

## Abstracts

### *Les Cahiers GUTenberg* Contents of Recent Issues

#### Numéro 20 — mai 1995

Editor's note: Thematic issue entitled "Character encodings from ASCII to UNICODE." The issue contains 102 pages in all, with 3 very detailed articles: two coming out of the very successful conference to launch Omega in Geneva (16 March 1995), and one a modified version of a paper presented by Bigelow and Holmes at the RIDT'94 Conference (Darmstadt, April 1994).

In memoriam : CATHY BOOTH; pp.i-ii

"This issue of *Cahier GUTenberg* is dedicated to Cathy Booth.

Cathy will be remembered with affection by many T<sub>E</sub>X enthusiasts around the world as she regularly attended T<sub>E</sub>X meetings in both Europe and North America. For those fortunate enough to have been there, memories of the hugely successful T<sub>E</sub>X88 conference at Exeter University, UK, will be a lasting memorial to her infectious vivacity and organisational talent. She was a founder-member of the UK T<sub>E</sub>X Users' Group, becoming a very active committee member, and also a gifted teacher over a wide area of computer-controlled design and typesetting."

JACQUES ANDRÉ, MICHEL GOOSSENS, YANNIS HARALAMBOUS, Éditorial : Multilinguisme et codage [Editorial: Multilingualism and coding]; pp. iii-iv

The joint editorial begins by reminding readers that while GUTenberg's mission does not focus exclusively on T<sub>E</sub>X, it is the best solution for technical and document exchange, compared with other more "modern", more commercial products. The editorial then moves on to outline plans for future issues of the *Cahiers*, exploring the general theme of electronic document exchange; the previous issue, no. 19, had been the first in the series, looking at the Web.<sup>1</sup> Subsequent issues (in addition to the current one) include the following:

- 23 Omega — 32-bit multilingual T<sub>E</sub>X
- 24 Ligatures — including reference to non-Latin based alphabets
- 25 T<sub>E</sub>X and Arabic — proceedings of a conference at INALCO<sup>2</sup>
- 26 Courier — in praise of typewriter-style monospaced fonts and their role in typography world-wide

Finally, the editorial briefly introduces each of the three essay-length articles, including a note that the Bigelow and Holmes article was deemed important because it is about the first commercial application of UNICODE, and thus is another facet of the many issues raised during the course of the Omega Conference held at CERN in March 1995.

JACQUES ANDRÉ, MICHEL GOOSSENS, Codage des caractères et multi-linguisme : de l'ASCII à UNICODE et ISO/IEC-10646 [Character coding and Multilingualism: From ASCII to UNICODE and ISO/IEC-10646]; pp. 1-53

Author's abstract: "After reviewing the difference between glyphs and characters, we discuss character exchange standards, like ASCII and ISO-LATIN 1. Then we turn our attention to UNICODE, a 16-bit encoding standard that will eventually represent the characters of all living languages and thus will make it possible to exchange without problems texts written in the languages spoken in various parts of the world. ISO/IEC-10646 is a 4-byte generalisation — the first two bytes coinciding with UNICODE — but whose full 32-bits wide encoding space allows the representation of special or ancient characters."

<sup>1</sup> See *TUGboat* 15, #4, pages 498-99.

<sup>2</sup> Institut National des Langues et Civilisations Orientales

YANNIS HARALAMBOUS, JOHN PLAICE,  $\Omega$ , une extension de  $\text{T}\text{E}\text{X}$  incluant UNICODE et des filtres de type Lex [ $\Omega$ , a  $\text{T}\text{E}\text{X}$  extension including UNICODE and Lex-type filters]; pp. 55–79

Author’s abstract: “ $\Omega$  consists of a series of extensions to  $\text{T}\text{E}\text{X}$  that improve its multilingual capabilities. It allows multiple input and output character sets, and will allow any number of internal encodings. Finite-state automata can be defined, using a `flex`-like syntax, to pass from one coding to another.

In this paper both a technical introduction and a few applications of the current implementation of  $\Omega$  are given. The applications concern typesetting problems that cannot be solved by  $\text{T}\text{E}\text{X}$  (consequently, by no other typesetting system known to the authors). They cover a wide range, going from calligraphic script fonts (Adobe *Poetica*), to plain Dutch/Portuguese/Turkish typesetting, to vowelized Arabic, fully diacriticized scholarly Greek, or decently kerned Khmer.

A few problems  $\Omega$  cannot solve are mentioned, as challenges for future  $\Omega$  versions.”

CHARLES BIGELOW, KRIS HOLMES, Création d’une police UNICODE [Creating a UNICODE font]; pp. 81–102

Author’s abstract: “The international scope of computing, digital information exchange, and electronic publishing has created a need for world-wide character encoding standards. UNICODE is a comprehensive standard designed to meet such a need. To be readable by humans, character codes require fonts that provide visual images — glyphs — corresponding to the codes. The design of a font developed to provide a portion of the UNICODE standard is described and discussed.”

[Editor’s note: This article originated as a paper presented at both RIDT’94 and EP’94 in Darmstadt, April 1994. The paper was subsequently presented at the TUG’94 meeting in Santa Barbara, entitled “Lucida and  $\text{T}\text{E}\text{X}$ : lessons of logic and history”, but not published in the proceedings, as it had already appeared elsewhere: “The Design of a Unicode Font”, *Proceedings of RIDT’94: Electronic Publishing — Origination, Dissemination and Design*, 6(3), pages 289–306, 1993.]

(Compiled by Christina Thiele)