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 "LaTeX and XML:
Cooperation on the Internet"**

MARTIAL CHARTOIRE, Éditorial : LaTeX 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 LaTeX 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 vari-
ous articles in the issue, and closes with words of
thanks to those who had helped organize the 2000
conference in Toulouse.

JACQUES ANDRÉ and PASCALE LAURENT,
Publications scientifiques électroniques : quoi et
comment ? (résumé étendu) [Electronic scientific
publication: what and how? (extended summary)];
pp. 5–13

This is a survey about scientific electronic jour-
nals 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 ap-
proach to be able to document code in any language
and to create documentation in any format. How-
ever, 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 work-
ing for a year on a project to distribute theses elec-
tronically. 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 $\mathcal{N_{T}S}$ Project: From
conception to implementation; pp. 53–77

This 25-page article provides an overview of the
$\mathcal{N_{T}S}$ project: its history, development approaches
and choices, current status, and impending comple-
tion.
[Based on authors' introduction]

DAVID CARLISLE, MICHEL GOOSSENS and
SEBASTIAN RAHTZ, De XML à PDF via `xmltex`,
XSLT et PassiveTeX [From XML to PDF via
`xmltex`, XSLT and PassiveTeX]; pp. 79–114

This article introduces `xmltex`, a TeX macro
package that parses an XML document and typesets
it under the control of configuration files. We also
discuss PassiveTeX, a library of TeX macros based
on `xmltex`, that processes XML documents contain-
ing 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 `xmltex` commands.

<div align="right">[Authors' abstract]</div>

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

Traditional LATEX class files typically imple-
ment one fixed design via ad hoc, and often low-
level, (LA)TEX code. This style of implementation
makes it much harder than is either desirable or nec-
essary to produce classes that implement a specific
visual design. This article introduces some exten-
sions 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 *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.

<div align="right">[Based on authors' introduction]</div>

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 situa-
tion 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 FDNTEX
(FDN = French Data Network) will be presented
and explained in detail.

<div align="right">[Translation of French résumé]</div>

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 applica-
tion 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 cus-
tomized formatting in Java, production of the result
via HTML, LATEX, ...

<div align="right">[Based on French résumé]</div>

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 informa-
tion 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.

<div align="right">[Author's abstract]</div>

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 learn-
ing both French and English rules, is not that diffi-
cult. The article also provides some starting points
for using the french and 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.

<div align="right">[Translation of French résumé]</div>

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

The CTAN Navigator (`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).

<div align="right">[Translation of French résumé]</div>

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Double issue 37/38 (December 2000)

JACQUES ANDRÉ, Éditorial; pp. 3–4

Jacques André cites a passage from the GUTen-
berg 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 publica-
tions, 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

Eitan 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_ε* [Formatting documents with floats: A new algorithm for LaTeX 2_ε*]; 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 TUG 2000 in Oxford, and appears in *TUGboat* 21, no. 3 (2000), pp. 278–290.

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

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    publications

[Compiled by Christina Thiele]