SIMPLICIO: the Integrated Authoring System

SIMPLICIO is the result of ISSELNORDs 30 years of experience in software development, logistic support research and logistic studies, technical publications and training aids development.

In traditional processes, technical publications, provisioning, LSA and training courses were developed separately. This approach implies misalignment, lack of coherency and documents extra reworking during their life cycle. SIMPLICIO has been designed and developed in order to solve these critical aspects concerning both the production and management of technical publications as well as initial provisioning lists, LSA records and training contents.

Why an integrated tool?

The study of S1000D™, S2000M™, S3000L™ and SCORM® specifications, has raised the idea of the development of a common software tool, able to manage and integrate all standards. SIMPLICIO is a powerful software solution, able to integrate the development process of S1000D™ technical publications with SCORM® compliant WBT (Web Based Training) systems, in a unique CSDB (Common Source Data Base).

SIMPLICIO is more than a S1000D™ authoring tool: it allows the development of training courses utilizing technical publications contents. With SIMPLICIO, SCORM® learning objects can be created from already existing S1000D™ data module contents.

In addition, SIMPLICIO integrates the management of provisioning in accordance with the S2000M™ thus allowing full integration with catalogue data modules production, and integrates the LSA-R management in accordance with the S3000L™ thus allowing full integration with tech pubs and IPC production.

The system provides a set of advanced features to assure a complete and optimum content management during the entire documentation life cycle.
Simplicio Features

**S1000D™ Technical Publications Management**
- S1000D™ Projects Tailoring Capability.
- Import/Export Wizards.
- S1000D™ Data Modules Authoring and Management.
- S1000D™ Data Modules Preview (HTML/PDF).
- S1000D™ Publication Projects Authoring and Management.
- S1000D™ Publication Projects Delivery (HTML/PDF).
- S1000D™ Comments Management.
- Multimedia Management.
- Delivery Management.
- XML Fly View IETP browser delivery.

**SCORM® Training Documentation Management**
- Integrated Learning Objects Authoring Tool.
- Drag & Drop from S1000D™ Data Modules to SCORM® Learning Objects.
- Extra data integration (3D model, pictures, video, audio, etc.).
- Learning Objects Preview (HTML/FLASH).
- SCORM® Training Courses Management.
- SCORM® Training Courses Packaging (HTML/FLASH).

**S2000M™ Management**

**S3000L™ LSA-R management and LSA data & S1000D™ Content Integration**

**S1000D™/SCORM® Integration**

SIMPLICIO combines S1000D™ technical publication features with the capability of developing SCORM® compliant training courses by means of a structured and integrated development process. SCORM® learning objects (LOs) can be directly obtained from existing information in data modules, linking text and figures by means of XPaths managed by the system.

In addition, as training courses usually require more media and detailed information not included in technical publication content, the system allows the integration of extra resources (3D models, videos, pictures and audios) into each Learning Object.

Thanks to this integrated solution, SIMPLICIO allows applicability and versioning management from data modules to learning objects, technical publications and training courses.
SIMPLICIO combines S1000D™ technical publication features with the capability of developing S2000M™ Initial Provisioning List, thus simplifying the IPC/IPD data module automatic creation.

**S1000D™/S2000M™ Integration**

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**S1000D™/S3000L™ Integration**

SIMPLICIO combines S1000D™ technical publication features with the capability of developing S3000L™ LSA-R, thus simplifying the management of LSA Data and allowing the integration of LSA Data with Data Module creation.

In addition, Simplicio supports the MIL-STD 1388 2B standard.

**Ability to reuse information**

Thanks to its advanced document database management features, the reuse of information is optimized.

After implementing the Data Modules dedicated to the production of technical publications, the ability to reuse information minimizes the need for duplication, with consequent loss of consistency between the technical publications and the training documentation.

Thanks to this architecture, the integration and reuse of data produced for IPL and LSA in the data module production is also guaranteed.

**Information Traceability**

Each Data Module (DM) is properly identified and managed through the document repository. If the content of a DM is revised and/or updated, the system is able to show the impact of such changes throughout the resources that utilize that particular module, (i.e. Publications, LO, SCORM® courses).

**Independence of the data from the source format**

The final layout, of both technical publication and training documentation, are generated by applying style sheets that can be mutually agreed upon. Different style sheets may be implemented over time, to allow for customized layout of the technical publications and training courses without having to modify the content.
SIMPLICIO is supplied “ready” to be installed on a server, and can be used by an unlimited number of clients within an intranet. External access capabilities via VPN can also be implemented in accordance with each company requirements.

SIMPLICIO Management Functions

**System Administration**
The System Administration allows to select the operating parameters of the software:

- System Configuration
- History Management
- Style Sheet Management
- User Management
- External Print Applications

**System Utilities**
The System Utilities area is used to access the different software tools:

- Memory Monitor
- Working Directory Management Console
- License Manager
- Change User
- Commit Browser
- SQL Console
This module allows technical writers to create individual Data Modules, manage and edit them by means of an XML editor. Data modules are the minimum unit package of information (i.e. functional descriptions, maintenance procedures, catalogue, learning content, etc.) that are assembled, to create technical publications, or used for SCORM® LO production.

The Project Setting module allows the user to create S1000D™ projects and set them in accordance to the specific requirements of the project (i.e. language, security, DM codes, SNS etc.).

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The Publication Management module allows the user to assemble different Data Modules and create technical publications, print them in a PDF format or export them into either the Fly View, HTML Viewer, X-Browser, Web Portal applications.

The Comment Management module is used to create and exchange comments for individual DMs, multimedia resources and technical publications to add extra information such as change requests and/or extra detail.

This module allows the delivery management of Data Modules, technical publications, DMRLs and DDNs in terms of date, client, RPC, status etc.).

This module allows the management and editing of all multimedia resources, common to DMs and LOs (animations, videos, illustrations, schematics, 3D models, audios etc.).
SIMPLICIO applies the same philosophy used for Data Modules to Learning Objects management.

Each LO is an individual learning package used in the creation of SCORM® courses. Each Learning Object may contain the description of a specific maintenance procedure, a functional description etc. This module allows users to directly select information from the CSDB DMs, in order to create each LO.

The information stored in the CSDB provides the textual information, multimedia resources such as videos, photos, images, audio etc., can then be added to integrate the training content.

The Course Management module allows the user to assemble different LOs, to create SCORM® courses and export them in a standard SCORM® compliant package format.

SCORM® courses can also be created combining both LOs and Learning Data Modules, applying the same philosophy of the publication management. All SCORM® and S1000D™ specifications apply. This guarantees the ability to share information between technical publications and training content within the system.
SIMPLICIO S2000M Module

This module allows the management and creation of S2000M Initial Provisioning List (IPL) and/or importing existing data from external systems by means of a standard EDI message, to automatically create and manage IPD modules.

SIMPLICIO S3000L and LSA data/S1000D™ Content Integration Module

This module allows the management and creation of S3000L LSA records and/or importing existing data from external systems, by means of a standard dump file, to automatically create and manage LSA-R modules into the repository. In addition, this module supports the MIL-STD 1388 2B standards allowing management of LSA-R importing “1388” dump files and the creation of “1388” export dump files or in any other exporting requirement format.

Thanks to this architecture the integration and reuse of data produced by IPL and LSA in the Data Module is also guaranteed.

This integration enables the link between LSA maintenance data and information contained into procedural Data Modules and IPD modules.
Customized applications for the production

**BREX DM**

BREX DM is a SIMPLICIO integrated application used to validate the modules produced by performing a series of automatic checks; these verify that the content of each module is written in accordance with the relevant Guidance Document. These checks further ensure product quality by avoiding the incidence of human error.

**HTML style sheet**

HTML style sheets are used to view Data Modules through IETP Viewers, and for Data Module previews during editing and/or revision activities.

**PDF style sheet**

The PDF style sheet is used to print single Data Modules or complete technical publications according to publishing rules of applicable style guides. A further advantage of adopting this solution is the ability to change the layout of the printed document by applying different style sheets, independent from the DMs content.

**Exporting SCORM® compliant courses**

SIMPLICIO can export SCORM® compliant courses using different types of formats by means of different style sheets or applications. In particular, SIMPLICIO allows users to create SCORM® courses exporting the content in HTML or using Adobe Flash® for the final presentation (Human-Machine Interface).

**LSA-R export data**

Various types of LSA-R export formats can be realized, starting from the “1388” standard dump file up to a specific exporting matrix.
SIMPLICIO S1000D™ visualization systems

Market requests have driven ISSELNORD to design and produce S1000D™ compliant visualization systems, adding a further tool that integrates SIMPLICIO’s outputs.

SIMPLICIO X-Browser

SIMPLICIO X-Browser is a system designed to view Interactive Electronic Technical Publications integrated with a database, which allows full text search and navigation features, directly from the XML source files, both stand alone and via web. The system is designed to manage single publications as well as series of publications, and is capable to export a stand-alone browser version. The system mainly consists of the following functions:

- Users management
- Project management
- Publication management
- Comment management
- IETP Browser

The use of the IETP browser permits the user to:

- Manage generated data: TOC, illustrations index, procedures index, dynamic list creation (spare parts, wiring, etc).
- Use: hyperlinks and hot spots, next and back sequential structure and usage history, history of visited pages.
- Manipulate graphics: pan, zoom, scale, magnify.
- Print: print publications (PDF), print Data Modules (PDF)
- Use advanced functions: create and export DM S1000D™ comments, add private and public notes, add and recall bookmarks.
- Use search functions: find text in Tech Name and Info Name, find text in publications, find text in a single page.

Release of stand-alone version

The system is able to create, for each publication, a stand-alone version of the browser. The obtained stand-alone version allows full text search and navigation capabilities directly on the XML source files, with the same main functions as SIMPLICIO XML Fly View.
SIMPLICIO XML Fly View is an IETP browser which allows users to navigate and consult electronic format technical publications, extracted directly from SIMPLICIO’s CSDB, without requiring any additional operation.

XML Fly View browser is a stand-alone application that allows navigation and search operations within the XML source files.

XML Fly View can be used both to visualize single publications and series of publications with the same functionalities of Simplicio X-Browser. In addition it can print single Data Modules and/or a complete publication in PDF format.
**Portfolio**

**Avionics. Civil & Military sectors**

**Ekis France, Groupe AKKA Technologies (2015)**  
*S1000D Technical Publications*

*S1000D Technical Publications*

**GDC Engineering GmbH (2015)**  
*S1000D Technical Publications, SCORM Training Aids*

**Leonardo/Finmeccanica - AleniaAermacchi (2009)**  
*S1000D Technical Publications, SCORM Training Aids*

**Leonardo/Finmeccanica - AgustaWestland (2009)**  
*S1000D Technical Publications, SCORM Training Aids*

**Leonardo/Finmeccanica - Selex-ES (Selex Galileo TO) (2014)**  
*S1000D Tech Pubs, S2000M Provisioning, S3000L LSA management, SCORM Training Aids*

**NATO Alliance Ground Surveillance Management Agency (NAGSMA) (2016)**  
*S1000D Tech Pubs, S2000M Provisioning, S3000L LSA management, SCORM Training Aids*

**Northrop Grumman Inc. (2015)**  
*S1000D Tech Pubs, S2000M Provisioning, S3000L LSA management, SCORM Training Aids*

*S1000D Tech Pubs, S2000M Provisioning, S3000L LSA management, SCORM Training Aids*

**Technodata GmbH (2014)**  
*S1000D Technical Publications, SCORM Training Aids*
Portfolio

**Naval, Land & Comms. Military sector**

**Abu Dhabi Ship Building PJSC (2016)**
S1000D Tech Pubs, S2000M Provisioning, S3000L LSA management, SCORM Training Aids

**Delfi S.r.l., a Fincantieri company (2013)**
S1000D Tech Pubs, S2000M Provisioning, S3000L LSA management, SCORM Training Aids

**Leonardo/Finmeccanica - OTO Melara (2010)**
S1000D Tech Pubs, S2000M Provisioning, S3000L LSA management, SCORM Training Aids

**Leonardo/Finmeccanica - Selex-ES (Selex Sistemi Integrati RM.) (2010)**
S1000D Tech Pubs, SCORM Training Aids

**Leonardo/Finmeccanica - Selex-ES (Selex Communications AQ) (2011)**
S1000D Technical Publications, SCORM Training Aids

**Leonardo/Finmeccanica - Selex-ES (Selex Communications GE) (2013)**
S1000D Technical Publications

**Leonardo/Finmeccanica - Selex-ES (Selex Communications GE Area CIFRA) (2014)**
S1000D Technical Publications

S1000D Tech Pubs, S2000M Provisioning, S3000L LSA management, SCORM Training Aids

S1000D Tech Pubs, S2000M Provisioning, S3000L LSA management, SCORM Training Aids

S1000D Technical Publications, SCORM Training Aids

**Civil sector**

**Caprari S.p.A. (2012)**
S1000D Technical Publications, SCORM Training Aids

**Grimaldi Group SpA (2014)**
S1000D/ShipDex Technical Publications

**Hitachi Group - Ansaldo STS (2009)**
S1000D Technical Publications, SCORM Training Aids

**SpecTec Taiwan Ltd (2014)**
S1000D/ShipDex Technical Publications

**Winterthur Gas & Diesel Ltd (2016)**
S1000D/ShipDex Technical Publications
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