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Polymorphism

The ML/LCF/Hope Newsletter

Contents

Letter from the Editors

This is the premier issue of *Polymorphism*, a newsletter for the LCF/ML/Hope community. There are now several geographically distributed groups working on LCF, ML or Hope, and there is a need for a rapid and informal communications medium permitting coordination and sharing of research results, without the long delays involved in formal publication. We think that a newsletter can help satisfy this need.

The purpose of this newsletter is to disseminate news, information, and ideas of interest to this community. To that end we invite contributions, including

- theoretical results and applications,
- announcements of meetings and conferences and calls for papers,
- announcements of new or revised implementations,
- programming tools and library packages,
- software documentation,
- queries and suggestions,
- bug reports and fixes,
- philosophical and historical commentaries,
- technical reports which are not widely available, including old reports,
- reviews of books and articles, and
- pointers to relevant literature, e.g. abstracts and bibliographies.

The emphasis is on timeliness and informality, so contributions to the newsletter need not be in a final, polished form. Presentation of speculative ideas and interim working papers is encouraged.

This introductory issue includes a list of our initial "subscribers" and their addresses, and a list of all known sites running a version of Luca Cardelli's Pascal implementation of ML (VAX ML). Please send us any corrections or additions to these lists. It would be very useful if each group could send a short summary of its activities and an indication of which ML, LCF, or Hope systems it is using or developing.

Comments on the organization, contents, and purpose of the newletter are welcome (including opinions on the provisional title). We hope to produce an issue of the newsletter roughly every two or three months, depending on the flow of contributions. A second issue with significant technical content is in preparation and will follow shortly. We expect the first few issues to contain installments of a revised manual for VAX ML, a definition of Luca's functional abstract machine, a history of LCF by Robin Milner, a yacc grammar for ML with commentary by Ravi Sethi, and a Hope manual.

Articles will not be refereed and should be in a form ready for reproduction. There will be no charge initially, and only one copy of the newsletter will be sent to each geographical location. There are practical limits on the size of each issue, so submissions should be of short to medium length. Longer documents, such as PhD theses, should be distributed directly by their authors, with an abstract being sent to the newsletter.

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Known VAX-ML System Locations

Luca Cardelli	(Unix Version 24-8-82)	Bell Labs
Bernard Sufrin	(VMS Version 12-6-81)	PRG Oxford
Simonetta Ronchi	(VMS Version 12-6-81)	Torino
Werner Damm	(VMS Version 12-6-81)	Aachen
Renzo Orsini	(VMS Version 13-10-81) (Unix Version 24-8-82)	Pisa
Mike Gordon	(VMS Version 13-10-81) (Unix Version 15-4-82)	Cambridge
Arnold G. Smith	(VMS Version 13-10-81)	Brighton
Bob Constable	(VMS Version 12-6-81)	Cornell
Jacek Leszczylowski	(VMS Version 12-6-81)	Warsaw
Lasse H. Ostergaard	(VMS Version 12-6-81)	Gotenborg
Lars Ericson	(VMS Version 13-10-81) (Unix Version 13-8-82)	CMU
Gerard Huet	(VMS Version 13-10-81) (Unix Version 11-5-82)	INRIA Paris
Gerard Berry	(VMS Version 13-10-81)	INRIA Sophia-Antipolis
Colleen Kitchen	(VMS Version 13-10-81) (Unix Version 24-8-82)	Dublin
Rodney Topor	(VMS Version 13-10-81)	Melbourn
Robin Milner	(VMS Version 13-10-81)	Edinburgh
Peter Buneman	(VMS Version 13-10-81)	PENN
Ian Cottam	(Unix Version CMU) (converting to Apollo)	Manchester
Richard Snodgarss	(Unix Version CMU)	NCU at Chapel Hill
Chris Wadsworth	(to convert to PERQ)	Rutherford Lab
Areski Nait-Abdallah	(Unix Version 13-8-82)	Waterloo Ontario
Toni Cohen	(Unix Version 13-8-82)	Delaware Univ. Newark
Hans Boehm	(Unix Version CMU)	Washington Univ. Seattle

Latest VMS Version: 13-10-81
  Version 13-10-81 differs from Version 12-6-81 because:
    - it has the "with" declaration construct
    - it accepts token quotations of arbitrary length
    - it has a working garbage collector

CMU Version
  Unix version of VMS 13-10-81.
  Some bugs were introduced in the translation.

Unix Version 13-8-82
  Differs from the CMU version because:
    - known CMU bugs have been fixed
    - other older bugs have been fixed
    - if-thenloop-elseloop construct introduced
    - arrays with constant access time predefined
    - some operators have been renamed:
        `_` --> `::`
        `::` --> `@`
        `@` --> `!`

Unix Version 24-8-82
  Differs from the 13-8-82 version because:
    - Interrupts, arithmetic exceptions and crashes are treated
      as ML failures.
    - An experimental set of file input-output primitive has been
      introduced.

Latest Unix Version: 11-5-82
  Differs from the 24-8-82 version because:
    - New typechecker for ref types.