



Integrated Courseware Solution

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Contents

1	Background	5
	Client testimonial	5
2	Overall Description	7
	Overall scope	7
	Client's goals	7
	Courseware model	8
	Timescales	8
	Key deliverables	8
3	Project Definition	9
	Gazelle Training's role	9
4	Software Evaluation	11
	Reasons for selecting AuthorIT	11
5	Planning	13
	Project plan	13
	Resources	14
	Change control	14
	Contingency planning	14
	Software installation	14
	Budgetary considerations	15
6	Implementation.....	17
	Initial Design	17
	Pilot.....	17
	Re-design	17
	Example 1 - Sharing a graphic within a project	18
	Example 2 - Sharing content in four User Guides	19
	Management review and acceptance	19
	Migration of existing courseware	20
	Creation of all new courseware	20
7	Delivery	21
	Client engagement	21
	Timeliness and cost effectiveness	21
	Follow-up	21
	Client Support.....	22
	AuthorIT support documentation.....	22
	Impact and Contribution.....	22
	Publishing capabilities.....	22

Online help.....	22
Controlled environment.....	23
Re-usable content.....	23
Easy to use and maintain.....	23
Achievements	23
Additional Comments	23

1 Background

Gazelle Training has been developing courseware for Lloyd's Register since 1995. From 2002, it has concentrated specifically on Marine technical software products.

Lloyd's Register is a world-renowned and substantial risk management organisation providing global services to major industries such as transportation, oil and gas.

Gazelle Training has developed this courseware for delivery by Lloyd's Register trainers, who are drawn from a global network of surveyors and technical experts.

The Marine technical software trainers have successfully delivered more than 1000 delegate days of practical, classroom training in both Europe and Asia.

Client testimonial

Martin Pittilo, Manager, Ship Design Systems (SDS) said:

“The training courses produced have been key to the success of the products. For example, before the RulesCalc courses and user guides were produced, there was only a small number of users external to Lloyd's Register. Making use of the course material and advice produced by Gazelle Training facilitated around four hundred users to be registered within four weeks. The courses have proved to be successful across the world, including locations where English is a second language.”

2 Overall Description

At the beginning of 2003, Lloyd's Register's Ship Design Systems department (SDS) expanded the development of its software products. This highlighted the need to streamline the courseware development process without compromising quality.

In May 2003, Lloyd's Register commissioned Gazelle Training to identify and implement a comprehensive object-orientated database with content management. The priority was to find a system that would facilitate the re-use of text and graphics in several different outputs.

Overall scope

The overall objective was to implement a courseware development tool that could be used to provide a training package without having to update several separate documents.

Gazelle Training was asked to take responsibility for managing this project from product selection through to live running.

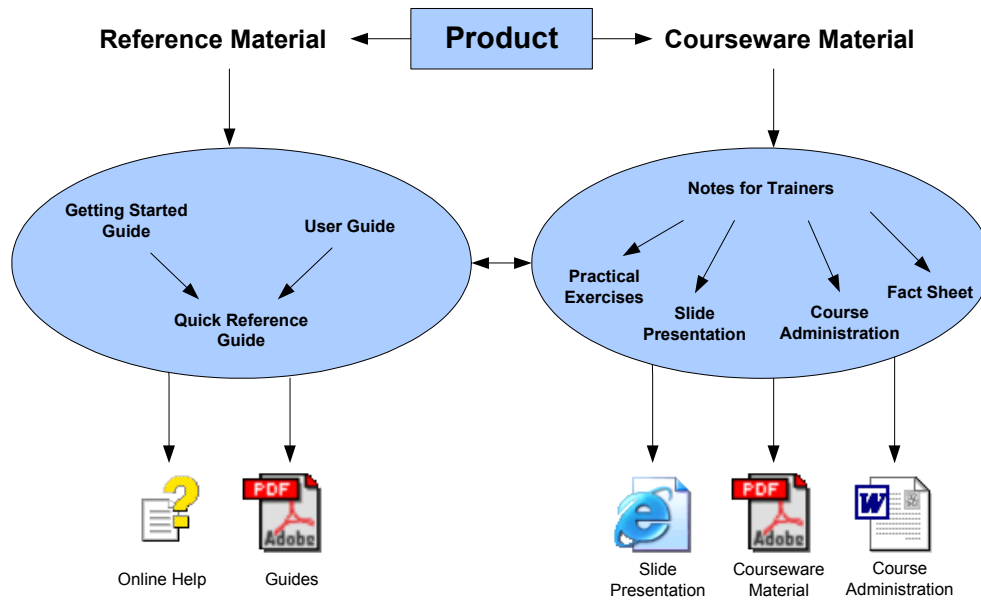
Client's goals

Lloyd's Register had the following goals for a courseware development tool:

- **Improve publishing capability**
Many of the documents are over 400 pages with many screenshots which can take several hours to publish.
- **Provide online help for software products**
Online help is developed independently by the software developers. A more efficient solution was required, whereby the content could be created once and used to provide both paper and online support material.
- **Improve consistency and re-use of information across projects**
At least 50% of the courseware developers' time is spent on formatting, checking conformity with house styles, fixing Word problems, and copying and pasting text and screenshots in several different documents.
- **Import all legacy user documentation**
The existing courseware consisted of over 50 documents with multiple screenshots and graphics, produced using MS Word, Adobe Acrobat and MS PowerPoint. These are live documents requiring update on a regular basis.
- **Improve the update and review process**
Word does not allow any central control or protection of approved content. For quality assurance each new version requires a complete review. With protected content, reviewers can work only on the updated or new sections.

Courseware model

Gazelle Training designed the following courseware model for the SDS software products.



Timescales

Evaluation and initial planning - June and July 2003.

Design, development and implementation - May 2004 to June 2005.

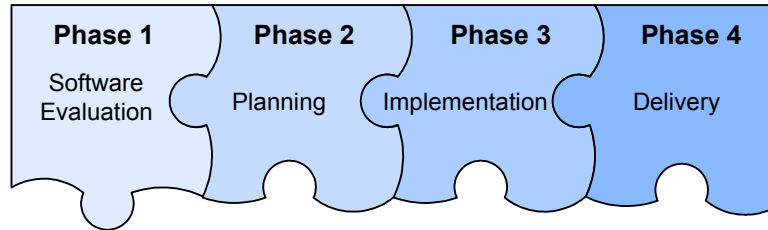
Key deliverables

The following key deliverables were identified for this project:

- evaluation and recommendation report
- software installation and training
- pilot results and recommendation report
- client support documentation
- migration of existing courseware
- creation of new courseware.

3 Project Definition

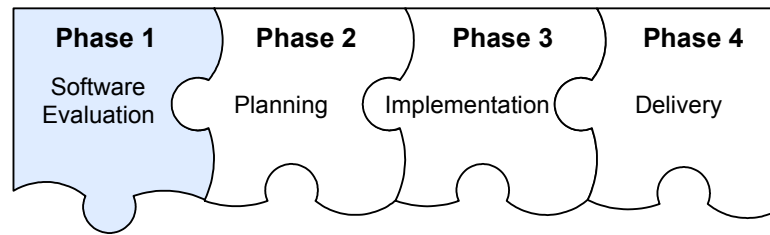
Gazelle Training divided this project into four phases:



Gazelle Training's role

Gazelle Training was asked by Lloyd's Register to take responsibility for all phases of the project, including the overall project management.

4 Software Evaluation



The software evaluation phase of this project took place during May 2003.

In line with the PRINCE2 methodology for a feasibility study, this phase was handled as a separate and distinct project prior to starting up a second project to implement the results of the software evaluation.

Gazelle Training:

- Worked with Lloyd's Register to establish criteria for selecting a suitable courseware development tool.
- Selected six software products for evaluation.
- Enlisted the services of an independent specialist to assist with the detailed evaluation of the selected tools against the identified criteria.
- Delivered a report to Lloyd's Register.

The evaluation and recommendation report contained details of:

- criteria for a courseware development tool
- courseware development tools selected for evaluation
- evaluation results
- recommendation to implement AuthorIT.

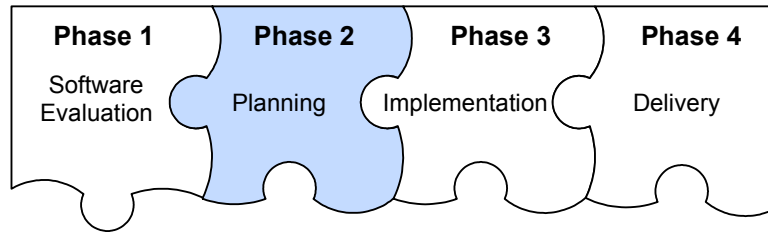
Reasons for selecting AuthorIT

AuthorIT was selected in favour of other products as it provides the most appropriate solution for Lloyd's Register. Features particularly relevant include:

- publishing capabilities
- online help
- controlled environment
- re-usable content
- multiple formats available from the same content, without rework, conversion or external tools
- courseware developers can create and maintain the set-up
- legacy documents can be imported from MS Word.

AuthorIT is produced by AuthorIT Software Corporation in New Zealand.

5 Planning

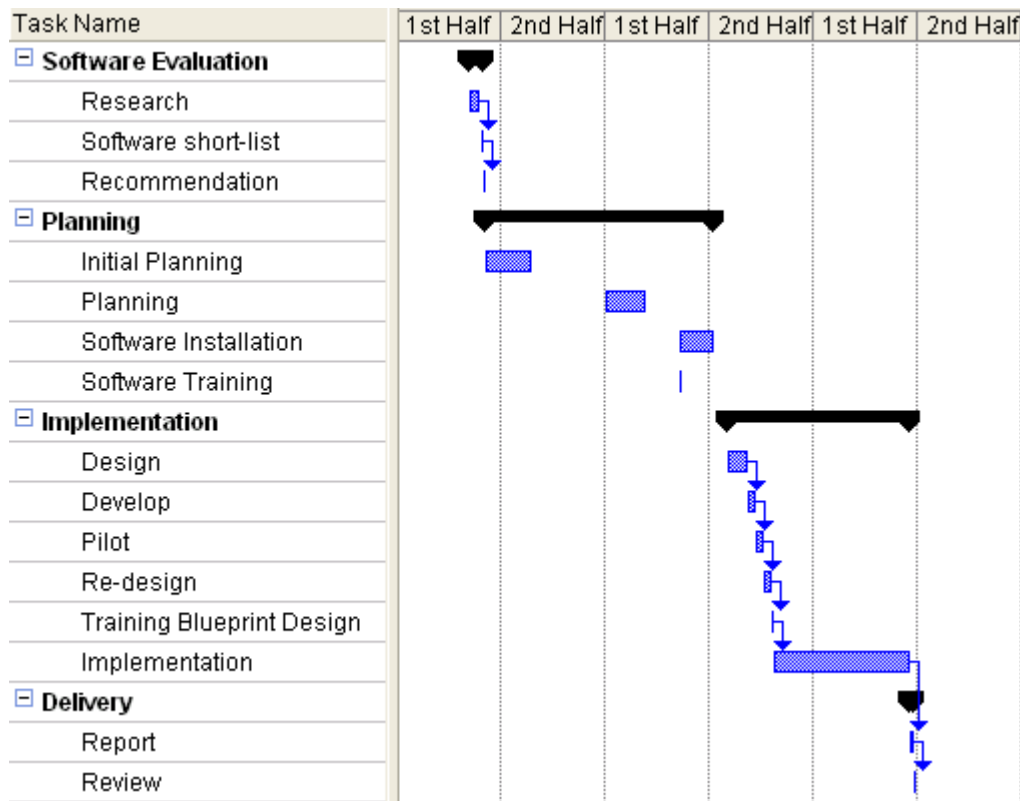


The planning phase of this project took place between June 2003 and August 2004.

Gazelle Training took full responsibility for the planning and risk management aspects of this project.

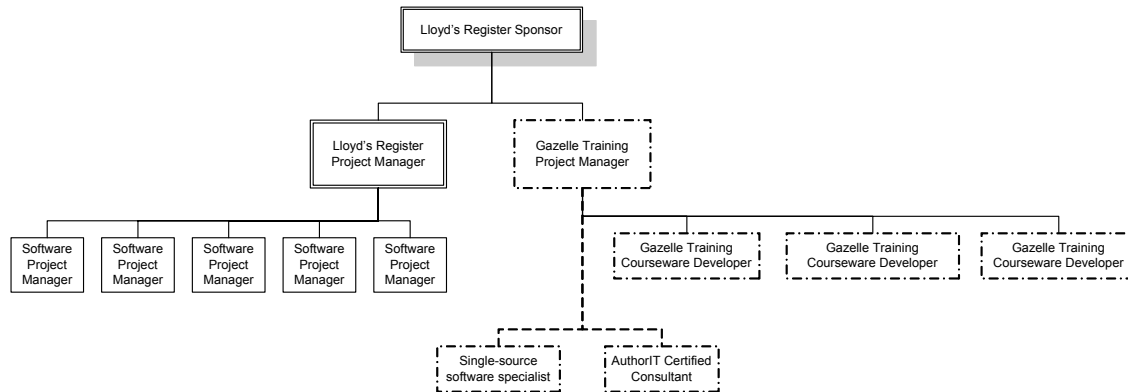
Project plan

The following diagram provides a summary of the project plan.



Resources

The chart below provides details of the resources assigned to this project.



Change control

Gazelle Training took full responsibility for managing the day-to-day change control. The courseware developers:

- worked together as a team, taking responsibility for different aspects of the design
- had regular plenary sessions to agree and finalise the blueprint for the design
- implemented a change control mechanism within AuthorIT to provide an audit trail of suggestions, reviews and actions
- kept Lloyd's Register up-to-date informally on a weekly basis and formally through a written progress report at the end of each month.

Contingency planning

The project plan was developed so that tasks could be easily halted or reversed at short notice. This ensured that, where necessary, production work could always be given priority whilst minimising the amount of re-work on the courseware development tool project.

All legacy documents were backed-up before they were imported to AuthorIT.

Software installation

At the beginning of May 2004, Gazelle Training arranged with the AuthorIT UK distributors, PDA Services for:

- purchase of the software licences
- installation of the software
- a three-day training course
- ten days' follow-up consultancy.

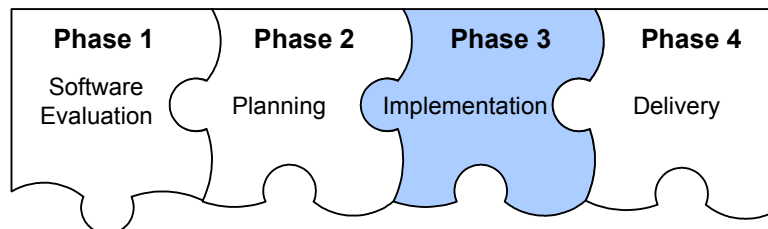
Budgetary considerations

During the software evaluation process, the relative costs of implementation were assessed. It was agreed with Lloyd's Register, that the preferred route for implementation was one which involved a higher set-up cost, if the long term costs could be reduced and dealt with mainly in-house.

With the emergence of a number of unforeseen issues, not least the progression of production work in parallel at the client's request, the cost of implementation was higher than at first anticipated. However it was still acceptable to the client, and seen as a good value implementation, bearing in mind the benefits. Compared with quotations for other single-source systems, the final solution was felt by Lloyd's Register to be very cost effective.

6 Implementation

The implementation phase of this project took place between August 2004 and June 2005.



Gazelle Training employed an AuthorIT certified consultant to assist with the comprehensive and complex AuthorIT set-up.

Initial Design

An initial design was developed to maintain the same look and feel as the legacy documents. It was encouraging to see how quickly the documents migrated from MS Word to AuthorIT.

The findings were presented to Lloyd's Register and it was agreed the initial design should be piloted on one of the user guides.

During the design phase Lloyd's Register specialist trainers were consulted and invited to provide feedback and recommendations on improvements to the documentation.

Pilot

A suitable document was selected for the pilot. Analysis of the pilot results highlighted a number of issues.

Gazelle Training presented the findings of the pilot to Lloyd's Register. There were two options:

- a quick, low-cost implementation with high maintenance costs
- a slower, more expensive implementation with lower maintenance costs.

Gazelle Training recommended that Lloyd's Register would gain in the long term if they opted for the lower maintenance cost option, which would also provide a greater reduction in duplication of effort.

Lloyd's Register agreed to implement this recommendation.

Re-design

Gazelle Training undertook a major re-design of the set-up to produce a more elegant and robust, long-term, cost effective solution.

The re-design involved:

- detailed analysis and restructuring of the content
- creation of new templates and styles
- consolidating the converted content
- deleting obsolete content
- re-designing the suite of courseware documents to improve integration.

In the legacy system, one object (a chunk of text or a graphic) may have been replicated in 10 or more different places. Investing in this major re-design has resulted in at least a 40% reduction in the number of objects for each training package.

Lloyd's Register now has a sophisticated content management system which gives complete integration of all courseware documents. For example, one object can potentially be used in six places: User Guide, Quick Reference Guide, Notes for Trainers, Practical Exercises, Slide Presentation and Online Help.

There are many instances where a single graphic is used in over 500 places. For example:

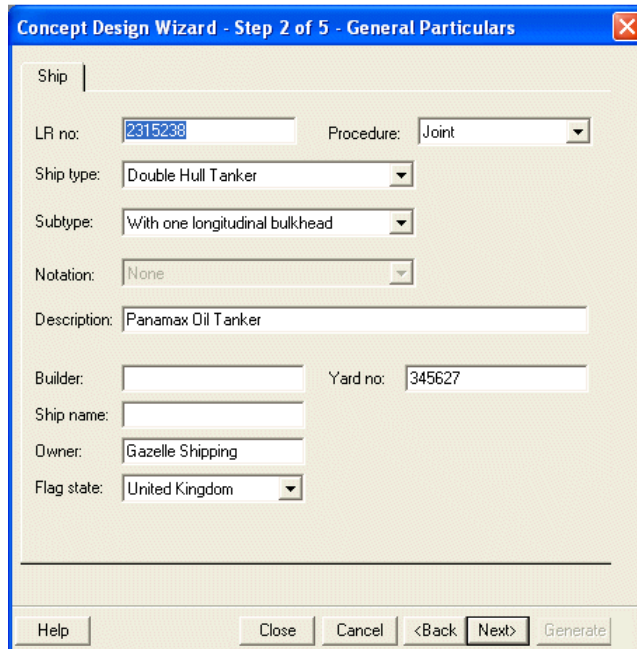


This icon is used as one of the conventions throughout all the documentation. If this graphic changes in the future it will only need replacing in one place.

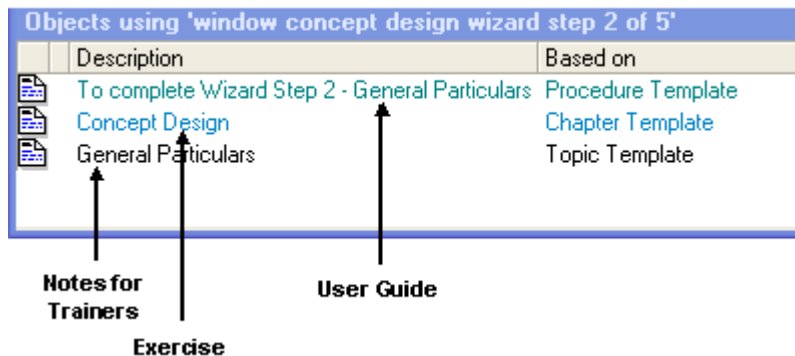
Example 1 - Sharing a graphic within a project

This example shows a software screenshot being used in three outputs for the same project.

Software screenshot



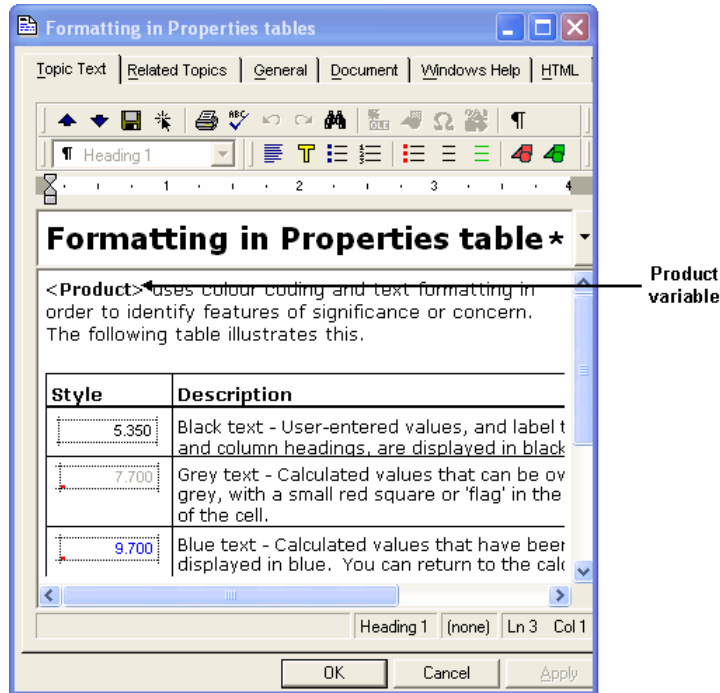
AuthorIT Relationship window



Example 2 - Sharing content in four User Guides

This example shows a chunk of text being used in four different user guides. The product variable facilitates the automatic insertion of the correct product name in each user guide.

AuthorIT topic



AuthorIT Relationship window

Objects using 'Formatting in Properties tables'		
	Description	Based on
	MachineryCalc V1.2 User Guide	User Guide Template
	NSR V3.0 User Guide	User Guide Template
	SSC V5.0 User Guide	User Guide Template
	RulesCalc V3.1 Getting Started	User Guide Template

Management review and acceptance

Gazelle Training briefed Lloyd's Register on progress at regular intervals, presenting the issues and suggesting various resolutions.

Sample documents were given to each software project manager for review and comment.

In October 2004, Gazelle Training gave a formal presentation to Lloyd's Register to:

- provide an overview of AuthorIT
- explain the benefits of AuthorIT
- give a report on the current status of the project.

At the end of each phase, Lloyd's Register was asked to review progress and approve the next phase of the project.

Migration of existing courseware

The complete suite of legacy documents was successfully migrated by the end of June 2005.

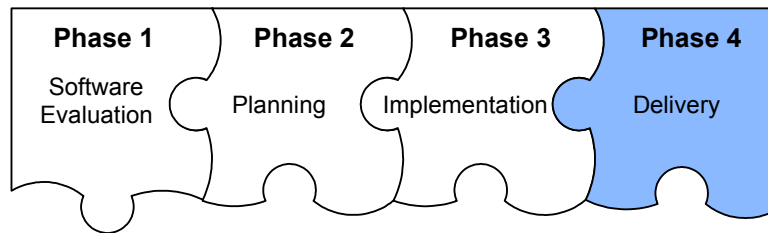
Gazelle Training carried out in-depth analyses on the converted documents to ensure maximum re-use of content. The opportunities for re-use of content both within projects and across projects have greatly reduced the ongoing updating tasks.

Creation of all new courseware

From May 2005, all courseware for new projects has been developed using AuthorIT.

At least 30% of the content of a new document can be created using existing content within the AuthorIT Library. Most of the front and back matter required for a user guide can be re-used, as well as some of the common graphics and procedures. This also reduces the review time by 30%, as the re-used content has already been approved.

7 Delivery



The delivery phase of this project took place during July 2005.

Gazelle Training prepared a post implementation review report for Lloyd's Register.

Gazelle Training courseware developers and Lloyd's Register personnel met to review this project.

Client engagement

Gazelle Training maintained the profile of this project within Lloyd's Register through regular meetings and monthly progress reports.

Lloyd's Register is very happy with the end result. It is satisfied that the original project objectives have been achieved and exceeded.

Gazelle Training was commissioned by the Group IT Services department to deliver a user guide and an online help system for a customised version of Radia. This product is being rolled out to over 5,000 people. Gazelle Training were able to meet this requirement using the SDS AuthorIT set-up without the Group IT Services department incurring any set-up costs.

Gazelle Training is implementing AuthorIT for another department within Lloyd's Register, the Marine Training Services (MTS) department. The major benefit for MTS is that they will not have any of the set-up costs incurred by SDS.

Timeliness and cost effectiveness

The priority for Lloyd's Register was to implement a system that would provide long-term benefits. Emphasis was placed on providing good content management, so that maintenance costs and development times could be reduced in the long term.

Ideally it would have been more efficient and cost effective to freeze the documentation to allow a big bang conversion. However, this was not a commercially viable option for Lloyd's Register.

Follow-up

At the end of July 2005, Lloyd's Register ran a five-day trainers workshop. One day of this workshop was dedicated to:

- presentation of the AuthorIT system
- review of the AuthorIT Library content.

AuthorIT was well received by the trainers and they made a number of suggestions for enhancements to the content. These suggestions were reviewed by Lloyd's Register and approved suggestions were implemented.

Client Support

Gazelle Training:

- continues to work on the development of courseware for Lloyd's Register
- are available to assist Lloyd's Register either on-site or via email and telephone
- has created a comprehensive set of documents to support the AuthorIT system.

AuthorIT support documentation

Document	Contents
Training Blueprint Design	A list of the training documents and who they are used by An explanation of the design concept Guidance on how to develop the various training documents using AuthorIT
AuthorIT Library Guide	The Library Folder Structure Users and Permissions AuthorIT Templates and Styles Shared Objects
AuthorIT Administrators Guide	User and Group Accounts Folder Action Permissions Release States Variables
Hints and Tips	Courseware developers add information to this on a regular basis

Impact and Contribution

AuthorIT provides the following benefits for Lloyd's Register:

Publishing capabilities

AuthorIT can handle large documents with extensive graphics. Publishing times have reduced from hours to minutes.

Online help

This is now an integral component of the training package. The reduction in effort is substantial. The software developers no longer need to create the online help and the materials are consistent in both paper and online outputs. Most importantly, the material only needs updating in one place, greatly reducing the maintenance overhead.

Lloyd's Register is particularly impressed that they have reduced the cost of developing the paper and online help outputs by almost 100%.

Controlled environment

Once all the required styles, templates and folders have been set up, they are protected. The AuthorIT administrator is the only person who can make formatting and folder access changes. This ensures that courseware developers concentrate on the content. They cannot:

- create/amend templates
- create/amend styles
- edit content they are not authorised to access.

AuthorIT provides a release state feature, so that content being reviewed, or content that has been approved, can be protected from further changes. A secure workflow system has been set up using this feature. This controlled environment represents at least a 50% saving in non-productive effort.

Re-usable content

The software products within SDS share common functionality. AuthorIT enables re-use of information not only within projects but also across projects. This is saving much time and effort, and ultimately money.

Easy to use and maintain

Time invested in the planning and initial set-up has paid off. New courseware developers can be brought up to speed very quickly. They can concentrate on the content rather than the formatting. Any required changes to formatting are carried out centrally by the AuthorIT administrator.

Achievements

The greatest achievement for Gazelle Training is to have been involved in the design and implementation of a truly single-source courseware development system. For many years Gazelle Training has been searching for a software product that has the capability of producing an integrated suite of courseware materials. With AuthorIT, it is no longer necessary to update the same information in several different outputs and formats. Small chunks of information and graphics can be re-used successfully in many different places, in many different formats.

In September 2005, Gazelle Training received an award from the Institute of Scientific and Technical Communications (ISTC). The ISTC documentation awards recognise particular achievements in the literary design and visual creativity of online and printed documentation. The award presented to Lloyd's Register and Gazelle Training was in the category dedicated to printed delivery of technical matter.

Additional Comments

Although AuthorIT is not a well-known single-source software product in the United Kingdom, it has a great deal to offer the IT Training industry.

Factors that contributed to the success of this project include the:

- financial support and commitment from Lloyd's Register
- assistance from a single-source software expert during the evaluation phase
- training and consultancy from an AuthorIT certified consultant
- skills and team spirit within the Gazelle Training team.

This document was produced using the SDS AuthorIT set-up developed for Lloyd's Register.