Abstracts

Les Cahiers GUTenberg
Contents of Issue 35/36 (May 2000) and Issue 37/38 (December 2000)

Double issue 35/36 (May 2000): Proceedings of GUT 2000 “\(\text{\textsc{\textit{XML}}}\) and \(\text{\textsc{\textit{XML}}}\): Cooperation on the Internet”

Martial Chartoire, Éditorial : \(\text{\textsc{\textit{I}}\text{\textsc{\texttt{E}}}\text{\textsc{\textit{P}}}\text{\textsc{X}}}\) et XML : coopération pour l’internet; pp. 3–4

The subject is the theme of the GUTenberg 2000 annual meeting in Toulouse. This issue of the Cahiers includes a good number of conference papers, which demonstrate that this cooperation has become quite effective.

The editor muses about how far things have come from the 1994 GUTenberg meeting, which had as its theme “Distribution of electronic documents”: from the advent of the Web and HTML, and now XML and XSL, which bring screen output closer to that which \(\text{\textsc{\textit{I}}\text{\textsc{\texttt{E}}}\text{\textsc{\textit{P}}}\text{\textsc{X}}}\) can produce. XML has been adopted so quickly that four articles in this issue are already discussing its application to various projects.

The rest of the editorial touches on the various articles in the issue, and closes with words of thanks to those who had helped organize the 2000 conference in Toulouse.


This is a survey about scientific electronic journals and some current international experiments, the results of which too often remain within the domain of computer and documentation specialists.

[Based on authors’ résumé and abstract]

Frédéric Boulanger and Yolaine Bourda, Documentation de projets en XML [Documenting XML Projects]; pp. 15–23

The lack of documentation in most software projects, and particularly in our students’ projects, led us to develop a way to document software by annotating it in comments. We generalize this approach to be able to document code in any language and to create documentation in any format. However, XML is our preferred choice since this work is part of a larger document processing project.

[Authors’ abstract]

Viviane Boulétreau and Jean-Paul Ducasse, La production de documents électroniques structurés à grande échelle : la diffusion électronique des thèse universitaires [Large-scale production of structured electronic documents: electronic distribution of university theses]; pp. 25–35

The Université Lumière Lyon 2 has been working for a year on a project to distribute theses electronically. This requires that the document format meet three crucial criteria: long-term availability, efficient distribution, and ease of access. The article provides an overview of the current project, plans for future development (in the short term), and pointers to the long-term role of such documents in information exchange.

[Based on authors’ introduction]

Yolaine Bourda and Marc Hélier, Métadonnées, RDF et documents pédagogiques [Metadata, RDF and teaching documents]; pp. 37–52

In many fields, such as education, electronic documents do not pay for themselves as they should (reused, found . . . ). One possible solution is to rely on metadata, RDF and XML. The aim of this paper is to present the idea of metadata and to emphasize the importance of standardization. For a given set of metadata, many implementations using XML are possible. This multiplicity has its drawbacks. A unique implementation may be obtained by means of RDF. The Dublin Core initiative and the Learning Objects, which are under construction by the IEEE, are given as examples of this process. [Authors’ abstract]

Philip Taylor, Jiří Zlatuška and Karel Skoupý, The \(\text{\textsc{\textit{N}}\text{\textsc{\texttt{T}}}\text{\textsc{\textit{S}}}\text{\textsc{\textit{P}}}}\) Project: From conception to implementation; pp. 53–77

This 25-page article provides an overview of the \(\text{\textsc{\textit{N}}\text{\textsc{\texttt{T}}}\text{\textsc{\textit{S}}}\text{\textsc{\textit{P}}}}\) project: its history, development approaches and choices, current status, and impending completion.

[Based on authors’ introduction]

David Carlisle, Michel Goossens and Sebastian Rahtz, De XML à PDF via \texttt{xmltex}, XSLT et Passive\TeX\ [From XML to PDF via \texttt{xmltex}, XSLT and Passive\TeX]; pp. 79–114

This article introduces \texttt{xmltex}, a \TeX\ macro package that parses an XML document and typesets it under the control of configuration files. We also discuss Passive\TeX, a library of \TeX\ macros based on \texttt{xmltex}, that processes XML documents containing XSL formatting objects and generates PDF or DVI output. We compare these two approaches
with a direct translation of the XML source file into \LaTeX. We show examples of these techniques for the TEI, DocBook and MathML DTDs. The appendix gives details about the \texttt{xmltex} commands.

[Authors’ abstract]

FRANK MITTELBACH, DAVID CARLISLE and CHRIS ROWLEY, New Interfaces for \LaTeX Class Design; pp. 115–120

Traditional \LaTeX class files typically implement one fixed design via ad hoc, and often low-level, (\LaTeX) code. This style of implementation makes it much harder than is either desirable or necessary to produce classes that implement a specific visual design. This article introduces some extensions to \LaTeX that will help to provide a new, more declarative interface that can be used in class files. It is based on the idea of a \textit{template}, which describes how to carry out some action but which provides some flexibility since its code uses the values of a set of named (keyword) parameters.

[Based on authors’ introduction]

BENJAMIN BAYART, Nouvelles pistes pour une distribution de \TeX [New approaches for \TeX distributions]; pp. 121–132

We begin with a quick overview of the situation which led to the idea of a new type of \TeX distribution. Based on quite different problems, a very old discussion about defining a TPM (\TeX Package Manager) had quickly led to quite similar conclusions. The basic principles behind FD\TeX (FDN = French Data Network) will be presented and explained in detail.

[Translation of French résumé]

MICHEL CUBERO-CASTAN, PolyDoc : un exemple d’application XML pour la création personnalisée de polycopiés [PolyDoc: Example of an XML application for creating customized copies]; pp. 133–155

This article presents PolyDoc, a Java application based on the W3C’s Document Object Model (DOM), which allows translation of a document from XML to HTML, \LaTeX, Open e-Book, . . . , or again into XML (with a different DTD). Using PolyDoc, we describe a document production process with three stages: contents written in XML, global customized formatting in Java, production of the result via HTML, \LaTeX, . . .

[Based on French résumé]

ROBERTA FAGGIAN, Integration of resources on the World Wide Web using XML; pp. 157–167

An initiative to explain high energy physics to the general public has been started at CERN. The use of the Web has been identified as crucial to the success of this initiative. An integral part of this project is the construction of a Web-based information system that collects many different resources on the Web (information published by many European and US particle physics institutes). This paper proposes a solution to the problem of integration and reuse of heterogeneous information by enriching existing content semantic with metadata in order to improve understanding and discovery. The main part of the work is the study of the RDF standard for representing metadata, and its implementation using XML syntax.

[Author’s abstract]

JEAN-MICHEL HUFFLEN, Typographie : les conventions, la tradition, les goûts, . . . et \LaTeX [Typography: Conventions, traditions, tastes . . . and \LaTeX]; pp. 169–214

This article is a transcript of a tutorial designed to show that learning typographic rules, even learning both French and English rules, is not that difficult. The article also provides some starting points for using the \texttt{french} and \texttt{babel} packages, the one for writing in French, the other for dealing with most other languages in a relatively homogeneous fashion. The article then shows how to organize a new class file as well as a new multilingual bibliography style.

[Translation of French résumé]

CHRISTIAN ROSSI, Le CTAN Navigator [The CTAN Navigator]; pp. 215–221

The CTAN Navigator (\texttt{http://ctan.loria.fr}) is a Web server that provides a set of tools to facilitate the search, transfer, and installation of files available from CTAN (the Comprehensive \TeX Archive Network).

[Translation of French résumé]

--- * ---

Double issue 37/38 (December 2000)

JACQUES ANDRÉ, Éditorial; pp. 3–4

Jacques André cites a passage from the GUTenberg statutes, one which states that the association’s aims include bringing together French-language \TeX users, encouraging technical exchanges to promote the printing and distribution of scientific publications, and offering its members a specific number of services. Those aims are all represented in the various articles included in this issue.

And as do all editors, Jacques laments the fact that articles seem so rarely to arrive unsolicited — and hopes that the new millenium will see this change.
Fabrice Popineau, Affichez vos documents \LaTeX{} sur le Web avec \TeX4ht  [Post your \LaTeX{} documents on the Web with \TeX4ht]; pp. 5–43

Éitan Gurari is the author of \TeX4ht, a clever tool which allows \TeX{} and \LaTeX{} documents to be translated into HTML and XML. I’d like to show here that \TeX4ht is simple to use, powerful and extensible. Let’s have a look at its features.

[Author’s abstract]

Hermann Zapf, Typographie des caractères romains et de la Renaissance  [Typography of Roman characters and the Renaissance]; pp. 44–52

This paper is the French translation of a German paper written by Hermann Zapf in 1953, dedicated to the Renaissance humanists who defined Roman Capitals with the use of compass and rules. Zapf shows that the design of characters is not just a matter of geometry and that the re-design of a classic character must take into account the original drawings.

[Author’s abstract]

The article was originally published in German as “Vom Formgesetz der Renaissance Antiqua”, in the 1953 issue of the annual series Gutenberg-Jahrbuch. The “Editorial Note” accompanying the article gives more details.

Pierre Attar and Bruno Chatel, État des recommandations XML dans le domaine documentaire  [Status of XML recommendations for documents]; pp. 53–85

The purpose of this report is to present the current state of the XML standard, its power and its limits in addressing the needs of documentation applications. As well, it looks at XML parsers, to try and define their quality and efficiency.

[Translation of French résumé (abbreviated)]

Frank Mittelbach, Formater des documents ayant des flottants : un nouvel algorithme pour \LaTeX{} 2\epsilon  [Formatting documents with floats: A new algorithm for \LaTeX{} 2\epsilon ]; pp. 86–108

This paper describes an approach to placement of floats in multicolumn documents. The current version of \LaTeX{} was originally written for single-column documents and extended to support two-column documents by essentially building each column independently from the other. As a result, the current system shows severe limitations in two-column mode, such as the fact that spanning floats are always deferred to at least the next page or that numbering between column floats and spanning floats can get out of sequence.

The new algorithm is intended to overcome these limitations and at the same time extend the supported class of document layouts to multiple columns with floats spanning an arbitrary number of columns.

[Author’s abstract]

This paper was also also presented at TUG2000 in Oxford, and appears in TUGboat 21, no. 3 (2000), pp. 278–290.

--- * ---

Articles from Cahiers issues can be found in PDF format at the GUTenberg site:

http://www.gutenberg.eu.org/pub/gut/publications

[Compiled by Christina Thiele]