Visualizing DOORS Information and Traceability with DOORS/Traceline

Jared Pulham
Director, Product Manager
Requirements Management Tools

Innovation 2008
TELELOGIC USER GROUP CONFERENCE
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

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 Visualize 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

Easy Display Format

Navigation Memory

Extendable

Intuitive Traceability Management

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 unconstrained data sets

- Principal 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 requires minimal training
  - Filters in TraceLine limit users’ analysis detail
Isolate Specific Project Information in Views

• User specific views for:
  – Project managers
  – Analysts
  – Marketing
  – Business Depts.
  – QA
  – 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

Zoom Enabled

Data Model Configurable

Project Specific Terminology
How to Focus Project Members on Crucial Requirements

• Traceability is complex and can be hard for some people to understand; how can this data be displayed better?
  – Traceability goes to multiple depths thus multiplying the analysis problem
  – Internal/external team members who don’t use DOORS but do want end to end visibility for requirements

• Through the export extensions TraceLine can represent traceability graphically in popular diagram 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
  – Visualize your traceability structures
Visualize Information and its Traceability

• **Visualize 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

© Telelogic AB
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** – See how an object has changed between any two dates or baselines
  – **Baseline Access** - Views can include baselines of modules
  – **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)
Telelogic/IBM and Integrate

• Integrate: Member of IBM Ready for Rational (Partner World)
  – Integrate transferred from Telelogic’s partner programme to IBM’s Ready for Rational programme
• TraceLine 2.1 will be released and supported by Integrate
  – Telelogic to migrate TraceLine 2.0 customers through maintenance expiry programme for TraceLine 2.1
  – Telelogic/IBM continue to support TraceLine 2.0
  – Customers can upgrade to 2.1 when desired
  – Contact: traceline@integrate.biz

www.integrate.biz
Visualizing DOORS Information and Traceability with DOORS/Traceline

Questions?
Visualizing DOORS Information and Traceability with DOORS/Traceline

Jared Pulham
Director, Product Manager
Requirements Management Tools

Innovation 2008
TELELOGIC USER GROUP CONFERENCE