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J.UCS Special Issue on Dynamic Symbolic Languages

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This special issue of J.UCS deals with the beginning of MIRACLE. MIRACLE is more than a project, it is an undertaking that will deeply influence mankind in the long run. Exactly where it will go, how fast it will develop, and whether it will have rather universal applications or only succeed in special niches cannot be foreseen at this stage.

MIRACLE is the acronym for Multimedia Information Repository, A Computer-based Language Effort. The main credo behind MIRACLE is that computers will be ubiquitous before long, like cellular phones today, and might well be extensions of such phones.

This belief and a realistic scenario are explained in the first paper "The Future of PCs and Implications on Society". However, if we always have a powerful computer with us then clearly we will consume (almost) all information via such computers, rather than e.g. reading it in a traditional newspaper or book. Taking this for granted has tremendous implications: not only does it change how we will 'read' things, but it will also change how ideas and emotions are recorded - not by using static text and static pictures, but by using a mixture of media-rich material and a new symbolism. In such a symbolism, symbols are not frozen in time, but subject to temporal changes (in size, colour, position, etc.), changes providing new powerful tools to record knowledge in a more efficient way. This may sometimes be even possible independently of natural languages, much as signs "airport" or dynamic sequences in cartoon-movies are understood by everyone.

It is the second paper "Foundations of MIRACLE: Multimedia Information Repository, a Computer-supported Language Effort" that shows how such a new dynamic symbolism might be designed using experiences made in such diverse areas as constructed languages (like Esperanto or Glosa), gesture languages for hearing challenged persons, symbolic languages (such as BLISS or Elephant's memory), and dozens of symbolic notations from musical scores to sending messages between ships by means of flags.

Although the ultimate dream would be to have a symbolic language rich enough to formulate anything we want to record, and this independently of culture and natural language (ending the translation nightmare in Brussels and elsewhere) and still easy to learn, this may not be achievable. More optimistically speaking, it may not be achievable without much experimentation. Thus, trying to apply the fundamental ideas to restricted application areas may not just be useful in its own right by allowing to use dynamic symbols and multimedia material without traditional written language in some niches, but could lead to sufficient insights to produce a universal approach at some stage. A first glimpse of specific application areas is provided in the third paper "Applications of MIRACLE: Working with Dynamic Visual Information."

It is the belief of all authors of the papers in this issue that we are just starting what might be a long, even generation-long, process. However, we want to encourage many researches to consider the novel possibilities, and we are eager to cooperate, to indeed establish a sizeable MIRACLE community. This is one of the reasons why this issue contains "A Cross-disciplinary Bibliography on Visual Languages for Information Sharing and Archiving". This special issue together with the bibliography can be considered the cornerstones of future MIRACLE efforts. We are in the process of compiling a much more extensive bibliography that will also include topics and papers covering fringe areas. Anyone interested or knowing of contributions that should be included and have been overlooked should send an email to either Daniela Camhy or Hermann Maurer.

As Managing Editor-in-Chief of J.UCS I always wish you enjoyment when reading a new issue. This time I wish for more: spread the information that written language as we now know it is likely to be partially replaced by new ways of recording knowledge; that MIRACLE is the first major effort in this direction; and that with this issue, J.UCS will at some stage be remembered as opening a new horizon for information sharing and archiving.

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