Contents

Letter from the editors
Mailing List
List of known VAX ML sites
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 newsletter 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.

Luca Cardelli
David MacQueen
Bell Laboratories
Murray Hill, NJ 07974
USA
Mailing List

Gerard Berry
Ecole des Mines
Sophia-Antipolis
06560 Valbonne
France
Tel 93 336780

Peter Buneman
The Moore School of
Electrical Engineering D2
Dept. of Computer and
Information Science
Philadelphia, PA 19104
USA
Tel 215 243 7703

Luca Cardelli
Bell Laboratories
600 Mountain Avenue
Murray Hill, NJ 07974
USA
Tel 201 582 5707

Toni Cohen
Dept. of Computer and
Information Science
University of Delaware
Newark, DE 19711
USA
Tel 302 738 2712

Bob Constable
Dept. of Computer Science
Cornell University
405 Upson Hall
Ithaca, NY 14853
USA
Tel 607 256 4052

Ian Cottam
Dept. of Computer Science
Manchester University
Manchester
England

Werner Damm
Lehrstuhl fur Informatik II
Buchel 29-31
5100 Aachen
W.Germany
Tel 0241 804564

Mike Gordon
Cambridge Univ. Computing Laboratory
Corn Exchange Street
Cambridge CB2 3QG
England
Tel 0223 352435 ex 217

Soren Holmstrom and Thomas Johnsson
Chalmers University of Technology
and University of Goteborg
Dept. of Computer Sciences
S-412 96 Goteborg
Sweden

Gilles Khan
INRIA
P.O. Box 105
Domain de Voluceau
Rocquencourt
78150 Le Chesnay
France
Tel 3-9549020

Colleen Kitchen
Trinity College Dublin
201 Pearse Street
Dublin 2
Ireland

Jacek Leszczykowski
Institute of Computer Science
Polish Academy of Sciences
P.O. Box 22
00-901 Warszawa PKIN
Poland

Robin Milner
Dept. of Computer Science
University of Edinburgh
J.C.M.B. The King’s Buildings
Edinburgh EH9 3JZ
Scotland
Tel 031 667 1081

Areski Nait-Abdallah
Computer Science Dept.
Waterloo, Ontario N2L3G1
Canada
Renzo Orsini  
Istituto di Scienze dell’Informazione  
Corso Italia 40  
56100 Pisa  
Italy  
Tel 050 40862

Chris Wadsworth  
Rutherford Appleton Laboratory  
Chilton  
Didcot  
Oxfordshire OX11 0QX  
England

Lasse H. Ostergaard  
Dept. of Computer Science  
Buildings 344 & 343  
Technical University of Denmark  
DK-2800 Lyngby  
Denmark

Simonetta Ronchi  
Istituto di Scienze dell’Informazione  
Corso M.D’Azeglio 42  
10125 Torino  
Italy  
Tel 011 655307

Dana Scott  
Dept. of Computer Science  
Carnegie-Mellon University  
Pittsburgh, PA 15213  
USA  
Tel 412 578 2566

Arnold G. Smith  
University of Sussex  
Dept of Experimental Psychology  
Brighton BN1 9QY  
England

Richard Snodgarss  
Department of Computer Science  
North Carolina University at Chapel Hill  
Chapel Hill, North Carolina 27514  
USA

Bernard Sufrin  
Programming Research Group  
45 Banbury Road  
Oxford OX2 6PE  
England  
Tel 0865 58086

Rodney Topor  
Dept. of Computer Science  
University of Melbourne  
Parkville, Vic 3052  
Australia
### Known VAX-ML System Locations

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