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 TeX enthusiasts around the world as she regularly attended TeX meetings in both Europe and North America. For those fortunate enough to have been there, memories of the hugely successful TeX88 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 TeX 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 TeX, 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.1 Subsequent issues (in addition to the current one) include the following:

23 Omega — 32-bit multilingual TeX
24 Ligatures — including reference to non-Latin based alphabets
25 TeX and Arabic — proceedings of a conference at INALCO2
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.


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.”

1 See TUGboat 15, #4, pages 498–99.
2 Institut National des Langues et Civilisations Orientales
Yannis Haralambous, John Plaice, Ω, une extension de TeX incluant Unicode et des filtres de type Lex [Ω, a TeX extension including Unicode and Lex-type filters]; pp. 55–79

Author’s abstract: “Ω consists of a series of extensions to TeX 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 Ω are given. The applications concern typesetting problems that cannot be solved by TeX (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 vowel-ized Arabic, fully diacriticized scholarly Greek, or decently kerned Khmer.

A few problems Ω cannot solve are mentioned, as challenges for future Ω 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 worldwide 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.”


(Compiled by Christina Thiele)