Cradle-7
From concept to creation...

3SL

Cradle-SE Pro

Model Based Systems Engineering Across the Systems Lifecycle

Complete Application Lifecycle Management (ALM), Model Based Systems Engineering (MBSE) and documentation solution for the entire project lifecycle, fully user-definable and applicable to all agile and phase-based processes

Cradle-SE Pro is a complete solution to manage, trace and document all the data for your agile and phase-based projects.

You can capture information from external documents and tools, and track changes. You can build new sets of requirements, analysis, architecture and design models, tests or verifications, and link them to the source data and to each other. You can check the consistency and quality of this information, and prove the integrity of the models and other data with bi-directional coverage and traceability analyses.

You can raise customers' confidence with proof that your work satisfies its sources and constraints, and will meet their needs.

You can easily track progress with metrics and KPIs and link to your WBS and actual progress to your project planning tools.

You can create any number of databases, each with a schema and multiple projects that contain any number of items of any number of user-defined item types. Each item has any number of attributes with up to 1 TByte of data, held in Cradle, or

referenced in files, URLs or other tools.

All items can be linked with user-defined types of cross reference. The links have attributes to justify, explain or parametise them. Links are direct and indirect, for lifecycle traceability, impact and coverage analyses.

External documents can be loaded into hierarchies of items. Every item in Cradle is linked to its source in a document. Changes in new document versions are automatically found and the database updated. You can prove the integrity of all source data to your customers with a range of detailed coverage analyses of their documents.

Items can be linear, hierarchical and in many-to-many relationships. Items can be split, merged and reordered. All information can be shared and reused. Cradle can support

product ranges, models, variants and builds, and compare them in tables, pivot tables and matrices.

Create any number of analysis, architecture, logical, process or design

- Supports the full systems development lifecycle at system, subsystem and lower levels
- Integrates in one product features normally spread across separate tools from different vendors
- Completely user-definable and user-extensible with point-and-click UIs
- Manage any information, including requirements, models, risks, interfaces, tests and verifications
- Scalable to millions of items of information
- Full traceability of data to source and generated documents with complete version management
- Full traceability and coverage analyses
- User-definable views of data including tables, trees, documents, matrices, diagrams and graphs
- User-defined metrics and management dashboards

models in UML, SASD, IDEF, ADARTS, SysML and other notations. Optionally group models in hierarchies and link all elements of all models to requirements, SBS, issues, test cases and all other information.

Cradle tracks all edits to every requirement, test case, verification and all other information that you want it to hold. Edits can be reversed selectively or by group. Full or partial change logs are readily available.

You define how information is viewed and reported in any number of views, shown as nested tables, trees, matrices, pivot tables, and as diagrams.

Generate versions of documents such as a URD, SRD, IRS, SDS and SSDS to match your or your client's formats with user-defined templates and detailed traceability of which items were published in each document issue.

You can manage your projects with:

- Metrics, user-defined calculations of items' values
- Key Performance Indicators (KPIs), results of metric calculations with colour-coded display bands
- Bi-directional links to Project, including user task lists and actual progress reporting

Cradle is open. It supports many import/export formats, has several interface mechanisms to link to other tools, and connects to Microsoft Office® components Word, Excel, PowerPoint, Visio and Project.

Cradle is simple to customise and use. You do not need to learn a scripting language or become a programmer to tailor it to your process. After every change to your schema, Cradle will automatically update collections of queries, views and other definitions that make you productive immediately.

Major Features

Product and Tool Capabilities	
Supports full system lifecycle	Agile and phase processes
Process independent	Supports RM
Supports managing functions and components	Supports test management
Optionally manage Cost and System Breakdown Structures	Supports feature-driven development (FDD)
Supports project V&V	Load source documents (text, tables, figures and links)
Manage source document versions and differences	Full lifecycle transitive traceability and coverage
User-defined items and attributes	User-defined link types, link rules and link attributes
Fully linked model hierarchies with model sharing and reuse	Full modelling and checking tools, inter-model checks
Spell checking	Quality (conformance) checks
Direct editing in tables and in user-defined forms	1:1, 1:N, M:N linking of all items
Drag-and-drop linking	Graphical traceability views
User-defined queries, views, forms, hierarchies, navigations	Make child, sibling, hierarchy
Split and merge items	Reordering of item hierarchies
Traceability to/from document versions	User-defined document templates
Suspect item displays	User-defined metrics
Automated change histories	User-defined calculations
User-defined progress graphs	User-defined pivot tables
User-defined matrices	Automated WBS and progress reporting
User-defined dashboards and KPIs	User-defined reports to CSV, Word, HTML, Excel
User-defined Start Page UIs	User-defined table commands
Import/export for XML (any schema), CSV, ReqIF, Cradle	Automated batch reporting from command line utilities

Supported Platforms

Component	Details
Windows	8.1 and 10 (32/64-bit) 11 (64-bit) Server 2012 R2 (64-bit) Server 2016 (64-bit) Server 2019 (64-bit)
Linux	Any 32/64-bit with a kernel ≥ 2.6.32 and ODBC Manager 2.3.7 or later
PDF Viewer	Acrobat/Reader 9 or later
Web Browser	Firefox, Chrome, Edge: latest available
Microsoft Office	2010 SP2 (32/64-bit) 2013 SP1 (32/64-bit) 2016 (32/64-bit) 2019 (32/64-bit) 365 (32/64-bit)
Other Office	OpenOffice ≥ 4, LibreOffice ≥ 5

Characteristics

Characteristic		Details
Users		Single
Modules Included		PDM REQ MET DASH SYS DOC
Project databases		Unlimited
Items / database		Unlimited
Links / database		Unlimited
Limits	Per database	≤ 25 item types ≤ 50 categories
	Per item	≤ 25 frames

Cradle-SE Pro is part of the Cradle product range. The full, multi-user, product is Cradle Enterprise.

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