# Ch-ch-changes

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This is the first issue of *Vector* to appear without the BCS logo. Following an almost unanimous vote by our members we have ended our twenty-year affiliation to the British Computer Society. In his article "Changes at the BAA", Paul Grosvenor discusses the reasons for this change, and what it now makes possible.

The cover bears our new logo and we have taken this opportunity to refresh the design. There are changes inside the covers as well. With generous support from Dyalog (whose silver-anniversary history appears as a separately-bound supplement to this issue) we have upgraded our production process. Since 1987, *Vector* has been produced using Microsoft Word, thanks in very large measure to the skill of Adrian Smith in handling difficult font-mapping and typographical issues.

The arrival of Unicode, and Adrian's own work on the APL385 Unicode font, has allowed us in the last few years to present APL code on the Web far more simply. That in turn has allowed us to import HTML documents straight into Word, hugely reducing our typesetting work. This issue of *Vector* takes the next step: the markup has been changed from HTML to DocBook, an XML-based system widely used in technical publishing. This is the first issue to be produced without Word, and brings our production process into the publishing mainstream.

Even without the character mappings of various APL implementations, typesetting *Vector* is demanding. Mathematical typesetting is a specialised skill. Where more verbose programming languages generally have their source code set as separate blocks, terse APL and J expressions appear 'in-line' all through our articles, reflecting the role Iverson intended for the 'tool of thought', but demanding the greatest care and attention in setting and proofing. (Is that comma part of an expression, or does it punctuate the English sentence?) Even had BAA been able to afford them, it is highly unlikely we could have produced *Vector* with professional typesetters. BAA owes Adrian Smith an unpayable debt of gratitude for keeping *Vector* in production for over two decades until the technology caught up.

Appropriately enough, Adrian describes in this issue his first encounters with Dyalog's new support for Unicode.

APL publishing has become more active outside our pages too. This issue reviews Jeffry Borror's new textbook *q for Mortals*. Graeme Robertson has published two APL textbooks, Dyalog has a new textbook in preparation from Bernard Legrand,

and *At Play With J* is now being proofed, the first title to appear under the Vector Books imprint.

Array languages are receiving renewed attention with the expiry of Moore's Law. Unable to push clock speeds higher, computer manufacturers push more processors into their boxes. But sharing work between them is hard, and this has revved interest in functional- and array-programming languages. Microsoft has established a research centre around the F# group at Cambridge. Web 2.0 networking site LinkedIn.com now boasts a functional-programming group with over 300 members; the Iversonians group there has itself grown to nearly 90.

In this issue David Liebtag reports how APL2's new parallel-each operators tackle load sharing, and Neville Holmes continues his tutorial series on functional calculation. R.E. Boss discusses how to partition numbers quickly.

Much in this issue on the 'tool of thought' theme. Simon Marsden thinks his way through a problem using classes. His moves will surprise OO programmers unfamiliar with interpreters, as much as it will APLers unfamiliar with classes. Gianluigi Quario finds new ways to write and think about polynomials, and Norman Thomson works through handling complex numbers in J. Veteran educator Ray Polivka makes a welcome debut in *Vector* with this issue's "In Session" column, returning to the derived and direct 'ruler's edge' functions in *Vector* 23:1&2 and taking them back to traditional forms.

Dan Baronet reports in "SALT II" on extensions to Dyalog's code-management tools.

Finally, we are pleased to publish an autobiographical essay by Ken Iverson. This has been extracted from the manuscript of *The Story of APL & J*, that he and Donald McIntyre were collaborating on up to his death.

In our next issue we'll have reports and papers from the Dyalog and APL2000 conferences this autumn: see the conference programmes in "Industry news".