

**Directory of
Computer Assisted Research
in Musicology**

1987

**Walter B. Hewlett
Eleanor Selfridge-Field**

**Center for Computer Assisted Research in the Humanities
Menlo Park, CA
June 1987**

**Directory of
Computer Assisted Research
in Musicology
1987**

Walter B. Hewlett

Eleanor Selfridge-Field

**Center for Computer Assisted Research in the Humanities
Menlo Park, CA
June 1987**

© 1987 Center for Computer Assisted Research in the Humanities

Center for Computer Assisted Research in the Humanities
525 Middlefield Road, Suite 120
Menlo Park, CA 94025
(415) 322-7050
XB.L36@forsythe.stanford.edu
ccarh@ucbmsa.bitnet

Preface

The 1987 *Directory of Computer Assisted Research in Musicology* is significantly larger than its predecessors of 1985 and 1986. The main purpose of the *Directory* is to make information about current activities readily available. The Center collects technical information oriented towards academic use and reports of current and intended academic applications on an ongoing basis. Anyone engaged in an activity that seems compatible with the work reported here is invited to submit information for future inclusion. A few months before the publication of a new directory, the Center distributes a formal solicitation for contributions to everyone on its mailing list.

A great deal of academic activity related to musical research requires involvement with both text and music. We report on both these aspects of research. Because the technical challenge of dealing with musical information is so much greater than that presented by text, we include in each directory an article on some component of the complex process by which computers are increasingly being used to store and manipulate musical data. Input processes were considered in 1985. Music printing was the main topic in 1986. Ways of representing music provide the main focus of the current directory. We also continue our coverage of music printing with a provisional inventory of musical symbols desirable for critical editions of standard repertory, an update on music printing activities, a cumulative list of music encoding and printing systems and products (with a large number of illustrations), and a brief report on one effort of twenty years ago to print music by computer.

The balance of the directory consists of short news items (conferences, theses in progress, recently formed organizations and services), a log of current activities and applications, a brief dictionary of computer terminology in four languages (English, French, German, Italian), a short bibliography of recent and imminent publications of a comprehensive nature, and a series of address lists (individuals, businesses, agencies, and electronic mail users).

We are indebted to a great many contributors this year. We would like especially to extend our thanks to Stephen Dydo for compiling the inventory of musical symbols (which includes many suggestions made by respondents to one of our surveys) and for many other valuable contributions to the presentation of this directory; to Mario Baroni, Laura Callegari, Lelio Camilleri, Etienne Darbellay, and Christoph Schnell for their contributions to the four-language dictionary of computer terms; to Lelio Camilleri, Stephen Dydo, Michael Keller, Stephen Page, and Alastair Pearce for their efforts over the past year to expand our outreach; to the many software developers and other researchers who contributed examples of music printing and other illustrative materials; to all of those who contributed information about encoding systems and applications; to Jef Raskin for the photographs from his personal archives; and to Frances Bennion, Edmund Correia, Michael Flexer, and Esther Hewlett for their proofreading efforts and general assistance.

Menlo Park, CA
June 29, 1987

Table of Contents

The Representation of Musical Information in Machine-Readable Form	1
Examples of Musical Encoding Systems	3
Internal Representations	8
An Inventory of Musical Characters	23
Music Printing: An Update	26
Cumulative List of Music Encoding and Printing Systems and Products	27
An Early System for Printing Music	74
News	77
Standards for Musical Information	77
Recent Events	78
Forthcoming Events	80
Online Communications	80
Current Technical Research	81
Optical Scanning	81
Automatic Transcription	82
Other	85
Theses and Dissertations	85
Comprehensive Publications (Recent)	86
Resource List for Humanities Computing	87
Humanities Research Tools in Machine-Readable Form	88
Log of Current Activities and Applications	90
Bibliographies, Databases, and Editions	91
Bibliographies and Indices of Text	91
Bibliographies and Indices of Music	92
Databases of Text	96
Databases and Editions of Music	104
Textual Analysis	107
Musical Analysis and Analytical Methods (Specific)	109
General Applications in Musical Analysis and Information Processing	117
Data Structures and Representation Systems for Musical Analysis	117
Computational Music Theory	123
Musical Information Processing	124
Facilities and Integrated Systems	124
Programs of Study	126
Short Courses	127

Computer Terminology: a Four-Language Dictionary	128
Recent and Forthcoming Literature about the Discipline	134
Address Lists	135
Individuals	135
Businesses	145
Agencies	147
Electronic Mail Addresses	150

List of Illustrations

Music Representation:

1. DARMS	12
2. SCORE	14
3. Waseda University	16
4. Musiccomp Terminal	17
5. Interactive Music System	18
6. CCARH	20
7. TELETAU	22

Music Printing: Proprietary Systems

8. Toppan Scan-Note System: Bach chorale	35
9. Toppan Scan-Note System: Bach prelude	36
10. Toppan Scan-Note System: Mozart clarinet quintet	37
11. Toppan Scan-Note System: orchestral score	38
12. Toppan Scan-Note System: piano score	39
13. A-R Editions, Inc.: Magnificat	40
14. A-R Editions, Inc.: orchestral score	41
15. Lasergraphics: hymn	42

Music Printing: Commercially Available Systems

16. Synclavier: Liszt piano score	43
17. Synclavier: Bach chorale	44

Music Printing: Software for Personal Computers

18. SCORE (Tandy 2000/IBM PC): part extraction; complex meters	45
19. SCORE: parameters for control of spacing	46
20. SCORE: special symbol sets	47
21. The Music Processor (TI Prof./IBM PC): Mozart quintet, Bach chorale	48
22. The Music Processor: two-stave reduction of five-part score	49
23. The Music Processor: editing and drawing capabilities	50
24. The Note Processor (IBM PC): keyboard score; complex meters	51
25. The Note Processor: Bach chorale (dot matrix output)	52
26. The Note Processor: Bach chorale (laser printer output)	53
27. The Copyist (Atari ST): Bach prelude	54
28. The Copyist: Bach chorale	55
29. Personal Composer II (IBM PC): Beethoven string quartet	56
30. Noteprocessor (Apple //): Bach St. Matthew Passion	57
31. Professional Composer (Macintosh): hymn	58
32. MusScript (Macintosh): Bach prelude	59
33. Theme (IBM PC): Bach chorale	60
34. Theme: Bach prelude	61
35. Oberon System II (HP Vectra/IBM PC): Mozart quintet	62
36. Oberon System II: Bach chorale	63

37. The Music Writer (IBM PC): Bach chorale	64
38. The Music Writer: miscellaneous capabilities	65
39. Deluxe Music Construction Set 2.0 (Macintosh): Bach chorale	66
40. Deluxe Music Construction Set 2.0: Mozart quintet	67
41. High Score (Macintosh): Bartok quartet (typesetter output)	68
42. High Score: Bartok quartet (laser printer output)	69
43. Oxford Music Processor (IBM PC): Handel keyboard fugue	70
44. ETH (Lilith workstation): non-coincident parts	71
45. ALPHA/TIMES (Macintosh): mass incipit in neumatic notation	72
46. Interactive Music System (PLATO): keyboard prelude	73
 Current Technical Research: Optical Scanning	
47. Fundamental Concepts (Mont-Reynaud, Stanford U.)	83
48. Sample of Recognizable Music (Ohteru Group, Waseda U.)	84
 Applications: Databases of Text	
49. Hill <i>et al.</i> /Historical Editions: List of fields in record	98
50. Mould/Harpsichord Makers: List of fields in record	99
51. UCB <i>et al.</i> /Italian Lyric Poetry: List of fields in record	100
52. RENARC: Sample of retrievable information	102
 Applications: Musical Analysis	
53. M. Kassler: Schenkerian derivation	108
54. D. Coombs: probability graphs	119