

Potential Applications of Artificial Intelligence, Expert Systems and
Related Technologies Within the Special Library Environment

a report to
the Special Libraries Association

with the support of the
Steven I. Goldspiel Memorial Research Grant

F. W. Lancaster
Linda C. Smith
Graduate School of Library and Information Science
University of Illinois

May 1997

CONTENTS

Preface

Introduction

 Scope of the study

 Methods

Applications within libraries and other information service operations

 Cataloging

 Subject indexing

 Expert system approaches

 Intelligent indexing

 Acquisitions and collection development activities

 Reference services

 Referral systems

 Database selection

 Information retrieval

 Other library applications

 Conclusions

Applications closely related to library problems

 Intelligent text processing

 Operating systems

 Intelligent agents

 Intelligent interfaces

 Data mining

Applications from other environments

 Help desks

 Medical diagnosis

 Critiquing systems

 Groupware

General technologies

Speech technology

Computer vision

Conclusions and implications

The information service environment

Library applications so far

Applications of advanced technologies in the library of the future

Implications for library managers

Appendices

1. Sample letter sent to vendors
2. Sample letter sent to authors
3. Author questionnaire
4. Sources for keeping current with new technologies
5. Criteria for deciding when an expert system approach may be justified

References