The future of the Machine Intelligence series

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1 Introduction

Since 1967 the Machine Intelligence (MI) series, under the guidance of Professor Donald Michie, has played a central role in fostering ground-breaking new areas of AI research. The fifteen volume MI series now acts as an essential repository for many of the core concepts in the AI literature. The year 2000 has special significance for the series. It is now 50 years since the publication in the journal Mind of the paper "Computing Machinery and Intelligence", in which Alan Turing foresaw many of the developments which have been investigated by papers in the MI series. However, there is still an enormous amount of research necessary to achieve Turing's goals of human-level intelligence within the next 50 years. As the new Editor-in-Chief of the MI series I intend that we should continue to set the pace in this ongoing effort. MI should aim to publish adventurous research which offers advances in the integration of a wide array of topics including vision, communication, learning, planning, reasoning, representation and action. Without a platform for such research, AI will never reach the long-term goals envisaged by Turing.

2 New developments

The year 2000 sees new departures for the series. Changes in publishing technology are making book-based editing and publishing unnecessarily cumbersome. This is reflected in continued confusion over the respective roles of publishers and editors together with excessively slow turn-around time and rocketing prices. For instance, Oxford University Press's sales price of Machine Intelligence volume 15 was twice as much (around £125) as Machine Intelligence 14. Such a price is prohibitive for the ordinary AI researcher. To combat these problems a new Machine Intelligence Board was recently assembled consisting of Donald Michie, Koichi Furukawa (International Secretary), Erik Sandewall, Luc de Raedt, Nils

Nilsson, James Cussens and Stephen Muggleton. On this new board Donald Michie requested to stand down as Editor-in-Chief, and Stephen Muggleton was chosen as his replacement. At its first meeting the board agreed the following bold moves.

ETAI publication. All future publications of the MI workshops from MI16 onwards will be in the form of electronic publishing within the ETAI journal. In return for this commitment the ETAI board will be expected to agree to ring-fenced publishing for the MI series special issues. Publishing with ETAI will simplify the editing process and ensure that papers are easily accessible to academics, at low price. Citations to ETAI papers have the same form as for any other journal paper (Volume, Issue, Page Numbers), though there is also an associated URL for downloading each paper. ETAI was started in 1997. For each issue, 100-200 copies were printed. These were distributed in cooperation with the SWS (Swedish Academy of Sciences) and ECAI (European Conference on AI). SWS is the publisher and distributes printed copies to other academic bodies. ETAI's representative on the MI Board is Erik Sandewall, the editor of ETAI. Articles for MI16 are now in a position to be published without further input. Articles for MI17 onwards will be reviewed by invitees to the workshop (see below).

Time and place for workshops. It was agreed that it would be advantageous to set a regular default time and place for the workshop. This would not be binding, and opportunities for alternative venues would be considered by the MI Board as they appeared. The default place was agreed to be the King's Manor, University of York. It was further agreed that by default workshops should be held on an annual basis in the first half of September.

Papers submissions. Extended abstracts of papers will be required by ETAI from invitees eight weeks before the workshop. Full draft papers should be submitted to ETAI four weeks before the workshop. The papers will be required to be submitted to ETAI as either LaTeX source or HTML. Appropriate ETAI style files will be made available for LaTeX papers. Six weeks before the workshop a letter warning of the four week deadline will be sent to invitees. If a paper has already been published in journal form then only a summary will be allowed. Each invitee will be asked to referee two papers from the workshop. The reviews will be anonymous and consist of three parts: 1) Comments to the author, 2) comments to the committee, 3) Comments for inclusion in the public discussion of the paper (to be posted on the web). A first draft of the referee reports must either be submitted by email before the workshop or in writing by the end of the workshop. An MI board meeting will be held at the end of each workshop. At these meetings the referee reports will be considered and an initial recommendation for publication in the ETAI special issue (not restricted to papers presented) will be made. Normally all invited papers would be expected to be published.

3 Conclusion

The “Bottom-up” peer review system works well in general but leaves a gap for more strategic leadership. The MI workshop fills this gap by bringing together internationally acknowledged leaders of the field of AI to discuss research themes of strategic importance to the whole field. The series has a long pedigree in this role.

The publishing regime for the MI series is intended to ease the editing process. However, the future of the MI series depends on the abilities and motivations of the coming generations of AI researchers. The AI scientists of the future have a great challenge that has been passed on to them, together with wonderful examples of past research. Let us make sure that we do not lose sight of the challenge.