Editorial

Volume 5, issue number 1 marks the start of a new era for the *Journal of Information Technology*. We publish our revised policy statement on page 3, it charts a new direction for the Journal. The central theme of the redeveloped policy is the study of all aspects of the management of the production of information by technology, and how it could affect the performance of organizations and of methods of ensuring that this information is both effective and efficiently produced. Of particular interest are issues concerning the penetration of IT into the traditional arena of general management. For example, the crucial role of commissioning and paying for information systems which has caused many severe problems for organizations, has repercussions for general management training. The recent BCS task group report on hybrid managers (From Potential to Reality, Jan 1990) is a major contribution to the debate on management education and IT to which *JIT* looks forward to contributing.

Discussion of the future of IT takes *JIT* into the arena of general management because the lesson that successful IT comes from a partnership between business and technical people (sometimes within the same person – the hybrid) is being learnt by an increasing number of organizations. Each group has a crucial and equally important role to play in ensuring that the technology delivers what it is capable of delivering. This means that *JIT* is concerned not only with the detail of making the technology work but much more importantly with the challenge of getting the right systems in place for a given organization to match the requirements of the current business environment.

Discussion of these issues takes place against the background of today's models of structuring organizations with respect to the IT function. The business survey from MSA, 'Excellence and the IT factor', describes the way today's excellent companies organize their IT; there are few surprises there. This is in itself surprising because of the skills shortage and the range of initiatives to counteract this issue. *JIT* aims to enter the debate on ways of combating the IT skills shortage.

To achieve these aims *JIT* will publish original papers and reports on research from industry and academia, appropriate conference proceedings, case studies, book reviews. *JIT* aims to stimulate discussion

of further major issues such as national and international policy on IT, funding of research and development, security of information, and international sharing of the technology. *JIT* wants readers to contribute to this discussion by means of personal view articles and letters to the editor. The editorial team has put in place a fast refereeing process and the publication time is getting shorter; both factors contribute to *JIT*'s aim of producing high quality issues in as short a time as possible.

This issue

This issue is appearing in the new format and accompanying its publication will be a major marketing activity by Chapman and Hall. The Editorial board is taking on an increasingly international membership in line with the policy of spreading the readership around the world. The contents of this issue are diverse, covering both industrial and academic research as well as some papers from the AIT conference 'Information systems teaching: improving the practice', held in January 1990. This conference continues the tradition of supporting the teaching of information systems begun by the ISA (now merged with the AIT) and was a very successful event, so much so that the AIT hopes to extend the range and number of such events. Further papers will be published from the conference in the second issue.

Guy Fitzgerald's paper, from the conference, is a timely discussion of the problems of change of specification which continually bedevil information systems developers. It recognizes that this situation is unavoidable and discusses a study of approaches that have been made to successfully deal with this problem.

The second paper, by Graham Tate and June Verner, based on their work in the Esprit MERMAID project, is also timely in that it concentrates on examining some of the empirical work that has been done to validate and compare software size and cost estimation models. It shows that progress is being made in tackling the everpresent problem of resource allocation for information systems development. It is strong on the number of different models it describes and on the improvements made to the models as a result of their cross comparisons. It discusses the two

major concerns of accuracy and consistency over different models and observes that the quality and completeness of data used for estimating purposes must often be questioned. The problem of calibration of the models is discussed and also the concept of consistency as a tool for assessing the potential of a model.

Three further AIT conference papers follow; Carol Britton and Karry Omer's paper on the teaching of formal methods to students preparing for a career in building information systems is a valuable contribution to the debate on the usefulness and applicability of these techniques within systems analysis. They illustrate their points with a case based on a real system. The relevance of a mathematical notation to the problems of specifying a business case will not surprise many.

Martin Loomes' paper discusses the question of the paradigms currently used by systems developers and the fact that they are not fully recognized. He uses Alexander's work on architecture and its distinction between selfconscious and unselfconscious design to illustrate his theme. He suggests that the distinction might be a useful framework for structuring discussions on the current major system design issues such as craft versus engineering approaches and the relationship between the teaching of IT in schools and in higher education. He suggests that many IT designers need to suffer 'a loss of innocence'. A paper to stimulate discussion.

In a third paper Ian Bray, Orville Jones and Stephen Webster argue that the major problems persisting in the software industry are largely attributable to inappropriate education of software

engineers. They usefully outline an alternative approach to the education of software engineers at the undergraduate level, one based on the concept of 'software as a product'.

JIT is very pleased that MSA have given permission to reproduce in this issue, their research project 'Excellence and the IT factor'. The conclusions reached in this survey of ten top multinational companies are based on some interesting findings and will provide support for those other companies already trying to implement some of the factors defined as key to achieving excellence. An interesting conclusion is about the short length of realistic planning horizons adopted by these companies. The conclusion does not simplify the problems of managing the implementation of information systems even with today's tools such as CASE and 4GLS. It is perhaps surprising, in view of the activities of the government advertising campaigns, that 1992 was not found to be a major issue.

Two conference reports and three book reviews follow. Of particular interest is Martin Harris's report on the *Computer Weekly* conference, 'Developing a business-led IT strategy.' The conclusion is that the key issue is, as ever, implementation, not only at board level or at operator level but also at the political level. This makes the issue right at the heart of *JIT*'s policy of being a forum for the development of an understanding of the management problems arising out of the use of IT – management of and management by IT. Finally *JIT* finishes with some comments overheard at conferences; please send in your contributions for this section to the editor.

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