

**IBM**

Armonk, New York  
[www.ibm.com](http://www.ibm.com)

**Results**

- Built powerful, customized solution for creating and managing training materials for customers worldwide
- Reduced course development time by up to 20%
- Allowed subject matter experts to contribute content using familiar, powerful tools
- Freed developers to spend more time on content creation and less time on formatting
- Enabled generating multiple outputs from a single source of content

IBM

# Meeting learning content expectations

## Technology leader uses Adobe Technical Communication Suite toolkit to efficiently create high-quality learning materials

Already renowned for the quality and technical sophistication of its products, IBM also applies the same high standards to creating and delivering educational materials. The IBM Learning Development business unit, together with various other geographically and organizationally dispersed training teams in IBM Software Group and IBM Systems & Technology Group, uses integrated solutions in Adobe Technical Communication Suite as the foundation for its instructor-led training content development tool, IBM Class Author.

"The development environment used by IBM Class Author software combines Adobe FrameMaker® and Adobe Acrobat® with an integrated suite of IBM-developed add-in tools created using the Adobe FrameMaker Developer Kit," says Julian Cable, courseware tools specialist and technical editor for IBM Learning Development. "By automating time-consuming and repetitive tasks with solutions in Adobe Technical Communication Suite, in combination with the IBM Class Author add-in tools we provide, we've been able to cut the development time for course content by up to 20%."

### Meeting the challenges of evolving requirements

IBM has always been committed to efficiently producing large volumes of high-quality training materials. But the migration away from mainframe technology several years ago challenged IBM to find a robust document authoring solution that could automatically and successfully manage the creation of hundreds of pages of course materials—including embedded graphics and tables, headers, footers, and tables of content—in a distributed desktop environment.

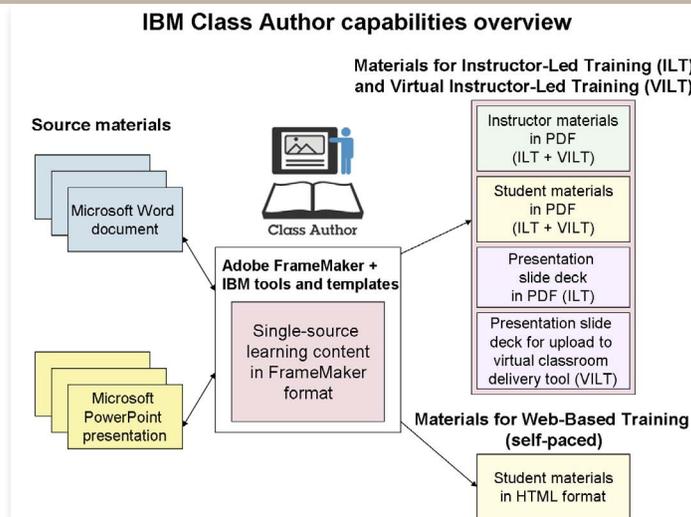
For IBM, Adobe FrameMaker offered the ideal combination of price and performance. More than a decade later, IBM still relies heavily on Adobe FrameMaker for content creation, and adds numerous enhancements with other solutions in Adobe Technical Communication Suite.

More than 600 learning professionals create or update approximately 800 courses each year at IBM. However, the developers of training content are dispersed both geographically and across various IBM business units. Also, because many of the contributors to IBM education materials are not professional writers or educators, IBM needed a solution to unify content creators across standards, practices, methodologies, and geographies in a manner that is both quick and simple for the lay user to grasp.

The combination of IBM Class Author and Adobe FrameMaker enables contributors to provide content using the tools they are familiar with. For example, source content for presentation visuals can be created in Microsoft PowerPoint by multiple authors. IBM Class Author converts a PowerPoint file with slides and speaker notes into a FrameMaker document that is based on a predefined template. IBM Class Author also provides a round-tripping capability to export existing FrameMaker content back into the original presentation file so that the next revision could be performed by a casual contributor who might not have FrameMaker. By converting the visuals to PDF files, the pages can be imported easily into Adobe FrameMaker, where an experienced writer might use the more advanced FrameMaker text editing capabilities to add student notes and instructor notes to create a FrameMaker book.

Practical exercises to reinforce learning are typically added as separate books. Exercises can be created directly in FrameMaker, or IBM Class Author can convert a Microsoft Word document with a predefined template to FrameMaker format.

The IBM Class Author solution, supported by Adobe FrameMaker and Adobe Acrobat, enables IBM to develop classroom and virtual classroom-based learning content. IBM chose to base IBM Class Author on Adobe FrameMaker because the software can efficiently handle long documents, organize content, process multiple outputs from a single source, and import graphics by reference.



### Challenge

- Creating educational materials that meet customers' expectations for quality
- Eliminating the need to maintain multiple versions of source content separately
- Improving developer productivity
- Helping ensure that learning solutions comply with accessibility requirements

### Solution

Use Adobe Technical Communication Suite to create IBM Class Author, a custom education material development solution that serves as a bridge between the preferred content creation technologies of contributors and a flexible means for publishing across training delivery modes

### Systems at a glance

Adobe Technical Communication Suite. Components used include:

- Adobe FrameMaker
- Adobe Acrobat XI Pro
- Adobe RoboHelp
- Adobe Captivate

Adobe FrameMaker Developer Kit

By using this flexible and modular approach, each course can be built from a series of Adobe FrameMaker books that provide required content for students and instructors. With Adobe solutions, final output can be either printed PDF files for classroom training events or be delivered as interactive softcopies for virtual instructor-led training, a delivery medium which IBM increasingly offers.

In addition to Adobe FrameMaker and Acrobat, IBM uses Adobe RoboHelp® to convert FrameMaker learning content so it can be repurposed for use in self-paced learning. IBM also uses Adobe Captivate® for self-paced learning.

### Integrated solutions, multiple benefits

IBM relies on Adobe FrameMaker capabilities including conditional text, change tracking, paragraph formats, character formats, variables, cross-references, and tables of contents. IBM chose to base IBM Class Author on Adobe FrameMaker because the software can efficiently handle long documents, organize content at the book level, process multiple outputs from a single source in a seamless manner, and import graphics by reference without having to copy graphics into the document.

"If we hadn't standardized on Adobe FrameMaker, course development times would be longer and the quality of deliverables would be lower," says Julian Cable. "Adobe FrameMaker frees developers to spend more time creating content and less time on routine formatting."

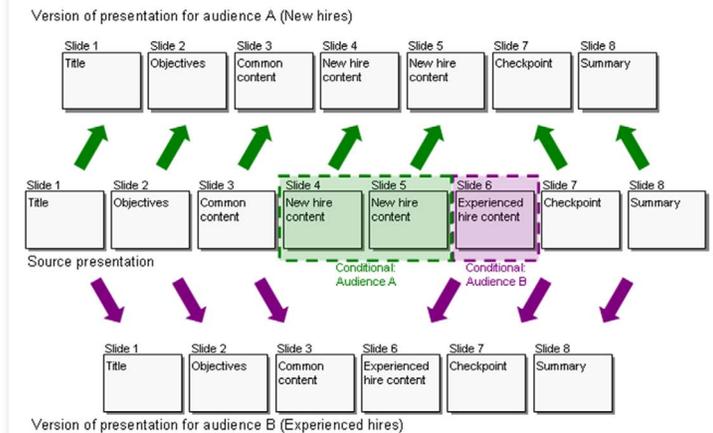
A key strategy in creating IBM Class Author is to enable the one-time creation of content that can be used to produce multiple outputs. "Developers can create professional, scalable learning content for live or virtual classroom delivery worldwide, or materials for simple web-based training, regardless of audience, subject, or language. Even when multiple authors work on a project, it helps ensure a consistent design across all materials that enables ease of deployment, delivery, and subsequent maintenance of the learning content." says Paul Jagger, business area manager for IBM Learning Development in Europe.

"The power of IBM Class Author comes into its own when learning content needs to be adapted for different audiences, is updated to keep abreast of new developments, and comprises multiple deliverables such as student guide, instructor guide, presentation materials, exercises guide and so on," says Paul Jagger.

Office productivity tools such as Microsoft Word and PowerPoint are not designed to handle such complex environments. IBM Class Author eliminates the repetition, duplication, and manual synchronization that would be otherwise necessary in both the creation and maintenance of learning content that requires multiple outputs.

IBM worked with a large U.K. public sector organization to create and deliver training courses to employees transitioning from legacy technology to an installation of new IBM technology. Using Adobe FrameMaker and IBM Class Author capabilities, IBM significantly streamlined the course development phase of the project.

### An example of how IBM Class Author uses a single source to produce two outputs for different audiences



*“By automating time-consuming and repetitive tasks with solutions in Adobe Technical Communication Suite, in combination with the IBM Class Author add-in tools we provide, we’ve been able to cut the development time for course content by up to 20%.”*

Julian Cable,  
Courseware tools specialist  
and technical editor,  
IBM Learning Development

“Our customers expect education materials to be delivered by people skilled in the products they teach and that class materials are of the highest quality, something IBM Class Author and Adobe FrameMaker play a major role in,” says David Stannard, education development manager for WebSphere Education, IBM Software Group.

### Turning complexity into productivity

Even bigger productivity gains can be realized when a course needs to be developed for two or more technical platforms, audiences, or languages. For instance, conditional text in Adobe FrameMaker content can be marked for specific uses, and then developed and maintained as a single source, eliminating the need for multiple versions of content. IBM Class Author synchronizes the conditional text settings across the whole book, in preparation for generating the production output files.

The robust, scalable Adobe Technical Communication Suite reduces maintenance costs through effective integration and generates a higher return on IBM’s investments in employee and customer training.

For example, IBM Class Author contributed significantly to the success of a project for a major public sector organization in the United Kingdom. IBM had to design, develop, and deliver training courses to more than 430 employees transitioning from legacy technology to an installation of new IBM technology. The training would also be used for 165 new hires, but with slightly different content from the former audience.

“Using Adobe FrameMaker conditional processing and IBM Class Author capabilities, IBM significantly streamlined the course development phase of the project by enabling materials for both employee audiences to be developed in a single place, instead of having to develop modules on given subjects separately for different audiences,” says Julian Cable. “This enabled the training course development and delivery to be completed on a tight deadline.”

For IBM, the move to Adobe solutions helped improve developer productivity by streamlining processes and eliminating waste. The what-you-see-is-what-you-get (WYSIWYG) editor in Adobe FrameMaker and the flexibility to deliver final materials in PDF help reduce the printouts used during content development and review cycles, saving paper, toner, and energy. Backwards compatibility of Adobe solutions also extends the longevity of the authoring solution by giving older documents longer shelf life and enabling the easy updating of course materials to the latest formats.

Adobe Technical Communication Suite helps improve customer satisfaction with training, too. Course materials built using IBM Class Author have a consistent structure, approach, and layout, which enhance the quality of student experiences.

*"Our customers expect education materials to be delivered by people skilled in the products they teach and that class materials are of the highest quality, something IBM Class Author and Adobe FrameMaker play a major role in."*

David Stannard, education development manager for WebSphere Education, IBM Software Group

Rather than be taught once and discarded, an IBM training course commonly has a lifespan of as much as 5 to 10 years and undergoes multiple revisions during that time by different authors, often in different countries. IBM Class Author automates bringing existing files from the previous course version to the latest FrameMaker template level. Also, IBM Class Author solves a significant challenge to synchronize the content between each presentation and the document with its corresponding text in the FrameMaker book, when the source document is subsequently updated and the sequence of objects changes.

In addition, IBM makes a strong commitment to make all its information technology products and services, including learning solutions, widely available and accessible, regardless of the physical ability of the user, in support of Section 508 of the U.S. Rehabilitation Act and similar legislation in other countries.

One of the key requirements to make electronic documents usable by people with visual disabilities is to provide alternative text for all images that are included in a document. However, it can be very time-consuming for an author to have to write alternative text for hundreds of images in a large document. Uniquely, IBM Class Author provides a tool to automatically assign alternative text to all presentation slides in a course, eliminating the need for the author to spend time writing the alternative text. This alternative text content is automatically propagated to FrameMaker and is used to produce a fully accessible PDF output document.

"The IBM Class Author solution, supported by Adobe FrameMaker and Adobe Acrobat, enables us to develop classroom and virtual classroom-based learning content that meets accessibility requirements in an efficient, cost-effective manner," says Ray Hawkes, technical lead, IBM Learning Development.

#### For more information

[www.adobe.com/products/technicalcommunicationsuite.edu.html](http://www.adobe.com/products/technicalcommunicationsuite.edu.html)



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