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Peter Simon Sapaty

Managing Distributed Dynamic Systems with Spatial Grasp Technology

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To my grandson Vanya with true belief that the world he so much loves and needs can be secured and improved by this book

Preface

This is the third book on high-level ideology, model, and technology for solving tasks in large distributed networked systems by active scenarios navigating and matching them in parallel. The other two being Mobile Processing in Distributed and Open Environments (1999) and Ruling Distributed Dynamic Worlds (2005), both from John Wiley & Sons.

The naturally arising question: What changed from the time of previous publications, and why this new book may be needed now? At least five reasons can be named.

Reason 1. Changed is the world as a whole, with its dynamics grown enormously for the last decade, lavishly fed by numerous conflicts and crises including international terrorism, ethnic, religious and military conflicts, endless floods of refugees, economy collapses too. To withstand this dynamics, much updated and even completely different views on the problems and their solutions are needed, in the area of information and control models and technologies too.

Reason 2. After the second book's publication, the developed ideology, methodology and technology were severely tested at many world events, both civil and military, to evaluate their potentials for solving hard practical tasks in distributed dynamic systems. And the proposed approach pretty much survived and was of real interest to different audiences. The feedback and experience gained helped to improve the technology and especially its core language in comparison with the previous book publications.

Reason 3. The participation in different world events with very different topics and very dissimilar audiences helped to witness uniformity of basic system principles in all areas. And this encouraged an attempt to link our work with some fundamental concepts like General System Theory, System Dynamics, Gestalt Psychology, also new trends like Memetics and Human Terrain; stimulating in this respect was our presentation at Gestalt Psychology Congress in Germany. It became clear that moving to higher system levels can often drastically improve solutions at lower levels too.

Reason 4. The previous technology versions were prototyped using special software communication channels between computers. But the current version can use any existing media communications, and can be easily installed in popular electronic devices which, communicating under the spreading spatial scenarios can help to solve different social problems within or without any borders.

Reason 5. Many conference and journal publications appeared during the last decade in relation to this technology and applications. It would be useful to collect at least most important of them and present in extended and improved form within a single volume like a book.

The mentioned above, altogether, have inspired the author to prepare this book in hope it can be useful and enjoyable by readers. Wishing them luck in digesting this material, with readiness to provide any additional consultation and information.

Kiev, Ukraine Peter Simon Sapaty

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Contents

1 Introduction 1
1.1 What Is This Book About? 1
1.2 Offering Technological Response to World Challenges 1
1.3 Background and History 2
1.3.1 Creating Distributed Networks 2
1.3.2 Using Program Mobility 2
1.3.3 Active Graphs and Networks 3
1.3.4 Mobile Programs in Active Networks 3
1.3.5 International Support 4
1.4 The Book Organization 5
References 8

2 Some Theoretical Background 11
2.1 Introduction 11
2.2 General Systems Theory 11
2.3 System Dynamics 13
2.4 Gestalt Psychology 15
2.5 Memetics Versus Genetics 20
2.6 Brain Waves and Consciousness 21
2.7 Interoperability Organizations and Their Weakness 23
2.8 Over-Operability Versus Interoperability in System Organization 25
2.9 Conclusion 28
References 28

3 Spatial Grasp Model 31
3.1 Introduction 31
3.2 Spatial Grasp Model Key Issues 32
3.2.1 General Idea 32
3.2.2 Parallel Wavelike World Coverage 32

3.2.3 Navigation Pattern's Modification, Reduction, and Replication . . . 33
3.2.4 Spatial Grasp with Echo Processing . . . 33
3.2.5 Multisource Matching . . . 35
3.2.6 Combining Biological, Sociological, and Psychological Ideas . . . 36
3.3 General Organization of Spatial Grasp Language, SGL . . . 36
3.3.1 SGL Orientation and Peculiarities . . . 36
3.3.2 SGL Recursive Structure . . . 37
3.3.3 Constants . . . 37
3.3.4 Variables . . . 38
3.3.5 Rules . . . 38
3.4 More SGL Details . . . 38
3.4.1 SGL Worlds . . . 39
3.4.2 How SGL Scenarios Evolve . . . 39
3.4.3 Sense and Nature of SGL Rules . . . 40
3.4.4 The Use of SGL Variables . . . 41
3.4.5 SGL Control States and Their Hierarchical Merge . . . 42
3.5 Elementary Examples in SGL . . . 43
3.6 General Issues of SGL Networked Interpretation . . . 52
3.7 Conclusion . . . 53
References . . . 54

4 SGL Detailed Specification . . . 57
4.1 Introduction . . . 57
4.2 Full SGL Syntax and Main Constructs . . . 57
4.3 SGL Constants . . . 60
4.3.1 Information . . . 60
4.3.2 Physical Matter . . . 60
4.3.3 Custom Constants . . . 61
4.3.4 Special Constants . . . 61
4.3.5 Compound Constants, Grasps . . . 62
4.4 SGL Variables . . . 62
4.4.1 Global, Heritable, Frontal, and Nodal Variables . . . 62
4.4.2 Environmental Variables . . . 62
4.5 SGL Rules . . . 66
4.5.1 Movement . . . 66
4.5.2 Creation . . . 67
4.5.3 Echoing . . . 68
4.5.4 Verification . . . 70
4.5.5 Assignment . . . 70
4.5.6 Advancement . . . 71
4.5.7 Branching . . . 72
4.5.8 Transference . . . 75

4.5.9 Timing . . . 76
4.5.10 Granting . . . 77
4.5.11 Type . . . 78
4.5.12 Usage . . . 78
4.5.13 Application . . . 79
4.5.14 Grasp . . . 79
4.6 Conclusion . . . 79
References . . . 80

5 Main Spatial Mechanisms in SGL . . . 81
5.1 Introduction . . . 81
5.2 Progress Points or Props . . . 81
5.3 Single Grasp Representation . . . 82
5.4 Depth Mode Space Navigation . . . 84
5.4.1 Advancement . . . 84
5.4.2 Sliding . . . 87
5.4.3 Repetition . . . 88
5.5 Breadth Mode Navigation . . . 91
5.5.1 General Branching . . . 92
5.5.2 IF-THEN-ELSE Branching . . . 94
5.5.3 OR Branching . . . 94
5.5.4 AND Branching . . . 96
5.5.5 Repetitive Branching . . . 97
5.6 Breadth-Depth Combined Navigation Mode . . . 100
5.6.1 General Breadth-Depth Mode . . . 100
5.6.2 Asynchronous-Parallel Mode . . . 101
5.6.3 Synchronous-Parallel Mode . . . 102
5.7 Direct Operations on Remote Values . . . 103
5.8 Conclusion . . . 104
References . . . 105

6 SGL Networked Interpreter . . . 107
6.1 Introduction . . . 107
6.2 The Interpreter General Organization . . . 108
6.3 Data Structures of the Interpreter . . . 108
6.3.1 Grasps Queue . . . 109
6.3.2 Suspended Grasps . . . 109
6.3.3 Track Forest . . . 109
6.3.4 Activated Rules . . . 110
6.3.5 Knowledge Network . . . 110
6.3.6 Grasps Identities . . . 110
6.3.7 Heritable Variables . . . 111
6.3.8 Fontal Variables . . . 111

6.3.9 Nodal Variables . . . 111
6.3.10 Environmental Variables . . . 112
6.3.11 Global Variables . . . 112
6.3.12 Incoming Queue . . . 112
6.3.13 Outgoing Queue . . . 113
6.4 Functional Processors . . . 113
6.4.1 Communication Processor . . . 113
6.4.2 Parser . . . 113
6.4.3 Operation Processors . . . 114
6.4.4 Navigation Processor . . . 114
6.4.5 Control Processor . . . 114
6.4.6 World Access Unit . . . 115
6.5 Track-Based Automatic Command and Control . . . 115
6.5.1 Track-Based Management Components . . . 115
6.5.2 Forward Grasping . . . 117
6.5.3 Distribution of Track Structure . . . 118
6.5.4 Echoing Via Tracks . . . 118
6.5.5 Failed and Blocked Track Branches . . . 120
6.5.6 Further World Grasping . . . 120
6.5.7 More Advanced Track Infrastructure . . . 123
6.6 Examples of Involvement of Interpreter Components . . . 124
6.6.1 Transferring Control Messages . . . 124
6.6.2 Engagement in Data Processing . . . 125
6.6.3 Networked Knowledge Processing . . . 127
6.6.4 Movement in Physical Space . . . 128
6.7 Integration with Other Systems . . . 129
6.8 Conclusions . . . 131
References . . . 131

7 Creation, Activation, and Management of a Distributed World . . . 133
7.1 Introduction . . . 133
7.2 Distributed World Creation . . . 134
7.2.1 Elementary Examples . . . 134
7.2.2 Creating General Networks . . . 136
7.3 Network Distribution . . . 142
7.4 World's Invasion with Mobile Objects . . . 144
7.5 Collecting and Exhibiting the History of Navigation . . . 145
7.6 Adding Nodal Activity . . . 146
7.7 Global Supervision and Inspection . . . 148
7.8 Runtime Restructuring of the Active Distributed World . . . 150

7.9 Virtual-Physical World Creation and Management 152
7.9.1 Converting Virtual to Physical. 152
7.9.2 Keeping Size and Shape in Movement 153
7.9.3 Creating Physical Structures from the Start 155
7.10 Conclusion 156
References. 156

8 Parallel and Distributed Network Operations 159
8.1 Introduction 159
8.2 Finding Simple Paths Between Nodes 160
8.2.1 All Simple Paths 160
8.2.2 Limited Length Simple Paths. 161
8.2.3 Using Constraints on Links 161
8.2.4 Constraints on Both Links and Nodes 162
8.2.5 Taking into Account Orientation of Links 162
8.2.6 Issuing the Paths in the Final Node 163
8.3 Creating Shortest Path Tree 163
8.4 Finding Shortest Path Between Nodes 164
8.4.1 Single Source Solution 164
8.4.2 Two-Source Solution 165
8.5 Moving Physical Matter via the Path Found 166
8.5.1 Matter Moving Along the Path 167
8.5.2 Matter Moving Opposite the Path 167
8.6 Finding Weak and Strong Components in Networks 168
8.6.1 Finding Weakest Points 168
8.6.2 Finding Strongest Parts 170
8.7 Finding Arbitrary Structures in Arbitrary Networks 172
8.7.1 Exemplary Network and Search Template 172
8.7.2 Template Representation Based on a Path Through All Nodes 172
8.7.3 Template Representation Based on a Path Through All Links. 174
8.7.4 Networks with Named Nodes and Links 175
8.7.5 Working with Networks Having Multiple Links Between Nodes 177
8.8 Examples of Finding Particular Structures 177
8.8.1 Example 1: Triangle 178
8.8.2 Example 2: Two Triangles Sharing a Side. 179
8.8.3 Example 3: Unlimited Expanding Structure. 180
8.9 Conclusion 181
References. 181

9 Solving Societal Problems 183
9.1 Introduction 183
9.2 Social Problems and Social Networks 184
9.2.1 Social Problems Examples 184
9.2.2 Human Terrain Concept and Its Relation to Social Problems 184
9.2.3 Social Networks and Their Representation 186
9.3 Exemplary Social Network Operations 187
9.3.1 Distributed Counting of the Number of Nodes and Links 187
9.3.2 Finding Paths Between Nodes 188
9.3.3 Shortest Path Tree and Solutions Based on It 191
9.3.4 Spatial Centres of Organizations 195
9.4 Active and Assisted Living 198
9.5 Emergency Management 200
9.5.1 Investigating and Relieving Disaster Consequences 200
9.5.2 Collective Evacuation from a Disaster Zone 201
9.6 Other Societal Tasks Currently Investigated Under SGT 202
9.7 Conclusion 203
References 203

10 Automated Command and Control 205
10.1 Introduction 205
10.2 Purely Semantic Scenario with Automatic Control 206
10.2.1 Exemplary Task 206
10.2.2 Three-Doer Task Solution 207
10.2.3 Task Solution with Other Numbers of Doers 212
10.3 Dynamic Creation of Distributed Command Infrastructures 213
10.3.1 Hierarchical Operational Infrastructure 214
10.3.2 Peripheral, Ring Infrastructure 218
10.4 Withstanding Cruise Missiles 220
10.4.1 Existing Solutions 220
10.4.2 Installing SGL Interpreters in Distributed Sensors 221
10.4.3 Distributed Missile Tracking Scenario in SGL 222
10.4.4 Withstanding Multiple Attacks 224
10.5 Networked Night Vision Scenarios 226
10.5.1 Multiple Spatial Vision of a Particular Object 226
10.5.2 Multiple Spatial Vision of the Whole Theatre 228
10.6 Europe-Related Missile Defense Scenario 229
10.6.1 Missile Defense Main Stages 229
10.6.2 Missile Defense Management in SGL 232

10.7 High-Level Battle Management in SGL 233
10.7.1 Traditional Battle Management in BML 233
10.7.2 Same Management Scenario in SGL 235
10.8 Distributed Avionics 237
10.9 Conclusion 238
References 239

11 Collective Robotics 241
11.1 Introduction 241
11.2 Some Modern Robotic Examples 242
11.2.1 Ground Robotics 242
11.2.2 Aerial Robotics 242
11.2.3 Maritime Robotics 243
11.2.4 Collectively Behaving Robots 244
11.2.5 General Demands to Advanced Robotic Systems 245
11.3 Integration of Loose Swarming with Hierarchical Command and Control 246
11.4 Multi-robot Hospital Service Example 250
11.5 Exploration and Mapping of Unknown Distributed Space 252
11.5.1 Different Mapping Scenarios 253
11.5.2 Finding Optimal Route by the Created Free Space Grid 256
11.6 Battling Forest Fires with Robotic Swarms 257
11.7 Coastal Waters Cooperative Patrol 259
11.8 Cooperative Finding of Oil Spill Center 261
11.9 Maritime Massive Robotic Attack 263
11.10 Swarm Against Swarm Aerial Scenario 265
11.11 Cooperative Robotic Forestry and Agriculture 266
11.12 Conclusion 272
References 272

12 Conclusions 275
12.1 General Advantages of the Technology Developed 275
12.2 Contribution to the System Theory and Practice 275
12.3 Some Particular Application Areas 279
12.4 Implementation Issues and Future Plans 282
References 282