

The Electronic Future for Documents

The 5th s.a.x. Conference brings leading technologists, designers and users together to discuss the changes in the generation, transport and use of documents.

2003's s.a.x. conference took place for the third time in the relaxed and luxurious surroundings of the Schlosshotel Bühlerhöhe. The gathering of eminent individuals from corporate design and technical departments of German multinationals, and distinguished names from typography, design and academia provided a stimulating atmosphere to examine not only the possibilities, but also the practices of generating and processing documents in the future.

Efficient Generation, Effective Communication

The keynote address was given by Frank Sax, founder and director of s.a.x. Software GmbH, and member of the German liaison committee of the Type Directors Club. He highlighted the current situation (document generation by many, application-dependent solutions, with inconsistent output) as an anomaly in the long history of documents. He predicted a future where the electronic nature of documents helps ensure that they reflect the entity producing them and their purpose more efficiently. This requires shared respect for the responsibilities of design and technology, to guarantee easy-to-use and efficient processing, and express corporate design effectively – a primary goal of the s.a.x. conference has always been to foster understanding between designers and technologists to this end.

Because generation is currently dependent on system and application considerations, there is often separate development for different sources (ERP systems, word processors, presentation software, e-mail applications, ...), and ensuring consistent layout is often limited to selected types of communication (such as letters, forms and faxes). This not only ignores the frequency of use (lead by e-mail, e-mail attachments, and standard documents such as invoices), it also fails to reflect the relevance of different document types for a companies turnover (the most important being presentations, invoices/quotes, and e-mail). The result is unnecessary expense, duplicated effort, and a sub-optimal use of resources.

To correct this, applications should concentrate on their core competences, and use information exchange protocols to send structured information to "document drivers", analogous to printer drivers, which ensure consistent, up-to-date and professional output. By centralizing control and rationalizing the combined technical and design effort, this sinks costs and increases value. Mr. Sax indicated some concrete advantages. For example, by formatting e-mail according to whether a decision or an appointment is required, by internal or external source, or by urgency and importance, the receiver gets information to help deal with the flood of messages. Structured information can be used to automate appearance and ease the creation of interactivity, so presentations can be adapted to the audience as they are presented. For invoices, quotes etc., structured information can be used to increase legibility, by automatically highlighting important data, or generate output for different media from a single source.

Making a Uniform Approach

The case of corporate forms in Siemens, presented by Mr. Hans-Jürgen Sörgel, Manager for the Concern-Wide Service for Siemens Corporate Forms (SCF), illustrated the challenges facing large companies in combating a proliferation of solutions for common tasks. By the mid 1990s, Siemens had a lot of forms, often developed locally for different applications, that were absorbing time and effort in maintenance, and that were rarely compliant with the corporate design. The SCF project was begun to examine the situation and develop a uniform approach for e-forms. Siemens Corporate Forms, using centrally managed layouts supported by local administration, went into operation a year later.

With changing requirements, updated applications, and a variety of platforms, the functionality of SCF expanded steadily. After five years in operation, a survey found that the breadth of the function set was highly praised by frequent users, caused some problems for regular users, but overwhelmed infrequent users. The response was a complete redesign of the user interface, automate the entry of standard data, and add a set of quick forms for easy access by infrequent users. Mr. Sörgel also commented that in becoming electronic, some documents have disappeared: paper forms were first replaced with online forms, which have in turn become direct data entry into systems such as SAP – from paper to pure content!

Reusing Information with XML

Dr. Wolfgang Weiss, Development Manager Text Management, and Mr. Klaus Hartig, Product Manager Smart Forms, of SAP AG, also provided a concrete example of the advantages of separating content from the medium. SAP is using XML (eXtensible Markup Language) to warehouse information for single source, multi-channel publishing in the production of training material and online documentation.

Dr. Weiss admitted that although XML was not new, its use for text, rather than data exchange was relatively recent. SAP had worked with s.a.x. to determine that XML was the best format for fully exploiting information from different sources, without the duplicated effort or the overheads of conversion and cleanup. At the same time, it still ensured attractive, medium-adjusted output. SAP's Customer Care knowledge-base is maintained in XML. It can be searched quickly by symptom or cause to find workarounds or corrections. Ease of use and maintenance makes a significant difference, given that there are around 500 changes and 100 new items a day, all of which are translated within 24 hours into English and Japanese. XML not only reduces the cost of making the information available online, it also means it can be provided sooner, thus speeding up customer support, accelerating time-to-market, and providing an important competitive advantage.

Mr. Hartig explained that XML separates the content from the format and structure of the documents that contain it. It is flexible enough to cope with different situations while still controlled enough to ensure conformance for specific applications. By defining the necessary information and the data structure in the Document Type Definition (DTD) and by handling the presentation of the information separately (for example, for trainer handbooks, presentations and trainee documentation), XML frees information developers to concentrate on producing high quality content. Once created, the single source simplifies maintenance – information is updated in all the documents using it automatically – and the information can be shared for use in different contexts. All in all, this saves time and cost in document preparation. Of course, because the formatting is handled separately, the output quality and consistency are guaranteed.

Common Differentiation

Mr. Christoph Bamugarten, of the Concern Marketing of Deutsche Post AG, connected the design and the technical perspectives in his presentation on recreating the image of the German post office as it becomes a worldwide concern. Getting the message right is an important part of bringing together new acquisitions and existing operations to maximize the full potential of the Deutsche Post World Net. The design has to simultaneously connect and differentiate the letter, logistic and financial branches, as well as the different services offered by each. This is done by the yellow background and consistent typefaces used across all three, and different logos and foreground colors (black for the Deutsche Post, red for DHL, the logistics branch, and blue for the Postbank).

The intranet is key to the technical foundation of the corporate design. It is home to the website with information and resources, and it is the medium used by s.a.x. MasterLayout to make the electronic stationery available. The 7000 variations of the stationery used by the German post office is maintained by 2 people (who were on hand to demonstrate it in the solutions fair in the Foyer of the conference). Before, distribution relied on disks, and then e-mail, but automated distribution makes

delivery even more robust. Mr. Baumgarten points to this as an important example of how protecting the corporate design saves time for users, and helps them concentrate on their work.

Order in Chaos, Chaos in Order

Under the heading "Order in Chaos – Design Quality and Information Quantity, a Contradiction?" Gerd Baumann, of the design agency Baumann & Baumann, examined the role of design in effective communication. He explained that, because we communicate not only by what we say, but also by how we say it, design is the way of stressing what is important. It is a way of removing distractions from the message, of ensuring that quantity and quality do not clash to overload the target audience. At the same time, it is the distractions that make the message human. Good design puts enough order on the chaos to communicate, but leaves enough chaos to inject a spark of creativity that makes sure the order does not become oppressive.

Mr. Baumann emphasized a constructive dialog between the people responsible for the design, for the technology that produces the message, and for the technology that transports the message. He illustrated this with a variety of examples, including a stand for trade fairs in China for Daimler Chrysler, which needed to be quick to erect in different configurations, without leaving anything to chance; the signage in the British Museum, which had to communicate a range of different messages for a worldwide audience; the city of Frankfurt, which needed to present a consistent image, without interfering with the different characters of various departments and cultural institutions; and Siemens, which needed to be sensitive, flexible, and adaptable for the needs of a major multinational. Though the goals of the different projects may be different, the basic problems are the same, and they require collaboration to structure and resolve.

One of a Type

Mr. Peter Rosenfeld is Managing Director of URW++, the company that provided the new Siemens corporate type. It is important that these serif, sans serif and slab typefaces are unique, so their power to identify Siemens will not be diluted by use by other organizations – unlike, for example, Univers which is used by companies from the Deutsche Bahn (German railway) to the Beate Uhse Group (erotic supplies). Mr. Rosenfeld indicated the design effort involved in producing the typefaces in different styles, for different media, and for use in Arabic, Asian and Latin, Cyrillic and Greek by normal and by "power" users (such as graphic designers). He outlined the effort involved in successfully launching the new typeface, rolling out for key agencies, high level reports and corporate communications first, as well as gaining recognition for the font among specialist organizations and in academic circles (the Siemens typefaces, for example won an award from the Type Directors Club), and only then making them available for internal use.

Mr. Rosenfeld also introduced the thinking behind OpenType, a joint development of Adobe and Microsoft intended to make fonts consistent across platforms.

Source Independence

Mr. Dieter Babutzka, Development Manager Computing Center Management System (CCMS) at SAP AG, discussed the development of a "document driver", called eXternal Document Converter (XDC), which integrates the printing of non-SAP formats into SAP printing. XDC, based on s.a.x.

MasterLayout, makes it possible to handle SmartForm and SAPScript attachments as a part of a single print job (traditionally SAP handles attachments separately if they are from Microsoft Office applications, or PDF, TIFF or other formats. This often meant that the printout was not kept together with the rest of the job on the printer). Though XDC is not strictly separating content and presentation, it does ensure consistent handling of output, independent of source, and as such typifies a forward-thinking approach to integrating documents.

Continuity of Information

With computing, networking and printing playing important roles in the electronic future of documents, Hewlett-Packard remains an important player in determining how that future looks. Mr. Steffen Papke, JetCAPS Program Manager with Hewlett-Packard GmbH, put HP's contribution into context. It starts with experience in the use of XML-based content management, used for the company's websites, but is best exemplified by the strategy to maximize the customer's Return on Investment in Technology. Central to this is improved productivity for knowledge workers, better management of assets, and more efficient generation of mission critical documents.

In this sense, productivity can be measured in terms of effective communication and access to information. One example is the use of printing in conjunction with Customer Relationship Management (CRM) to produce targeted marketing materials. Another example is the use of color, still regarded as expensive by many. Mr. Papke asked the attendees to consider the true cost of NOT using color – without the impact of color many messages would never be read! But HP is not just involved in turning electronic documents into paper. With its digital senders and the scan and send capabilities of its multi-function printers, HP also enables the conversion of paper documents into electronic information, thus ensuring that paper does not cause discontinuities in the flow of information.

The Final Word

The conference was brought to a close by Prof. Kurt Weidemann, typographer and graphic designer, who put technology and technological advance into human perspective. In the modern world digital manipulation already makes it hard to know what is real, and lossless copying makes it tricky to recognize originals or tough to protect intellectual rights. Prof. Weidemann argues that though we

cannot fully control the future, rather than failing to tackle issues because they seem difficult, we should realize that they only appear difficult if we do not dare tackle them.

Or in Frank Sax's concluding words, the future of documents is electronic. We can be overwhelmed, or we can create that future.