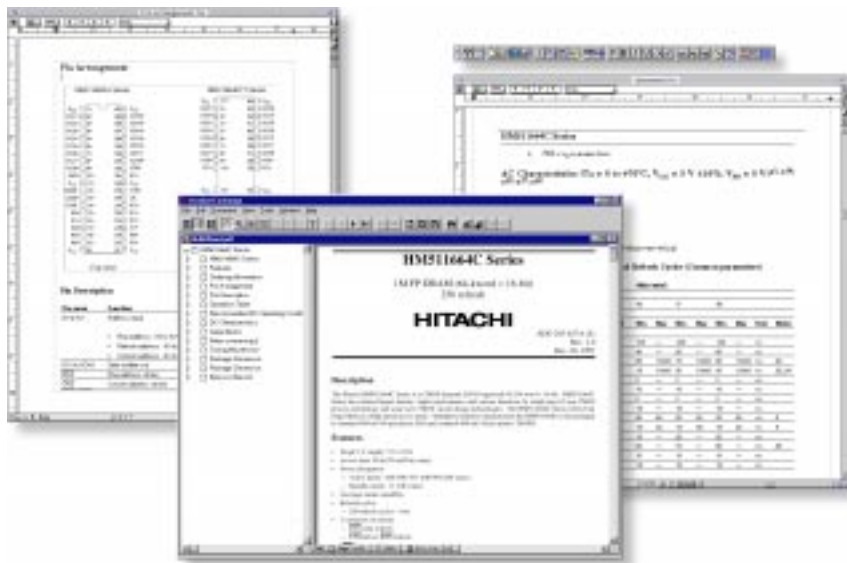


# Hitachi Semiconductor (America), Inc.

*Publishing Group Reduces Print Costs 40 Percent and Trims Print Cycle from Three Months to One*

Adobe® FrameMaker®+SGML  
Adobe Acrobat®  
Adobe Illustrator®



Using Adobe FrameMaker+SGML, Hitachi Semiconductor produces documents in multiple formats—HTML, SGML, and PDF—for delivery in print, on CD-ROM, and on the Web. The company also plans to add XML output to the process, further streamlining document delivery on the Web.

### Key Benefits

- Print costs dropped 40 percent due to the ability to create PDF files from the SGML source code. Additional cost savings of \$19,000 a month are a result of the ability to distribute data sheets via the Web rather than by mail.
- The print cycle shrunk 66 percent because FrameMaker+SGML preserves hyperlinks and bookmarks when it creates PDF files.
- A single source file for paper, Web, and CD-ROM publishing enables the company to manage a larger volume of information more reliably and accurately.
- Shorter publishing times reduce the number of published pieces that become obsolete while on the company's shelves.

Distributing the right document to the right customer at the right time presents a formidable challenge for Hitachi Semiconductor (America), Inc. The company maintains nearly 1,000 mission-critical data sheets comprising a total of 60,000 pages, and each must be made available to prospective customers—primarily design engineers—on paper, CD-ROM, and the Web. Without these data sheets, which provide details on a computer chip's performance characteristics and interface specifications, a chip cannot be engineered into a product.

With such a large volume of documents to publish, Hitachi Semiconductor needed an efficient, cost-effective solution for publishing documents to multiple media from a single source file. The company found its solution in Adobe FrameMaker+SGML and its integrated Adobe Acrobat software.

### An Urgent Need for a Single Source File

At Hitachi Semiconductor, 200 design engineers in Japan use a word processing application to create product data sheets

and save them as Rich Text Format (RTF) files. The documents reference external graphics files that are created in Adobe Illustrator software. The company's publishing group, located in Brisbane, California, converts the RTF files to standard generalized markup language (SGML) using an OmniMark filter. The company then publishes these documents in hard copy and in three electronic formats for the Web and CD-ROM: HTML files that enable browsing; SGML files that can be downloaded for inclusion in customers' design automation tools; and PDF files, which customers can print. The printed PDF files look exactly like the company's printed data sheets, preserving the look and feel of the original documents and protecting Hitachi's brand identity.

When Hitachi Semiconductor first began using this process, the main drawback was that the company could not render PDF files from the SGML source, and had to render them from the RTF file. "In the fast-paced semiconductor industry, we revise

our documents an average of four times a year, so version control is challenging enough with 970 publications,” says Bob Tabone, program manager for marketing communications. “With 970 times three versions—Web, CD-ROM, and paper—it would be nightmarish. Lacking a single source file, we could not have a high confidence level that we were producing PDF files from the same version as the SGML file. That was unacceptable from a quality standpoint.”

Another drawback of rendering PDF files from RTF was the need to manually re-add bookmarks and links, a process that required an average of five hours per document. At 40 documents per month, this meant Hitachi Semiconductor spent 200 person-hours re-creating information that already existed in another format. Long publishing lead times left the company with out-of-date documents: Approximately 30 percent of published pieces became obsolete while on the company’s shelves.

### **FrameMaker+SGML Software Creates SGML, HTML, and PDF Files**

With its adoption of FrameMaker+SGML software in late 1996, Hitachi Semiconductor was able to produce PDF files directly from the SGML source simply by choosing the Save As PDF command. The PDF files are published to the Web and delivered to print vendors for print-on-demand publication. “With PDF, we can deliver documents anywhere, exactly as intended,” says Tabone.

By preserving hyperlinks and automatically creating bookmarks, FrameMaker+SGML eliminates a labor-intensive process. In addition, the company can provide print vendors with production-ready files because FrameMaker+SGML handles composition and pagination of the data sheets and automatically generates indexes and tables of contents. “FrameMaker+SGML

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*“With shrinking product design cycles, faster time-to-information and resulting faster time-to-market are not just nice benefits for our customers, they are a business imperative. By eliminating steps from production, FrameMaker+SGML supports a mission-critical process.”*

—Bob Tabone,  
Program Manager, Marketing Communications,  
Hitachi Semiconductor (America), Inc.

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has become one of the most important tools in our publishing suite,” says Tabone.

### **Time Savings and Reduced Costs**

By using FrameMaker+SGML to create PDF files directly from the SGML source code, Hitachi was able to reduce its print costs 40 percent and decrease its print cycle 66 percent—from three months to one month. “With shrinking product design cycles, faster time-to-information and resulting faster time-to-market are not just nice benefits for our customers, they are a business imperative. By eliminating steps from production, FrameMaker+SGML supports a mission-critical process,” says Tabone. The company accrues additional savings by being able to convert existing documents to PDF files at no additional cost. Its customers download an average of 25,000 product data sheets as PDF files each month, saving \$25,000 in postage.

### **XML Support Positions Company for Future**

While FrameMaker+SGML solved the initial challenge—creating a single source file for multiple delivery mechanisms—SGML, itself, still imposed certain limitations for Hitachi. “SGML is so esoteric and abstract that software developers have difficulty

developing tools for it,” says Tabone. “The tools they do develop tend to be large and slow, making SGML ill-suited for Web delivery. In addition, no Web tools are available to allow customers to take advantage of an SGML document’s rich data format. For example, there is nothing today that will enable our customers to search our document set for all chips with performance in a certain range.”

The answers to the limitations of SGML have arrived in the form of XML output, available in a coming release of FrameMaker+SGML. “XML provides the structure of SGML without its complexity,” says Tabone. An added benefit for the company, whose authors are in Japan, is that XML has integrated double-byte character support.

Tabone expects that XML will augment the initial savings from FrameMaker+SGML. He calculates that XML will reduce printing costs another 15 percent, and shave another two weeks from lead time for a 50 percent gain.

“Adobe FrameMaker+SGML software and XML will make electronic, highly automated publishing available to a much broader spectrum of people because they reduce the cost of entry, ongoing costs, and time to market,” says Tabone.

### **Hitachi Semiconductor (America), Inc. Systems At-A-Glance**

#### **Hardware:**

Apple Macintosh  
PCs running Microsoft® Windows® 95  
UNIX® workstations

#### **Software:**

Adobe Acrobat  
Adobe FrameMaker+SGML  
Adobe Illustrator

#### **Document Management:**

Documentum Document Management System

**Adobe Systems Incorporated**  
345 Park Avenue, San Jose, CA 95110-2704 USA

**Adobe Systems Pty. Ltd.**  
Level 5, 18-20 Orion Road, Lane Cove, NSW 2066, Australia

**Adobe Systems Europe Limited**  
Adobe House, Mid New Cultins, Edinburgh EH11 4DU  
Scotland, United Kingdom

**Adobe Systems Co., Ltd.**  
Yebisu Garden Place Tower  
4-20-3 Ebisu, Shibuya-ku, Tokyo 150-6017 Japan

**World Wide Web**  
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