

INTELLIGENT TECHNOLOGIES

in Library and Information
Service Applications

F.W. Lancaster
and
Amy Warner

asis&t

ASIST Monograph Series

Table of Contents

List of Figures	v
Preface	vii
Introduction	1
Scope of the study	2
Methods	6
Chapter 1: Applications within libraries and other information service operations	11
Cataloging	11
Subject indexing	14
Expert system approaches	16
“Intelligent” indexing	20
Acquisitions and collection development activities	24
Reference services	27
Referral systems	27
Database selection	31
Information retrieval	35
Other library applications	38
Conclusions	40
Chapter 2: Applications closely related to library problems	43
Intelligent text processing	43
Intelligent agents	59
Intelligent interfaces	66
Data mining and knowledge discovery	74
Chapter 3: Applications from other fields	81
Help desks	83
Medical diagnosis	88
Critiquing systems	91
Groupware	92

Chapter 4: General technologies	95
Speech technology	95
Computer vision	101
Chapter 5: Conclusions and implications	107
The information service environment	111
Library applications so far	116
Applications of advanced technologies in the library of the future	117
Implications for managers of libraries and other information services	123
Appendices	131
1. Sample letter to vendors	131
2. Sample letter to authors	133
3. Author questionnaire	135
4. Sources for keeping current with new developments in advanced technologies	137
5. Criteria for deciding when an expert system approach may be justified	141
References	151
About the Authors	201
Index	203