

MKS

Practical IT Governance - Using MKS's Enterprise Software Change Management Solution for Greater Auditability and Control

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Agenda

- MKS & Enterprise SCM
- Sarbanes-Oxley – SCM, SPI & IT Governance
- Analyst Recommendations
- Basic Support Process Areas
- MKS's Enterprise SCM Solution
- Demonstration
- Closing Remarks
- Q & A

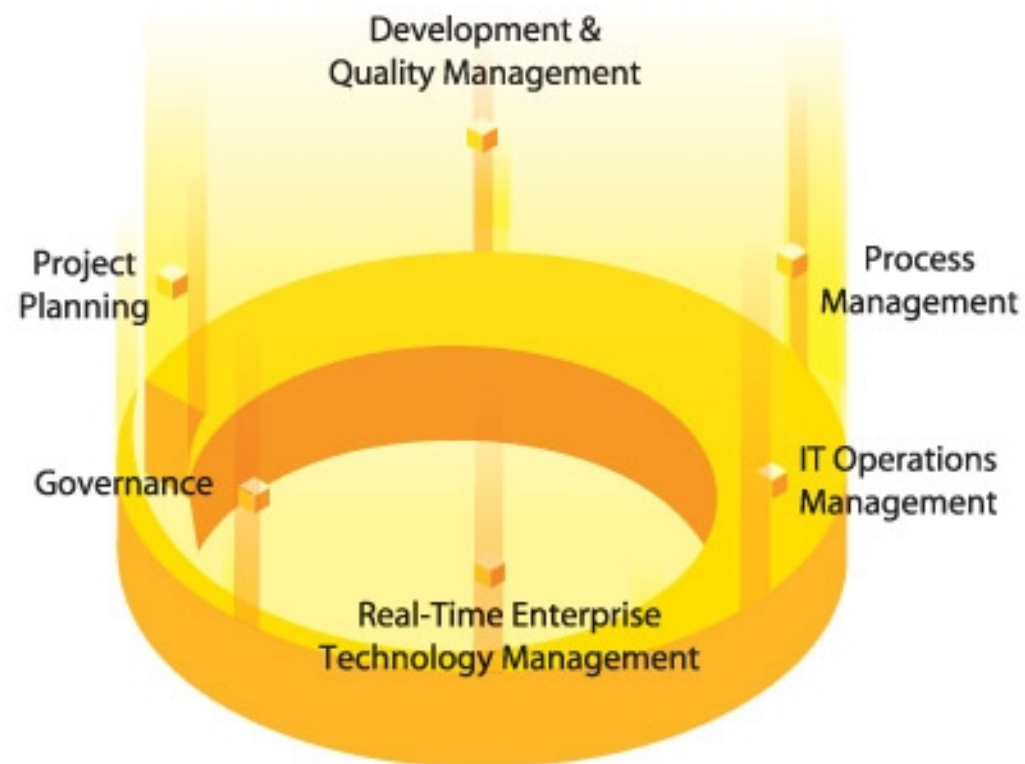
About MKS

- Preeminent provider of enterprise technology management (ETM)
- Help organizations better connect their business through flexible process, manage global development activity and protect critical software assets
- Global 1000 companies like HSBC Plc, Abbott Laboratories, Verizon Wireless and Northrop Grumman rely on MKS
- Founded in 1984, we serve more than 10,000 customers worldwide

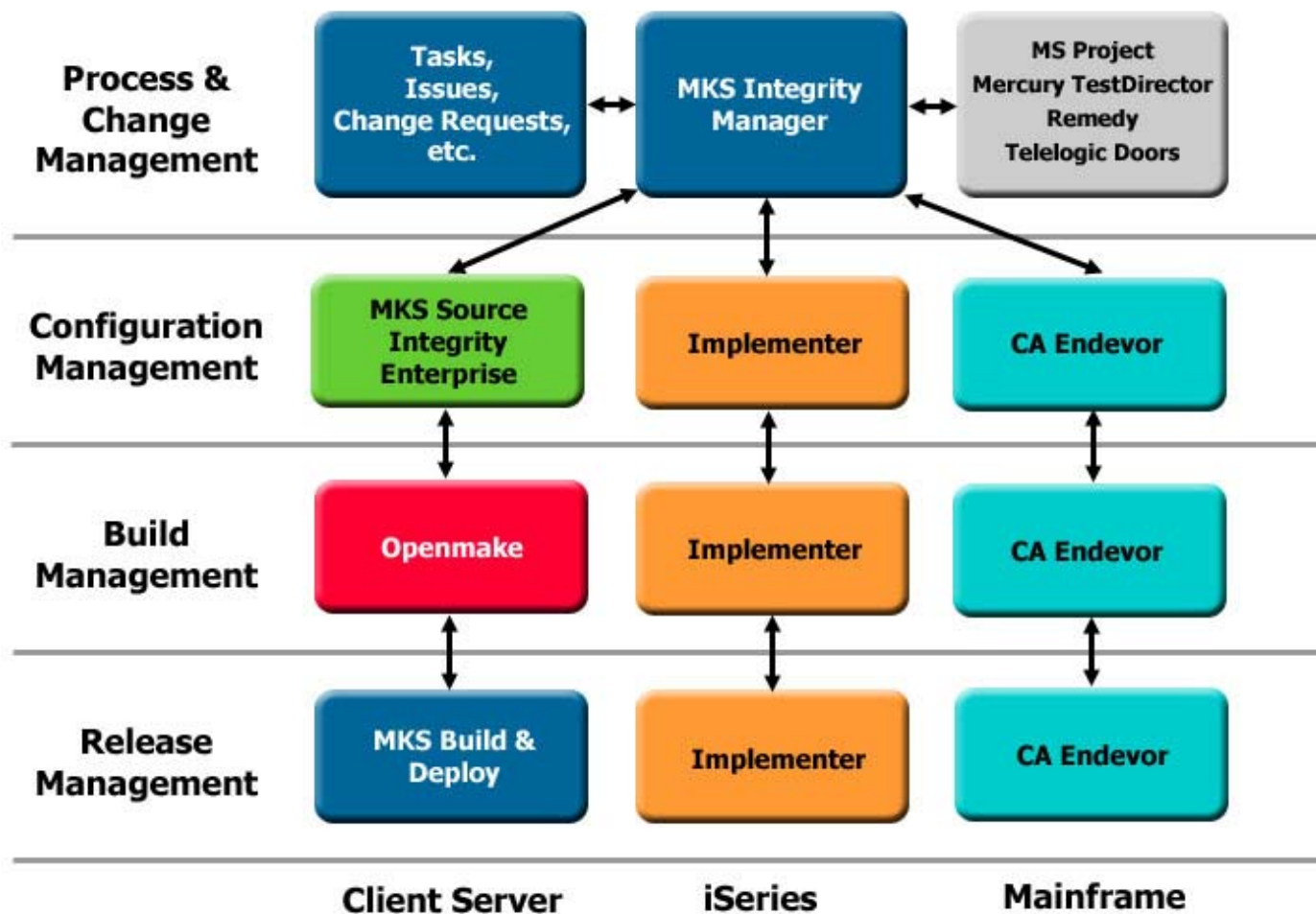


MKS & Enterprise SCM

- Enables IT organizations to seize control over development, integration, enhancement and support of technology and software systems
- Delivers process but not at the expense of agility
- Provides solid foundation for governance, regulatory compliance and quality improvement initiatives
- Spans multiple platforms, teams and tool environments
- Offers next generation architecture at a low TCO



MKS Integrity Solution



Comments From the IT Industry

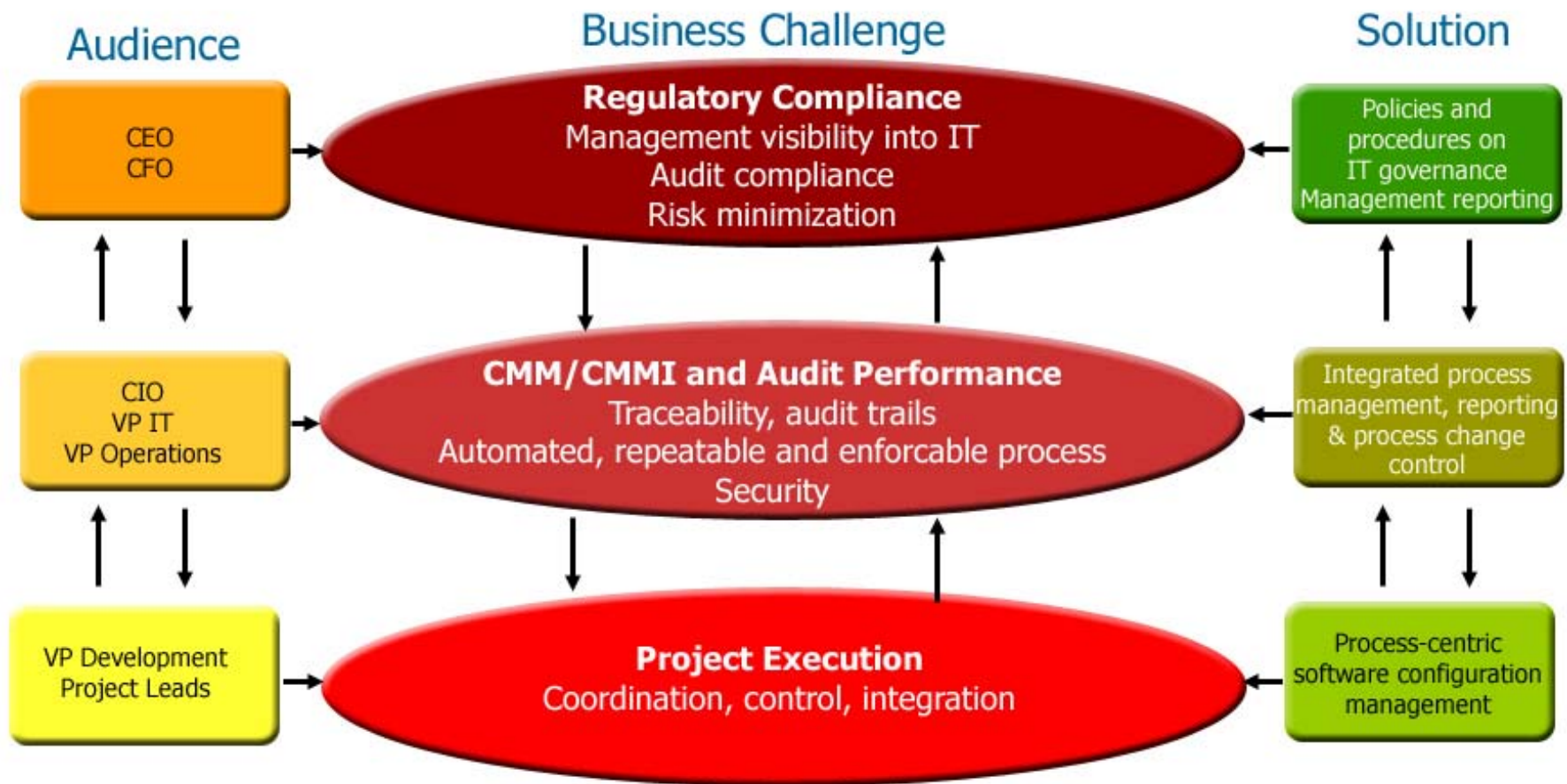
The Risk:

- "...many IT executives reportedly don't believe Sarbanes- Oxley has anything to do with IS operations. They couldn't be more wrong."—Gartner, 2003
- "You may think the Sarbanes-Oxley legislation has nothing to do with you. You'd be wrong."—CIO Magazine
- "85 percent of companies predict that SOA will require them to make changes to their IT and application infrastructure."—AMR Research
- Leading CIOs recognize that they need to address the SOA issue before it addresses them.

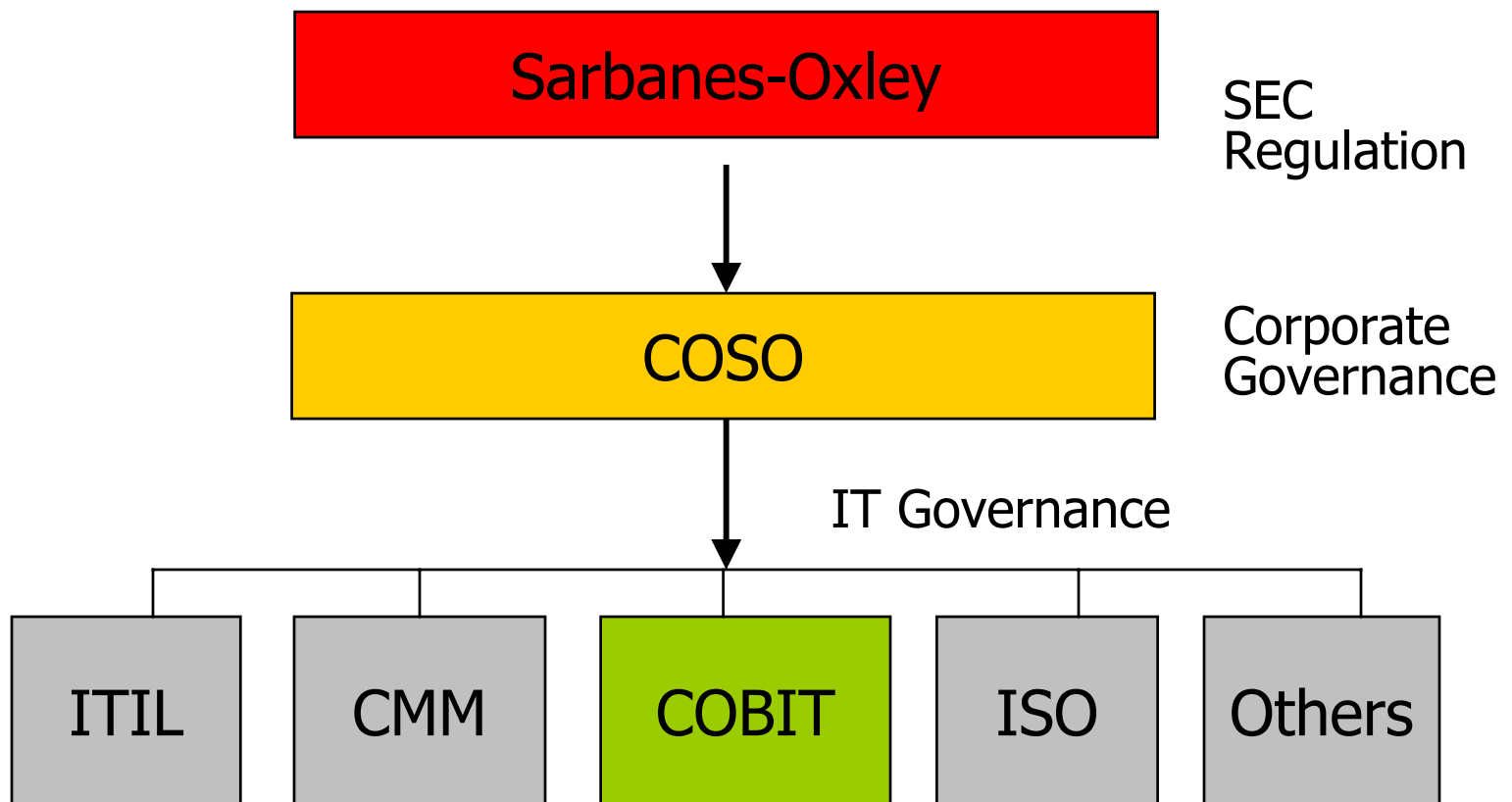
The Challenge:

- Few CIOs have a strategy to respond.
- Few CIOs have the resources to respond.
- Few CIOs know what technologies will help.

SCM, SPI and IT Governance



Sarbanes-Oxley and Control Measures



For IT Governance



IT leaders must:

- Centralize and improve visibility and control across all computing platforms and systems in the enterprise;
- Ensure IT processes are documented, consistent, automated and repeatable;
- Satisfy the stringent requirements of both internal and external auditors.

MKS delivers a solution that:

- Improves collaboration between IT staff
- Connects business and IT processes
- Offers detailed audit trails of policies, processes and software and system change

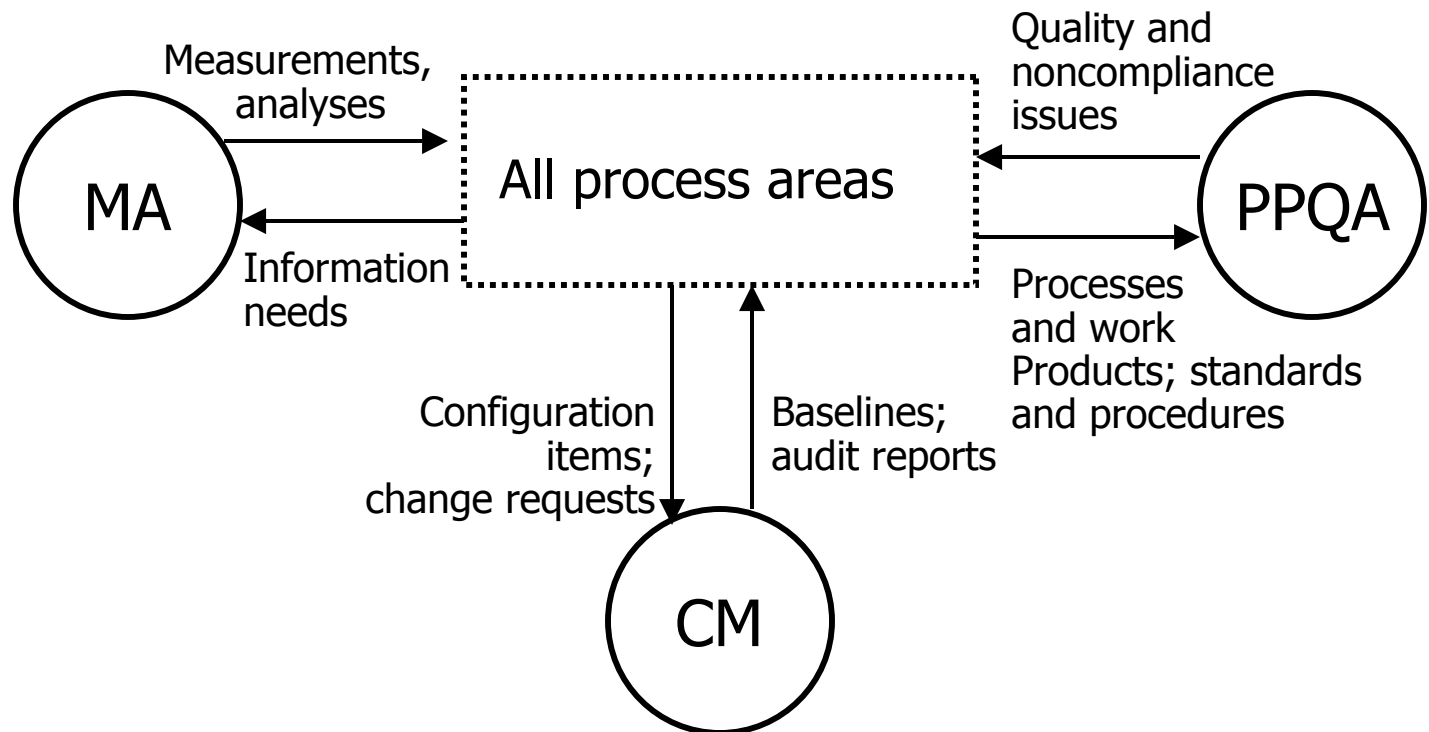
Analyst Recommendations

"Process-centric software configuration management (SCM) can be leveraged to help with Sarbanes-Oxley compliance. By using the issue management and workflow support provided by SCM systems directly, any existing business process (not necessarily a software development process) can be automated, with direct tracking of all work completed, workflow integration with human beings, and full audit trails...

...Companies with a strategic governance initiative, or those companies that have to meet regulatory and auditory compliance that goes beyond financial reporting into their very development processes, should investigate process-centric SCM for the reasons given above."

- Uttam Narsu, Principal Analyst, Forrester Research

Basic Support Process Areas



Procedures Under Version Control

Check List: Project Plan - Microsoft Internet Explorer


File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Media

Address C:\temp\Checklist_Project_Plan.htm Go Links

| | | | | | | |
|---|---|---|---|-----|----------------------------|-----|
| 4 | Master project schedule exists, identifying Development, QA, and Documentation activities for all committed features and milestone dates. | Provide all schedules to Project Manager. | Development, QA, Documentation | YES | | YES |
| | | Create integrated project schedule and post it on the project page. | Project Manager | NO | See Note C | |
| 5 | Risks have been identified and mitigation strategies developed. | Identify risks and mitigations. | Development, QA, Docs | YES | | YES |
| | | Produce risk mitigation plan. | Project Manager | YES | | |
| | | Approve risk mitigation plan. | Development, QA, Documentation, VP R&D, Project Manager | YES | | |
| 6 | A tracking mechanism using issue trends exists to monitor project status. | Issue trend charts accessible via project page. | Project Manager | Yes | | YES |
| | | QA defect analysis in place and accessible | Project Manager, QA | Yes | | |

| Evaluation Team | We Hereby Agree to Proceed | | |
|----------------------|----------------------------|-----------------------------|---------------|
| | Name | Title | Date |
| Product Management | Colin Doyle | Product Manager, SI | July 25, 2003 |
| Development | Jeff Smith | V.P. R&D | July 24, 2003 |
| Project Management | Blair Ernest | Project Manager | July 24, 2003 |
| QA | Phil Ruby | Director- Quality Assurance | July 25/03 |
| Documentation | Russ E. Brown | Mgr Documentation | July 24, 2003 |
| Global Customer Care | Not Applicable | | |



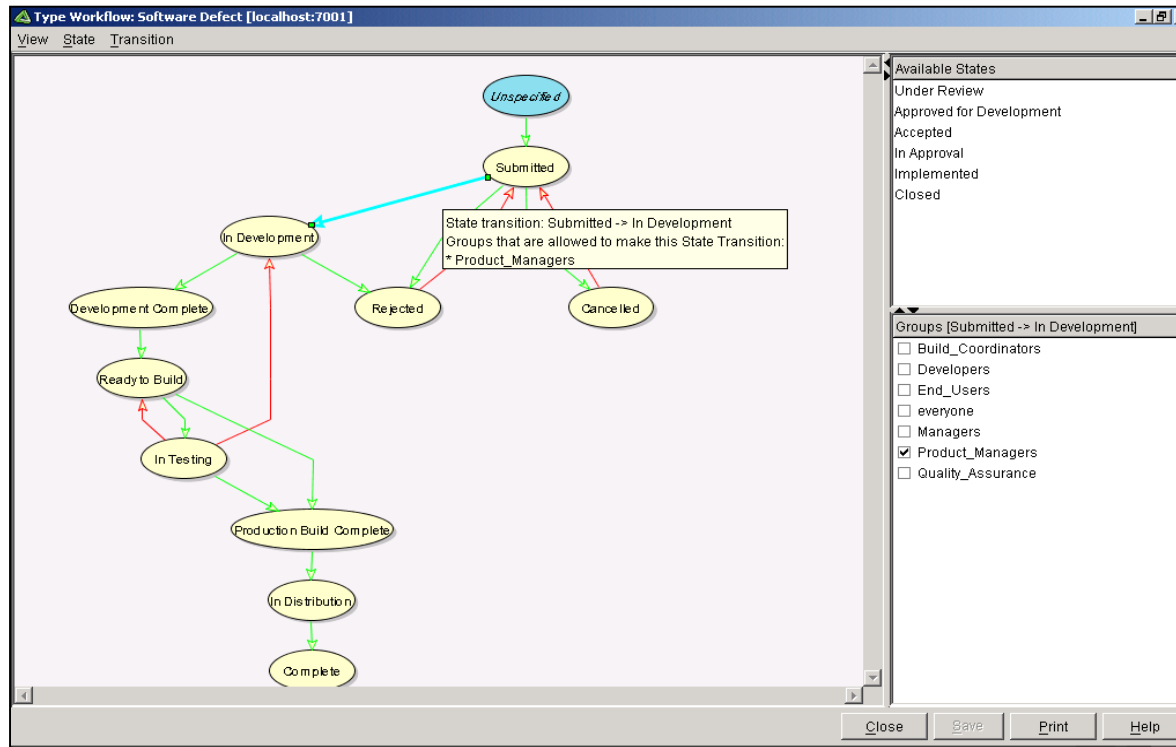
Page Revision Information
\$Author: cdoyle \$
\$Date: 2003/07/29 14:02:59 EDT \$
\$Source: mks44/Checklist_Project_Plan.htm \$
\$Revision: 1.12 \$

Copyright Notice

Done

My Computer

Define and Enforce Processes



- **Complete audit trail**
- **Organization, Site, Team, Individual, Project specific processes**

- **Groups**
- **Workflow**
- **To-dos**
- **Notification**
- **Escalation**
- **Reviews**
- **Approvals**
- **Fields**
- **Triggers**
- **Unique Ids**
- **Logged**

**Easy to
configure,
easy to
evolve**

Complete Audit Trail for Change

Feature: 100003

Created by Rob Butter (devrb) on Apr 13, 2004 6:10:19 PM

Modified by Rob Butter (devrb) on Apr 13, 2004 6:24:51 PM

Fields History Relationships Attachments  Change Packages

Modified by Rob Butter (devrb) on Apr 13, 2004 6:10:19 PM
Modified Fields New Value

Summary Add impact analysis to model
State Submit
Project /ABC Tools
Description Iseries add impact analysys

Modified by Rob Butter (devrb) on Apr 13, 2004 6:10:47 PM
Modified Fields New Value

Assigned User Rob Butter (devrb)

Modified by Rob Butter (devrb) on Apr 13, 2004 6:12:19 PM
Modified Fields New Value

State In Development
Priority Medium
Planned Release PDM 1.0
Development Type Strategic
Release Type Full
Classification New Capability
Release Planning R1
Feature Specification <http://>

Modified by Rob Butter (devrb) on Apr 13, 2004 6:17:09 PM
Modified Fields New Value

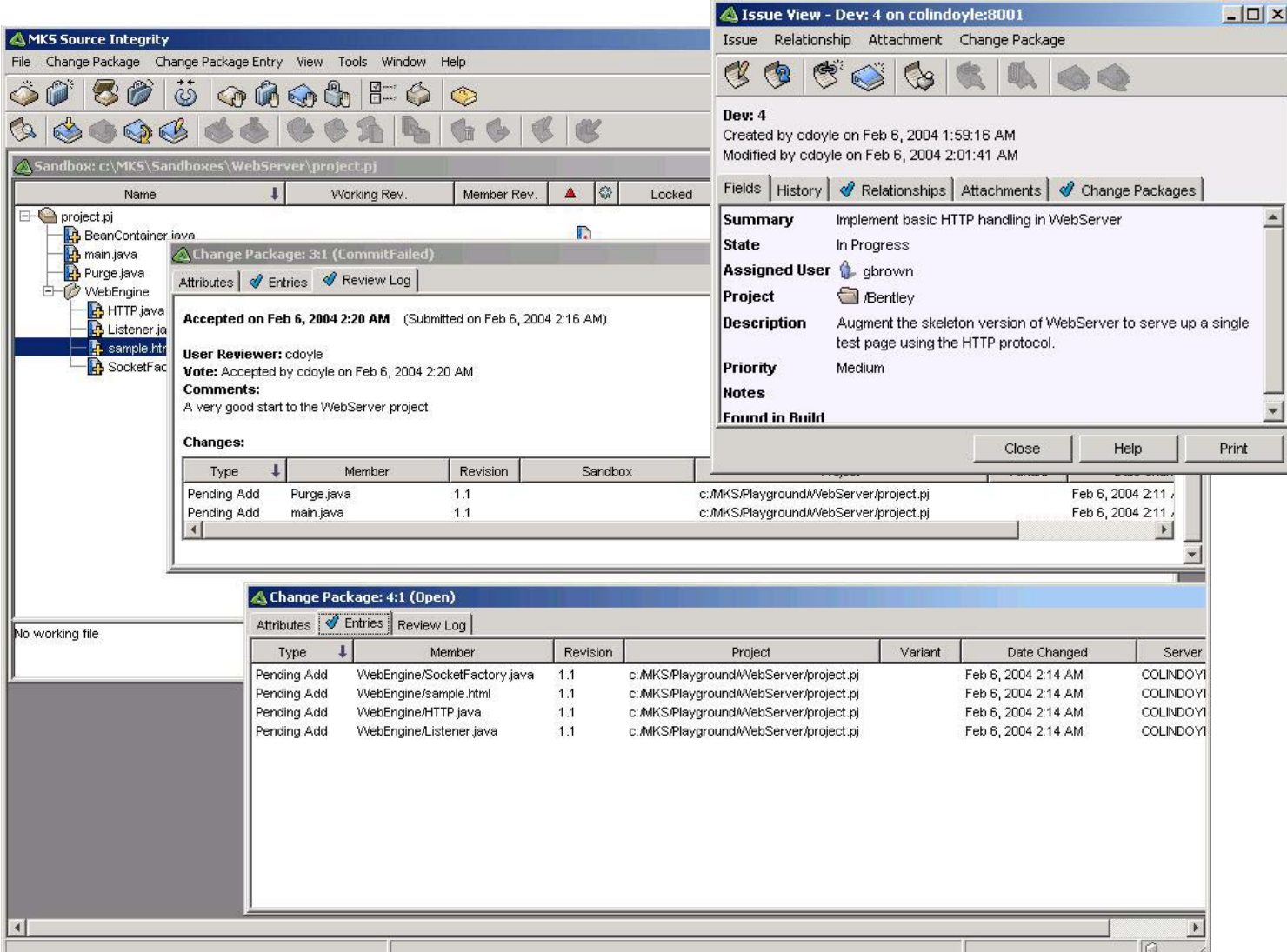
State QA

Modified by Rob Butter (devrb) on Apr 13, 2004 6:18:28 PM
Modified Fields New Value

State In Development

Modified by Rob Butter (devrb) on Apr 13, 2004 6:20:22 PM

Enforceable Review Process



The screenshot displays the MKS Source Integrity interface, showing a code review process for a project named 'project.pj' located in the sandbox 'c:\MKS\Sandboxes\WebServer\project.pj'.

Change Package: 3:1 (CommitFailed)

Accepted on Feb 6, 2004 2:20 AM (Submitted on Feb 6, 2004 2:16 AM)

User Reviewer: cdoyle
Vote: Accepted by cdoyle on Feb 6, 2004 2:20 AM
Comments:
 A very good start to the WebServer project

Changes:

| Type | Member | Revision | Sandbox |
|-------------|------------|----------|--|
| Pending Add | Purge.java | 1.1 | c:\MKS\Playground\WebServer\project.pj |
| Pending Add | main.java | 1.1 | c:\MKS\Playground\WebServer\project.pj |

Issue View - Dev: 4 on colindoyl:8001

Issue Relationship Attachment Change Package

Dev: 4
 Created by cdoyle on Feb 6, 2004 1:59:16 AM
 Modified by cdoyle on Feb 6, 2004 2:01:41 AM

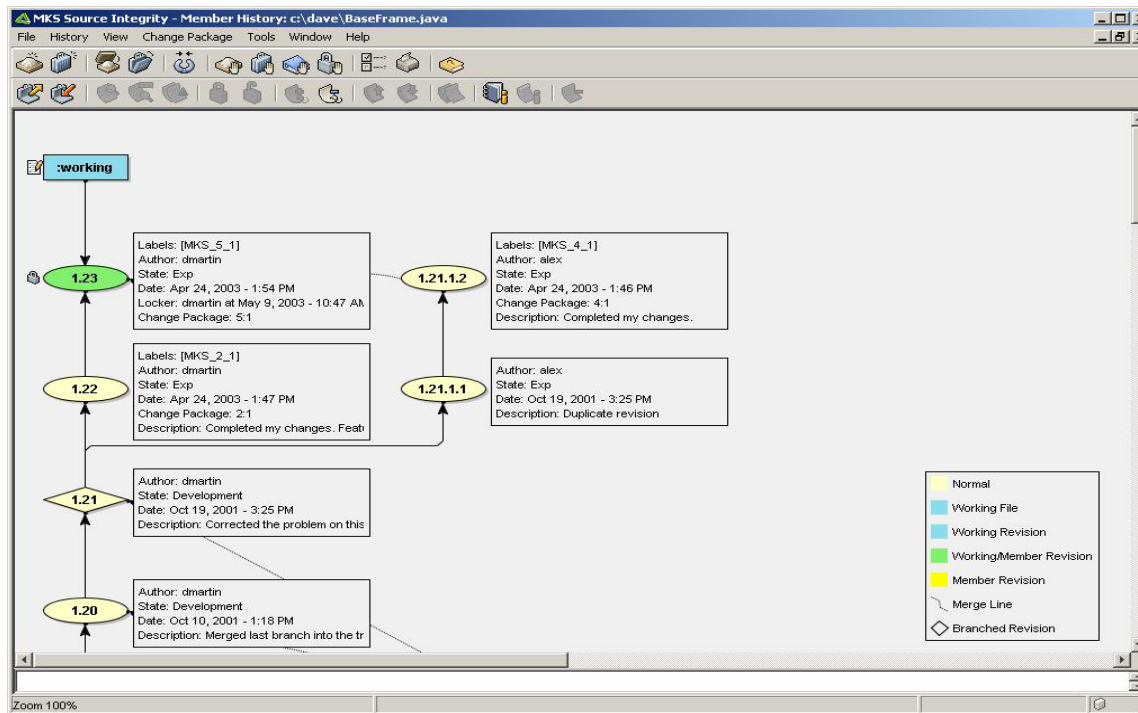
Summary Implement basic HTTP handling in WebServer
State In Progress
Assigned User gbrown
Project /Bentley
Description Augment the skeleton version of WebServer to serve up a single test page using the HTTP protocol.
Priority Medium
Notes
Found in Build

Change Package: 4:1 (Open)

Attributes Entries Review Log

| Type | Member | Revision | Project | Variant | Date Changed | Server |
|-------------|------------------------------|----------|--|---------|---------------------|-----------|
| Pending Add | WebEngine/SocketFactory.java | 1.1 | c:\MKS\Playground\WebServer\project.pj | | Feb 6, 2004 2:14 AM | COLINDOYI |
| Pending Add | WebEngine/sample.html | 1.1 | c:\MKS\Playground\WebServer\project.pj | | Feb 6, 2004 2:14 AM | COLINDOYI |
| Pending Add | WebEngine/HTTP.java | 1.1 | c:\MKS\Playground\WebServer\project.pj | | Feb 6, 2004 2:14 AM | COLINDOYI |
| Pending Add | WebEngine/Listener.java | 1.1 | c:\MKS\Playground\WebServer\project.pj | | Feb 6, 2004 2:14 AM | COLINDOYI |

Configuration Management

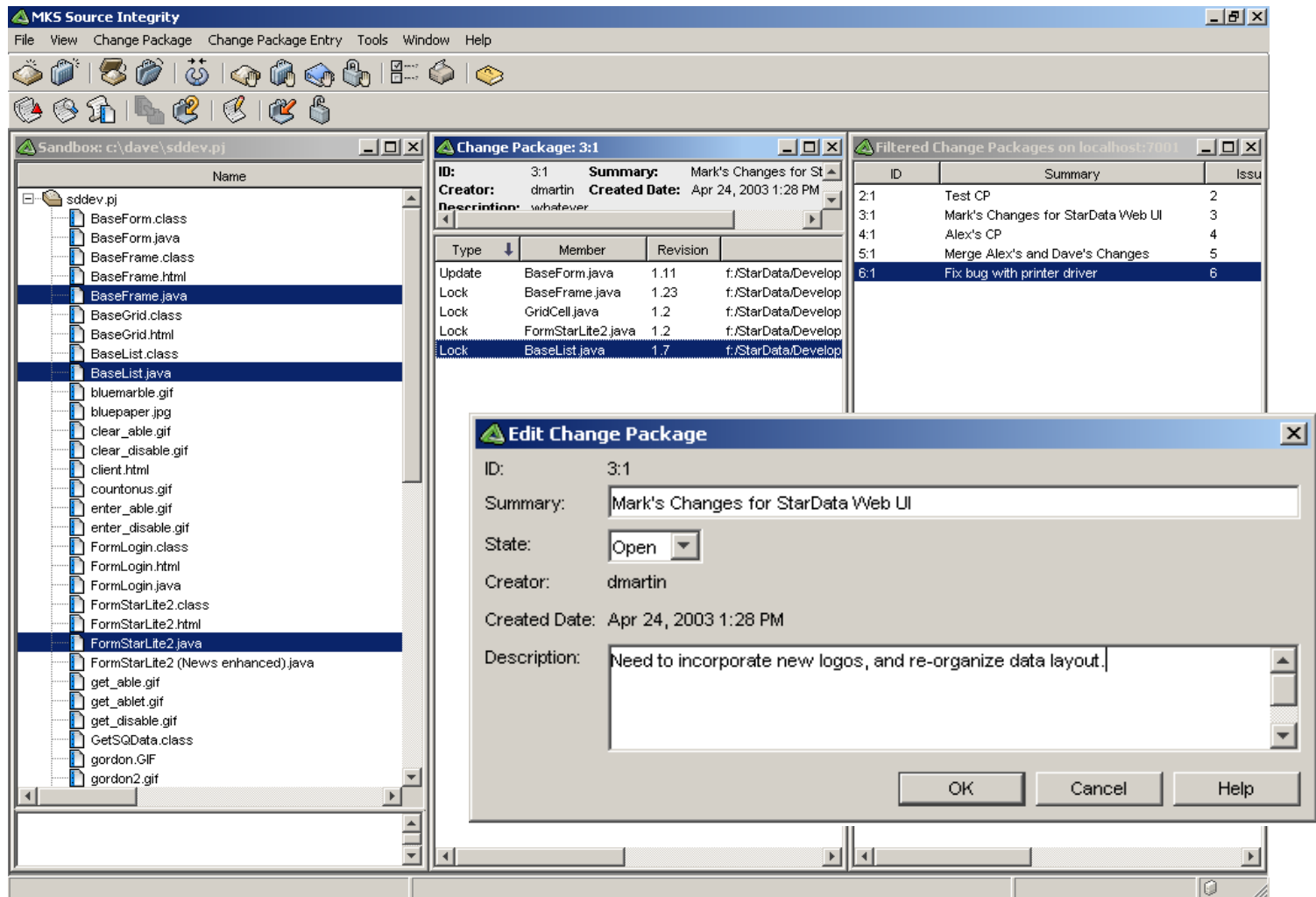


- **Change Packages**
- **Sandboxes**
- **Projects**
- **Branches**
- **Members**
- **Variants**
- **Locks**
- **Permissions**
- **Checkpoints**
- **Archives**

- **Web, GUI, CLI, IDE Interfaces**
- **Visual Diff/Merge**
- **Parallel Development**
- **Distributed Development (FSA)**

**Easy to
configure,
easy to
evolve**

Information Integration



MKS Source Integrity

File View Change Package Change Package Entry Tools Window Help

Sandbox: c:\dave\sddev.pj

sddev.pj

- BaseForm.class
- BaseForm.java
- BaseFrame.class
- BaseFrame.html
- BaseFrame.java
- BaseGrid.class
- BaseGrid.html
- BaseList.class
- BaseList.java
- bluemarble.gif
- bluepaper.jpg
- clear_able.gif
- clear_disable.gif
- client.html
- countonus.gif
- enter_able.gif
- enter_disable.gif
- FormLogin.class
- FormLogin.html
- FormLogin.java
- FormStarLite2.class
- FormStarLite2.html
- FormStarLite2.java
- FormStarLite2 (News enhanced).java
- get_able.gif
- get_ablet.gif
- get_disable.gif
- GetSQData.class
- gordon.GIF
- gordon2.gif

Change Package: 3:1

ID: 3:1 Summary: Mark's Changes for St
 Creator: dmartin Created Date: Apr 24, 2003 1:28 PM
 Description: whatever

| Type | Member | Revision | |
|--------|--------------------|----------|---------------------|
| Update | BaseForm.java | 1.11 | f:/StarData/Develop |
| Lock | BaseFrame.java | 1.23 | f:/StarData/Develop |
| Lock | GridCell.java | 1.2 | f:/StarData/Develop |
| Lock | FormStarLite2.java | 1.2 | f:/StarData/Develop |
| Lock | BaseList.java | 1.7 | f:/StarData/Develop |

Filtered Change Packages on localhost:7001

| ID | Summary | Issue |
|-----|------------------------------------|-------|
| 2:1 | Test CP | 2 |
| 3:1 | Mark's Changes for StarData Web UI | 3 |
| 4:1 | Alex's CP | 4 |
| 5:1 | Merge Alex's and Dave's Changes | 5 |
| 6:1 | Fix bug with printer driver | 6 |

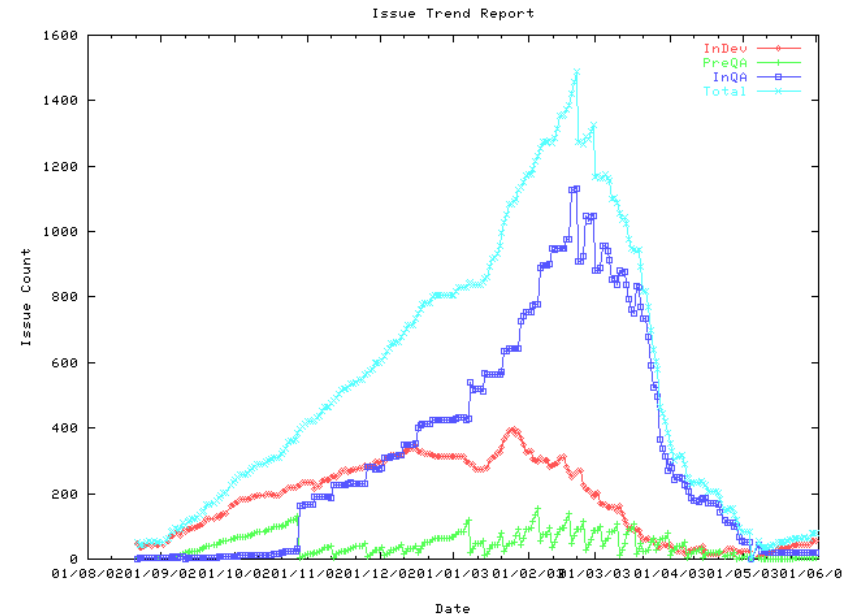
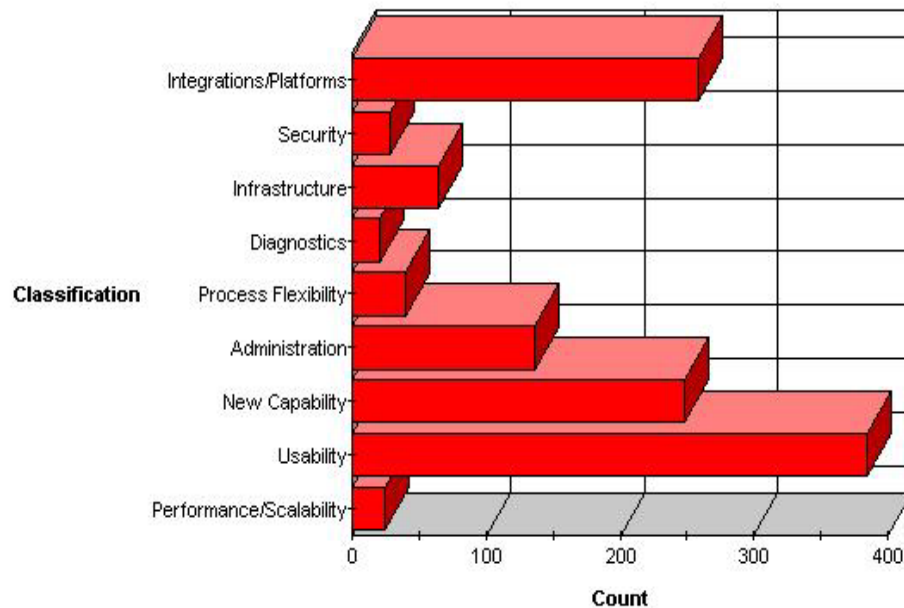
Edit Change Package

ID: 3:1
 Summary: Mark's Changes for StarData Web UI
 State: Open
 Creator: dmartin
 Created Date: Apr 24, 2003 1:28 PM
 Description: Need to incorporate new logos, and re-organize data layout.

OK Cancel Help

Monitor Defect and Quality Deficiencies

Outstanding Items by Functional Area



Defect Trend Rate

Monitor the Process

Critical Items Report - Submitted in Last 7 Days

29/03/2004

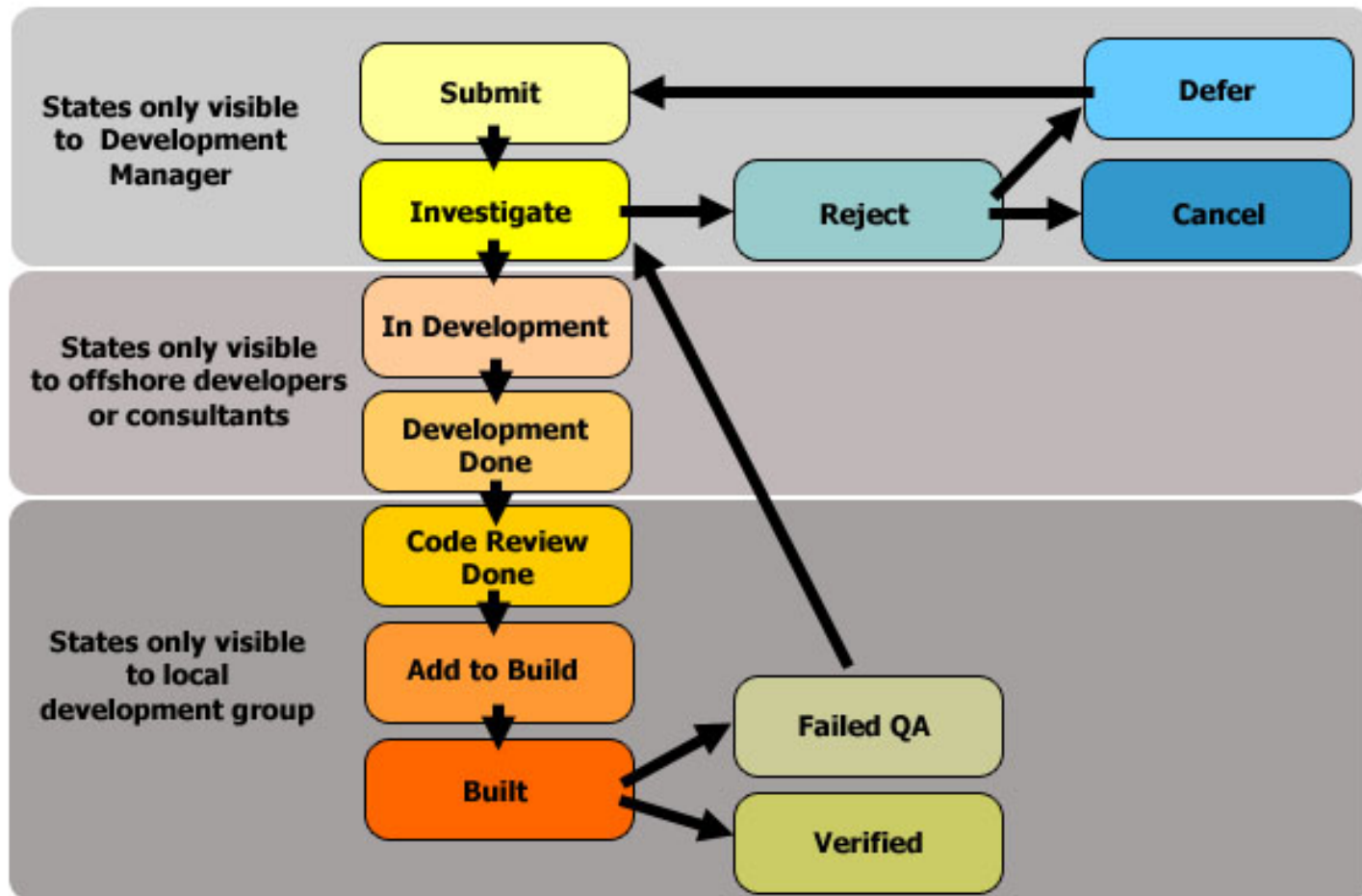
| ID | Modified Date | Summary | State | Assigned User | Priority |
|---|---------------|---|----------------|-----------------------------------|----------|
| Project = Stock | | | | | |
| 54 | 18/02/2004 | Grammar error in the amortization calculator. | In Development | David Martin (dmartin) | Critical |
| Group Total: Project = Stock: 1 | | | | | |
| Project = Product Delivery Model (PDM) | | | | | |
| 32 | 23/04/2003 | Need to formalize the software project planning process. | In Progress | project_manager (project_manager) | Critical |
| 30 | 07/04/2003 | Develop QA audit policies/procedures for requirements management activities. | In Progress | qa_manager (qa_manager) | High |
| Project = Amortization | | | | | |
| 24 | 20/03/2003 | Rounding error in the amortization calculator. | | | |
| 15 | 29/03/2004 | Ability to print out the full amortization chart on a single page. | | | |
| 14 | 29/03/2004 | The amortization calculator should show multiple interest rates for comparison. | | | |

Unassigned Items by Project - Week of March 21, 2004

29/03/2004

| Type | ID | Created By | Modified Date | Summary | State | Priority |
|---|----|-----------------------------------|---------------|---|------------------|----------|
| Project = ABC Tools | | | | | | |
| Feature | 9 | qa_member (qa_member) | 28/02/2003 | Need a Japanese version for our office in Japan. | Reject | Low |
| Task | 52 | qa_manager (qa_manager) | 15/05/2003 | Change the savings menu image to match the others. | Defer | Medium |
| Feature | 5 | qa_member (qa_member) | 26/03/2004 | Need support for all browsers. | Long Term Defer | Low |
| Group Total: Project = ABC Tools: 3 | | | | | | |
| Project = Amortization | | | | | | |
| Feature | 16 | qa_member (qa_member) | 07/03/2003 | Add a graphical chart to the amortization application. | Reject | Low |
| Feature | 14 | qa_member (qa_member) | 26/03/2004 | The amortization calculator should show multiple interest rates for comparison. | Submit | |
| Feature | 15 | project_manager (project_manager) | 26/03/2004 | Ability to print out the full amortization chart on a single page. | Short Term Defer | High |
| Group Total: Project = Amortization: 3 | | | | | | |
| Project = Product Delivery Model (PDM) | | | | | | |
| Action Item | 38 | qa_manager (qa_manager) | 22/04/2003 | Make sure that the dedicated computer resources are mentioned in the Product Development Process. | Defer | Low |
| Action Item | 37 | qa_manager (qa_manager) | 23/04/2003 | Recommend the use of a time tracking system that ties-in with the project schedule. | New | Low |
| Action Item | 39 | qa_manager (qa_manager) | 24/04/2003 | Project planning process needs to be documented. | Cancel | |
| Action Item | 40 | qa_manager (qa_manager) | 25/04/2003 | Track the time expended on all change activities related to the software development plan. | New | |
| Group Total: Project = Product Delivery Model (PDM): 4 | | | | | | |
| Project = Savings | | | | | | |
| Feature | 6 | qa_member (qa_member) | 17/02/2003 | Savings calculator fields should be different colors. | Reject | Low |
| Feature | 4 | qa_member (qa_member) | 26/03/2004 | Change the color of the Savings Calculator title to match the others. | Long Term Defer | Low |
| Feature | 41 | product_manager (product_manager) | 26/03/2004 | Add a future value section to the savings calculator. | Short Term Defer | Medium |

Manage Third Party Services - Outsourced Development Control



"Developing, implementing, evaluating, and maintaining systems that allow Magellan to provide high levels of service to members, customers and providers is vital to our success. Further, compliance with the laws and regulations that govern our business and with contractual and accreditation requirements is critical.

Achieving and maintaining compliance requires active participation and coordination with our customers, providers and business associates. We selected MKS for its people and support just as much as for its technology, and are confident that the value MKS brings to our business and to our customers will allow us to continue this mutual commitment to excellence far into the future."

- **Jeff Emerson, CIO Magellan Health Services**



Benefits of SPI Beyond Compliance

Siemens

Cost reduction:

Level 1: 17%
Level 2: 22%
Level 3: 19%
Level 4: 44%

Raytheon

Reduction in cost
of poor quality
from 40% to 4%

Hewlett-Packard

Productivity x3 in 4 years

80% reduction in defect density

Cycle time reduced by 33%

ROI - 9:1

Philips

10% effort reduction by
early defect detection

Ericsson

Annual savings of 500M SEK

Motorola

Each CMM Level increases
quality by factor of 2

Cycle time reduced by 2 - 7x

ROI - 7:1

Thomson-CSF

Cost performance +17%
Pre-test defect correction x4
ROI - 4:1

- 6 months after implementing MKS achieved CMM Level 2 meeting business goal
- Reduction in defects by 5 - 7% per month
- 9% improvement in project delivery against estimate
- 21% improvement in ability to meet project target dates while doubling the number of projects implemented per month
- Metrics and measurements are now available on demand

■ certegy

MKS – A Unique Solution

- Low total cost of ownership
- Innovative solution for real-time geographic team collaboration
- Process independence
- Cutting edge architectural platform
- Tuned to development and production needs
- Multi-platform – only enterprise SCM vendor to span to iSeries

**For the Executive Officer:**

- Global team visibility
- Automated audit tracking and control
- Management reporting capabilities
- Low TCO

Achieving and maintaining compliance requires active participation and coordination with our customers, providers and business associates. We selected MKS for its people and support just as much as for its technology."

- Jeff Emerson, CIO Magellan Health Services

**For the Application Development Manager:**

- Requirements capture and management
- Flexible process support
- Enterprise-level security
- Multi-platform deployment

"When we saw MKS Integrity Manager we realized it met the majority of our requirements for a 'dream' change control system."

- Peggy Dunn, Director of Information Technology Puget Sound Blood Center

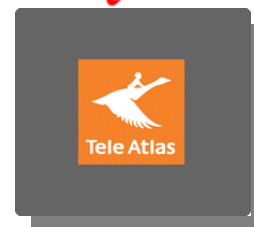
**For the Developer:**

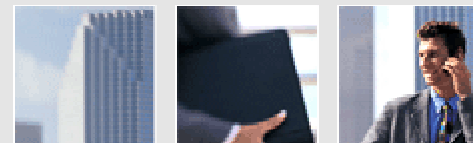
- Code re-use
- Baseline management
- Real-time collaboration
- Private developer workspaces

"In a market that is quickly consolidating, and filled with uncertainty, we are happy to know that we have a partnership with a company like MKS that quickly and aggressively responds to customers needs with new releases like the recently released MKS Integrity Solution 4.6, and offers world class support and guidance on best practices."

- Mike Knott, Systems Specialist, Union Bank of California, San Diego, CA

Enterprise Customers





Questions?

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www.mks.com