

# Contents

Introduction.....	9
Chapter 1	
Wizualizacja informacji - obszar badań informacji naukowej.....	15
Visualisation of information - a research field in information science	15
1.1 Background of visualization - the concept and history.....	27
1.2 Modern methods and examples of information visualization	
1.3 Information visualization - looking for a strategy of science mapping. . . .	37
Chapter 2	
The research subject -the Computer Classification System (CCS)	49
2.1 The discipline - computer and related sciences.....	49
2.2 The CCS ACM classification scheme.....	57
a) Historical background.....	57
b) The CCS classification scheme development.....	60
c) Analysis of the current CCS classification scheme.....	62
d) Ontology in the CCS.....	66
e) The CCS updating.....	69
2.3 The subject's taxonomy in the Internet services.....	71
Chapter 3	
Description of the study.....	75
3.1 Methodology.....	75
3.2 Process of data analysis.....	82
a) Tools and their implementation. . . . .	82
b) Data collection stage.....	84
c) Data processing stage.....	86
d) Data visualization stage.....	90
3.3 Interpretation of the results.....	93
a) The sphere's surface.....	93
b) The maps. . . . .	96
c) The new classification.....	102
3.4 Expanded methods of data analysis.....	105
a) Modification of data set.....	105
b) Quantification of structure of visualization maps.....	106

Chapter 4	
Implementations of the visualization system.....	113
4.1 Time characteristics of the science domain .....	113
4.2 Application: documents' searching.....	123
Conclusions.....	135
References.....	141
List of tables with study results.....	151
List of illustrations.....	183
Subject index.....	I84