Visualizing DOORS Information and Traceability with DOORS/Traceline

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TraceLine gives you a way to visually assess traceability for requirements...

.... and work out the holes.
Agenda

• Visualising Requirements Using DOORS TraceLine
• What TraceLine Provides
  – Problems and solutions
  – Interactive demo
• The TraceLine Architecture
• TraceLine In The Future
• Resources Available to the Public
• Q&A
Visualizing Requirements Using DOORS TraceLine

• DOORS/TraceLine is a DOORS extension for managing and visualizing information and its traceability in DOORS
• Provides requirements analysts with a powerful and intuitive browser to:
  – View, navigate and edit linked information held in DOORS
  – arrange this information in task and viewpoint-specific views
  – create graphical and textual content and traceability reports
• DOORS/TraceLine environment is extensible
  – allowing integration of custom task or viewpoint-specific functions
• DOORS/TraceLine offers
  – Increased user productivity
  – Reduces training needs
  – Easy access to information in DOORS for non-technical users
The DOORS/Traceline Browser

- Browser tab and navigation controls
- Single object analysis pane
- Layered traceability display
- Browser toolbar (find, filter, object, reports)
- Additional non-displayed objects
Telelogic Requirements Management Traceability Solutions

Interactive Solution Demo

“The essence of Telelogic DOORS is traceability (links) which drive projects with reliance on a formal requirements process such as complex or mission critical projects.”
What is Requirements Visualisation?

• Requirements
  – Mandatory statements that describe what must be delivered or accomplished to provide value to the business

• How Can I Visualise Requirements to Improve Development?
  – Requirements are typically displayed in document formats or long lists…try a visual approach

• TraceLine allows you to navigate around linked data with a single click and focus on single requirements
  – Users can perform day-to-day tasks directly through TraceLine:
    – Create, delete, link objects and edit object content through forms
    – The browser-based interface is familiar and intuitive
    – Make requirements easy to access/interpret across the project
Object Centric Visual Requirements Approach

• Single requirement statements are represented in object centric display

• Specific attributes referenced through tabs
  – Reference indicators
  – Single click access
  – Double-click form editing

• Contextual requirements are a click away

• URL support through object
Development Familiarity Across Projects

• As developers, engineers, project managers move from project to project how can you ensure uniformity and familiarity?
  – Module views can look different from module to module
  – Document structures can vary from project to project
  – Project terminology will change from team to team

• TraceLine provides a stable interface that keeps users focus on requirements and traced supporting requirements
  – Standard object centric form
  – Requirements displayed in standard format despite module structure
  – Link layout panes for supporting requirements assessment
  – Use specific local terminology
Standard TraceLine Layout

- Browser View
- Layered Link Display
- Extendable
- Intuitive Traceability Management
- Navigation Memory
- Easy Display Format
- Color Coding
Team Members Can Focus on Detail

• For users who don’t need to know the details of a development project how do I help them focus on the specific details?
  – Large module lists become confusing to infrequent users
  – DOORS specific items (modules, link modules, etc.) are foreign to untrained users
  – Unfiltered requirement views show unrestrained data sets

• Principle DOORS users can create TraceLine Views to isolate specific project detail
  – TraceLine doesn't rely on document paradigm for development focusing users on requirement specifics
  – TraceLine’s simple interface is a minimal training tool
  – Filters in TraceLine limit users analysis detail
Isolate Specific Project Information in Views

• User specific views for:
  – Project managers
  – Analysts
  – Marketing
  – Business Depts.
  – Q&A
  – Development
Separate the Issues Through Information Views

• How can my users (trained or untrained) see a representation of the data for the project?
  – How can isolating a project into a TraceLine view help?

• Present your data through as an intuitive TraceLine view
  – Task or viewpoint-based
  – Complement and extend DOORS module views
  – Show data that supports project tasks
  – Hide extraneous detail
  – Present information in familiar, project-defined structures
  – Easily configured to any (linked) DOORS project
  – Structured into groups or layers
Your Information Models Through Views

- Tabbed Navigation
- Point and Click
- Customized Levels
- View Definitions
- Data Model Configurable
- Project Specific Terminology
- Zoom Enabled
How to Focus Project Members on Crucial Requirements

• Traceability is complex and has been hard for some members to understand, how can you better represent this data?
  – Traceability goes to multiple depths thus multiplying the analysis problem
  – Internal/external team members who don’t use DOORS want visibility for end to end requirements

• Through the export extensions TraceLine can represent traceability graphically thorough popular diagramming tools
  – Represent filtered, full data graphical diagrams for team members using DOORS or not using DOORS
  – Standardised reports can be provided to key users
TraceLine Reporting

• Graphical and textual reports are just a mouse click away.

• Powerful textual reports
  – Browser specific reporting on single object focus directly to HTML
  – Summarize the linked in objects to isolate specific data through hyperlinks
  – Reports support full module output

• Graphical impact reports
  – Graphical traceability reports created for import into Microsoft Visio and Mindjet MindManager
  – Visualise your traceability structures
Visualize Information and its Traceability

- **Visualise your requirements** - Work with requirements data and supporting links
- **Access your data easily** - ‘point and click’ data tool
- **Focus on the detail** - visible information and traceability limited to that relevant to the current task or viewpoint
- **Familiarity** - presented information uses domain or project-specific language
- **Separate the issues** - isolate everyday users from administrative complexity
- **Focus on crucial requirements** - let users concentrate on their process, not on driving the tool
DOORS/TraceLine Features Summary

• DOORS/TraceLine: supported on DOORS 8.2 / 8.3 / 9.0
• Browser based analysis viewer/editor for requirements
  – Point and click browsing
  – Configured attribute entry/editing forms
• Information and traceability reports in:
  – HTML
  – Microsoft Visio
  – Mindjet MindManager
• DXL Extendable
• Fully supported DOORS explorer addin
DOORS TraceLine: Architecture

• TraceLine is as a DOORS client add on extension
• Requires local installation of DOORS client
• TraceLine can be used as an analysis tool with a DOORS module or an independent requirements interface
• Toolbar is extensible for custom DXL scripts (support project-specific needs)
What Can You Expect in the Future?

TraceLine 2.1 will soon provide:

• TraceLine Browser
  – History Explorer – View audit trail of requirement modification
  – Baselines Access - Views will include baselines of the module
  – Go To Object - Jump immediately to an object based on DOORS absolute number or section number
  – Link Icons - One-click access to the TraceLine Links Editor

• Administrator View Editor
  – New View Editor - completely re-implemented View Editor makes creating and maintaining TraceLine views even easier
  – Automatic View Generation - automatically create views from your existing DOORS projects based upon intelligent analysis
  – Limit View Editor access - Restrict access to the View Editor
TraceLine 2.1 (Nov 2008)
What Resources are Available for TraceLine?

*Version 2.0.6 Available from July 2008*

TraceLine 2.0.6 currently available for DOORS 8.2, 8.3, and 9.0

**Additional Public Materials**

- TraceLine Web Site
- Data Sheet
- Paper: “A New Way to Visualize Requirements Information and its Traceability”
- Auto Demo (5 Min)
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Questions?
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