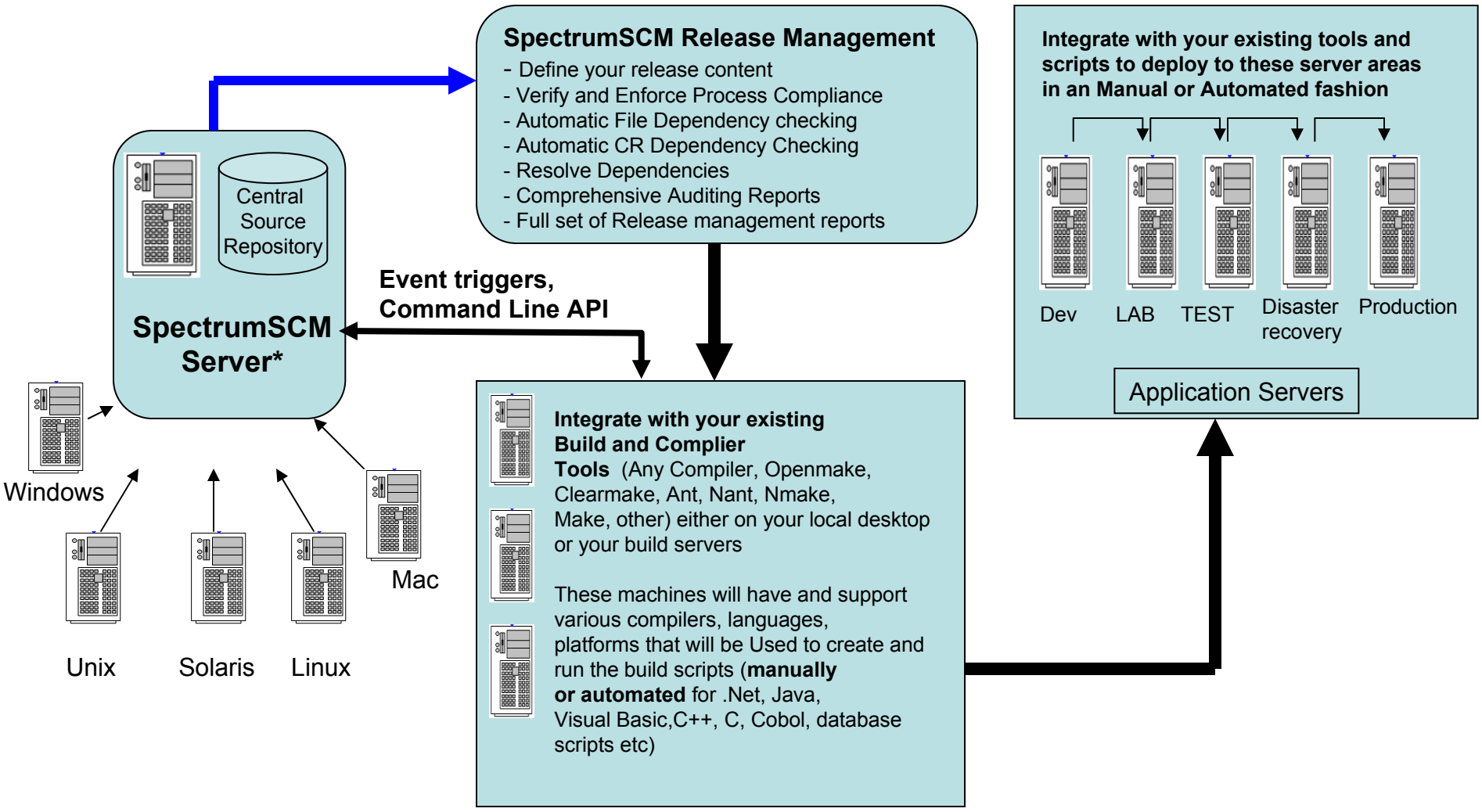
SpectrumSCM Build and Release Management



***SpectrumSCM repository can be used as the central source for storing source and binaries including complete deployment packages.**

Key Benefits Using SpectrumSCM in your Build and Deployment Process

- Acts as the gatekeeper and enforcer of your development build and deployment process.
- Provides the process framework to manage, track and audit your builds and production artifacts that are derived from the SCM repository.
- Ensures the integrity of any software release well before the sources reach your build and deployment area.
- Build process becomes repeatable, reproducible, enforceable and fully auditable.
- Eliminates most of the common error prone steps and offers many features to the build/release engineer to make better decisions.
- Enables users to detect and trouble shoot build errors quickly and efficiently.
- Most importantly it will enable you to **Do It Right The First Time**, **All The Time**

SpectrumSCM®

SpectrumSCM Environment

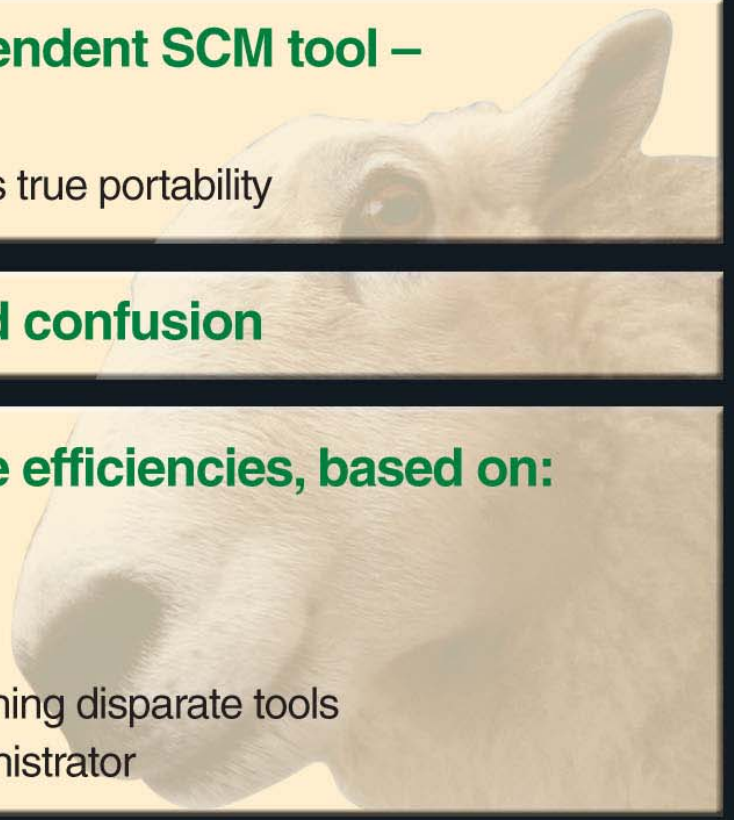
The only full featured, platform independent SCM tool – "Buy once, use anywhere"

- Java flexibility of platform and database enables true portability

Integrated functionality, not interfaced confusion

Delivers significant cost and resource efficiencies, based on:

- Elimination of need for separate tools
- Reduction in cost of training
- Reduction in integration costs
- Reduction in errors usually associated with running disparate tools
- Elimination of need for dedicated CM tool administrator



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SpectrumSCM Environment

Affordability and flexibility means SpectrumSCM can be deployed at every desktop

- Benefits of CM practices can be achieved across an entire organization

SpectrumSCM meets the needs of large enterprises

SpectrumSCM enables SMEs to take advantage of high-end CM capability at the price of a competitor's single function tool

Guaranteed cost savings of up to 80% and money back guarantee underline SpectrumSCM's cost advantages and performance confidence

Control and management delivered in a positive light

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What customers say...

"We researched several products. Two of us attended a weeklong class on a product similar in functionality to SpectrumSCM. After attending the class for the other product we decided that the product was too complicated and too inflexible to use for our entire team. Any changes to the design of components had to be done by scripts. It was incredibly tedious.

We chose SpectrumSCM because of its simplicity of use, dynamic changing of components, email notification capabilities and cost. It has allowed us to easily do configuration control on source code, documentation, and deployment distributions."

– Project Principal
A Large US Government Research Lab

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What customers say...

"Spectrum SCM provided an efficient way to handle our source-code control and configuration management needs. We began a new project and SCM allowed us to get up and running very quickly. Spectrum SCM made source code control easy. We did not have to waste a lot of time performing mundane tasks. Our software builds were simple and quick. Spectrum SCM is the best configuration management tool that I have ever used. It is very powerful yet easy to learn. The graphical interface is very user friendly. The support is excellent and I would strongly recommend the product."

– Eric C., Senior MTS
A Large US Telecom Company

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SpectrumSCM®

What customers say...

"We found SpectrumSCM to be a good company that has been easy to do business with and one with a product that has proven to meet our needs. The support we've had has been very good. We've even recommended the solution to others in our industry who have similar needs as ours. We are using SCM to govern 5 of our internal software applications now and we'll be adding two additional operations – our tech support team and our benefit services division into the realm of SCM within 60 days. We have found the solution to be robust (and yes it is complex), but "adoptable" and "adaptable".

- David M. Richard., Vice Pres. of IT
An Established Insurance Services Company

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What customers say...

"Some of the reasons we selected SpectrumSCM are:

- The high degree of integration of the component parts such as version control, issue tracking and reporting
- The multi-platform implementation; our development is on Linux, Solaris and Windows
- The change request-centric design of the product

As far as your support group goes, they've been first rate; very responsive and a pleasure to deal with. The same can be said about your company in general. Everyone I've dealt with has been very helpful and informative."

- Dennis B., Principal Software Engineer

A Large US Defense Contractor

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Why Customers Choose SpectrumSCM !

SpectrumSCM®

Why is SpectrumSCM Solution Attractive ?

- Process Centric SCM
- Support for Geographically distributed teams
- User access across LAN, WAN, Dial-up, Web etc.
- Multi-platform support – **Install once run anywhere**
- Workflow processes – ad-hoc and/or automated to fit project SDLC model
- Tight coupling of Issue/Change Management and Version Control
- Change Request to manage "why" a change is requested – new requirement, bug fix, enhancement, etc.
- Traceability of affected artifacts (requirement docs, design docs, source changes, test plans, etc.)
- Release Management, Support for Build and Deployment

SpectrumSCM®

"Limitless Versatility, Unlimited Productivity"

Spectrum Software

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Why is SpectrumSCM Solution Attractive ?

- Security – LDAP, Active Directory, SSL, SSH, Role-based, ACLs etc.
- IDE Integration – Visual Studio 2005, Visual Studio.NET, Eclipse, etc.
- Branching and merging
- Concurrent Development
- Support for working off-line
- Notifications through email and GUI
- Querying and Reports
- Audits, CMMI, ITIL, 21 CFR Part 11, Sarbanes Oxley
- Interfacing with External applications using API, CLI
- Co-existing with existing internal applications
- Ease of use, training, migration, administration, licenses

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Getting Started with SpectrumSCM™ is QUICK!

Steps

1. Installation - (Two – 5 minutes)
2. Create Project
3. Create/Add Generic (Branch or Baseline)
4. Create Life cycle Phases
5. Assign Lifecycle Phases
6. Create a user with proper roles /access
7. Create CR attributes
8. Create CR
9. Assign CR
10. Create local root directory
11. Check in / Check out files
12. Progress CR
13. Create Software Releases
14. Review Reports

Typical time to migrate from an existing system to SpectrumSCM and be productive: **< 15 minutes***

SpectrumSCM has migrated (i.e steps 2-14) a HR application containing 3800+ files (Ascii and Binary files) from VSS to SpectrumSCM: **7 minutes**.

Time could vary based on number and size of source files.

SpectrumSCM®

Don't waste
developers' time on inefficient SCM.

SpectrumSCM can make it happen at an affordable cost !

Bring structure, prevent errors, increase efficiency and reduce costs through the entire project life-cycle.

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Thank You for Your Time

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