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À Jean-François

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Those who dream by day are cognizant of many things which escape those who dream only by night.

Edgar Allan Poe

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BIBLIOTHEQUE DU CERIST

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BIBLIOTHEQUE DU CERIST

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Avant-propos

Cette thèse est le résultat d'un effort de recherche effectué à l'INRIA, au sein du Projet SOR (Systèmes d'Objets Répartis). Elle a été réalisée en tant qu'étudiant de l'Université Pierre et Marie Curie – Paris VI.

Cette thèse comporte deux parties : la première est un résumé long en français, la seconde est la version complète de la thèse en anglais.

Quelques aspects de cette thèse sont présentés dans les articles suivants, disponibles sur le World-Wide Web, à l'URL http://www-sor.inria.fr/~aline/, (Aline.Baggio@inria.fr).

Aline Baggio. Design and Early Implementation of the Cadmium Mobile and Disconnectable Middleware Support, INRIA Research Report 3515, October 1998.

Aline Baggio. Cadmium: Resource-Aware System Support for Mobile Environments, one-page abstract and poster, *Middleware'98 conference*, The Lake District, England, September 15th-18th, 1998.

Aline Baggio. Replication and Caching Strategies in Cadmium INRIA Research Report 3409, April 1998.

Aline Baggio. System Support for Transparency and Network-aware Adaptation in Mobile Environments, *ACM Symposium on Applied Computing special track on Mobile Computing Systems and Applications*, Atlanta, Georgia, USA, Feburary 27th-March 1st 1998. Also INRIA Research Report 3409, April 1998.

Aline Baggio and Marc Shapiro. Reconciling Transparency with Resource Awareness in Nomadic Computing, *4th CaberNet Radicals Workshop*, Rethimnon, Crete, September 17th-20th, 1997.

Aline Baggio and Guillaume Pierre. Oléron: Supporting Information Sharing in Large-Scale Mobile Environments, *ERSADS'97 Workshop*, Zinal, Switzerland, March 17th-21st, 1997.

Mobile Host Tracking and Resource Discovery, Aline Baggio and Ian Piumarta. *Seventh SIGOPS European Workshop*, Connemara, "Systems Support for Worldwide Applications", Ireland, September 8th-11th, 1996.

Aline Baggio. Environnements Mobiles : Étude et Synthèse Bibliographique (Mobile Environments: State of the Art), IBP Report 95/29, MASI Laboratory, Université Pierre et Marie Curie, October 1995, in French.

BIBLIOTHEQUE DU CERIST

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Foreword

This thesis is the result of a research effort done at INRIA, in the SOR (Distributed Object Systems) group, while I was a student of the Université Pierre et Marie Curie – Paris VI.

This thesis is divided in two parts: the first is an extended abstract in French, the second is the thesis itself in English.

Some results presented in this thesis appeared in the following articles, which are available on the World-Wide Web, at the URL http://www-sor.inria.fr/~aline/, (Aline.Baggio@inria.fr).

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BIBLIOTHEQUE DU CERIST

Contents

Objets Distribués Adaptables pour Environnements Mobiles (résumé/abstract) **1**

I Introduction **3**

II Qu'est-ce que l'informatique mobile? **5**

III Le support de la mobilité et de l'adaptabilité **7**

IV Le support de la réplication et de la cohérence **9**

V Le support des objets et des références **11**

VI Le modèle de Cadmium **13**

VII Architecture **15**

VIII Gestion des objets et des références **17**

IX Support de l'adaptation **19**

X Interaction avec les applications et les utilisateurs **21**

XI Applications de Cadmium **23**

XII Évaluation **25**

XIII Conclusion et perspectives **27**

Adaptable and Mobile-Aware Distributed Objects **29**

1 A Brief introduction to mobile computing 31

I Introduction **33**

1 Goals and needs 33

2 Steps towards a solution 34

2.1 Context 35

2.2 Approach 35

BIBLIOTHEQUE DU CERIST

2.3 Cadmium 36
2.4 Use and applications 37
3 Contribution 37
4 Thesis roadmap 38

II What is mobile computing? 39
1 Mobile computing: a definition 39
2 Techniques and applications 40
3 Problems of mobile environments 41

2 Understanding the problem: State of the art 43

III Support for mobility and adaptation 45
1 Network-level mobility support 45
1.1 Internet Protocol version 6 45
1.2 Amigos 47
1.3 MosquitoNet 48
2 The need for flexibility and adaptation 50
2.1 Operating system approach: Odyssey 51
2.2 Reflective approach: Guaraná 53
2.2.1 Reflection 53
2.2.2 Guaraná 53
3 Summary and comparison 54

IV Support for replication and consistency 57
1 Mobile file systems 57
1.1 Coda 57
1.2 Seer 61
1.3 Amigos 62
2 Mobile database: Bayou 64
3 Distributed object systems 66
3.1 CoRe 66
3.2 Globe 68
4 Summary and comparison 71

V System support for objects and references 73
1 Language extensions 73
1.1 Network Objects 73
1.2 Java RMI and Jini 75
2 Middleware frameworks 76
2.1 Rover 76
2.2 Hobbes 78
3 Summary and comparison 80

BIBLIOTHEQUE DU CERIST

3 Steps towards a solution: design & implementation 83

VI The Cadmium model **85**
1 Awareness model . . . 85
2 Interaction model . . . 87
3 Multiplexing: support stations and mobile hosts . . . 88
4 Distribution model . . . 89
5 Network model . . . 90
6 Replication model . . . 91
7 Consistency model . . . 92
8 Object model . . . 93
8.1 Objects . . . 93
8.2 References . . . 94
8.3 Binding and flexible binding . . . 95
9 Summary . . . 97

VII Architectural design **99**
1 Design overview . . . 99
2 Implementation . . . 100
2.1 Prototyping . . . 100
2.2 Language considerations . . . 101
3 Summary . . . 103

VIII Managing objects and references **105**
1 Objects . . . 105
2 Basics on referencing objects . . . 106
2.1 Stub-Scion Pair Chains . . . 106
2.1.1 Stubs and scions . . . 107
2.1.2 Stub-Scion Pair Chains management . . . 107
2.1.3 References, marshaling and unmarshaling . . . 109
2.2 The JoCaml SSP Chains specificities . . . 109
2.3 Cadmium JoCaml SSP Chains . . . 111
3 Low-level replication . . . 111
3.1 Using replication . . . 112
3.2 Enabling replication . . . 113
3.3 Managing the cache . . . 115
3.3.1 External parameters . . . 116
3.3.2 Storage . . . 116
3.3.3 Replacement . . . 116
3.3.4 Consistency . . . 118
3.3.5 Additional algorithms . . . 118
3.3.6 Cache organization . . . 119
3.4 Implementation hints . . . 119
4 Flexible binding . . . 119
4.1 Flexible reference redirection . . . 120
4.1.1 Use of flexible reference redirection . . . 120

BIBLIOTHEQUE DU CERIST

4.1.2 Enabling flexible binding through virtual multiplexing . . . 120
4.1.3 Replica selection and use . . . 121
4.1.4 Impact of redirections . . . 123
4.2 Quality of service-based flexible binding . . . 124
4.2.1 Use of the quality of service-based flexible binding 124
4.2.2 Quality of service-based flexible binding as an applicative need . . . 125
4.2.3 Problems related to quality of service-based flexible binding . . . 126
5 Multiplexing . . . 126
5.1 Host level multiplexer uses . . . 126
5.2 Enabling host level multiplexing . . . 127
5.3 Disconnection and reconnection scenarios . . . 128
6 Clustering in Cadmium . . . 128
6.1 Type of clustering . . . 129
6.2 Enabling clustering . . . 130
7 Managing correctness . . . 130
8 Summary . . . 131

IX Enabling adaptation 133
1 Adaptation and flexibility through strategies . . . 133
1.1 What is a strategy? . . . 133
1.2 Managing strategy collections . . . 135
1.3 Using strategies . . . 137
2 Basic strategy collections . . . 139
2.1 Binding . . . 139
2.2 Replication . . . 141
2.2.1 No cache . . . 141
2.2.2 Persistent caching . . . 141
2.2.3 On-demand caching . . . 142
2.2.4 Prefetching . . . 143
2.2.5 Mirroring . . . 143
2.2.6 On-the-fly replication . . . 144
2.2.7 Transparent mirroring . . . 145
2.3 Access control . . . 145
2.4 Replication control . . . 145
2.5 Consistency . . . 146
2.6 Conflict detection . . . 147
2.7 Conflict resolution . . . 148
3 Additional strategies . . . 148
3.1 Filtering . . . 149
3.2 Compression . . . 149
3.3 Encryption . . . 150
4 Tracking environment changes . . . 150
4.1 Environment monitoring . . . 150
4.2 Subscription and notification generation . . . 150

BIBLIOTHEQUE DU CERIST

4.3 Example uses . . . 152
4.3.1 Bandwidth variation and availability . . . 152
4.3.2 Location or distance . . . 152
4.3.3 Latency . . . 154
4.3.4 Connection state or network quality . . . 154
4.3.5 External equipment or hosts . . . 154
4.3.6 Soft events . . . 154
5 Summary . . . 155

X Interacting with applications and users 157
1 Application level . . . 157
1.1 Using the Cadmium API . . . 157
1.2 Use of ad-hoc strategies . . . 157
1.2.1 Defining a strategy alternative . . . 158
1.2.2 Adding a strategy collection . . . 159
1.3 Getting feedback and using it . . . 162
2 User level . . . 163
2.1 Feedback and hints . . . 163
2.2 Profiles . . . 164
2.3 The actual user interface . . . 165
3 Controlling adaptivity . . . 165
3.1 Aspects of control . . . 165
3.2 User control . . . 166
3.3 Trace-based simulation and replay . . . 166
3.4 Using reflection . . . 167
4 Summary . . . 167

4 Steps towards validation: experimentation & use 169

XI Cadmium applications 171
1 Use of Cadmium mechanisms . . . 171
1.1 Creating a new application . . . 171
1.2 Using an existing application . . . 172
2 Application examples . . . 172
2.1 The Cadmium demonstration . . . 172
2.2 A calendar application . . . 172
2.3 A World-Wide Web proxy . . . 173
2.4 A World-Wide Web browser . . . 174
2.5 A mailbox application . . . 175
2.6 Collaborative applications . . . 176
2.7 Real-time movie broadcaster . . . 176
3 Implementing an application . . . 177
3.1 The Cadmium demonstration . . . 177
3.2 The calendar application . . . 178
4 Summary . . . 178

BIBLIOTHEQUE DU CERIST

XII Evaluation **181**
1 Qualitative evaluation . . . 181
1.1 Reuse of Cadmium mechanisms . . . 181
1.2 Evaluation of the object-oriented approach . . . 183
1.3 Flexibility considerations . . . 184
2 Performance measurements . . . 184
2.1 Experimental conditions . . . 184
2.2 Low-level performance measurements . . . 185
2.2.1 Communication costs . . . 185
2.2.2 Other costs . . . 185
2.3 Middleware level measurements . . . 188
3 Summary . . . 189

XIII Conclusion and future work **191**
1 Mobility issues and solutions . . . 191
1.1 Application and user needs . . . 191
1.2 The Cadmium framework . . . 192
1.3 Cadmium's rationale . . . 193
2 Achievements . . . 194
3 Future work . . . 194
3.1 Framework tuning . . . 194
3.2 Optimization . . . 195
3.3 Extensions . . . 195
3.3.1 Language . . . 195
3.3.2 Replication . . . 196
3.3.3 Control . . . 196
4 Final word . . . 197

A Details on JoCaml SSP Chains **199**
1 JoCaml SSP Chains specificities . . . 199
1.1 Stub and scion structures . . . 199
1.2 Short-cutting features . . . 200
1.3 Automatic stub and scion generation . . . 202
1.4 Object migration . . . 202
1.5 Messages . . . 204
1.6 Name service . . . 204
1.7 Garbage collection . . . 204
2 JoCaml SSP Chains interface . . . 204

B Details on Cadmium JoCaml SSP Chains **205**
1 System-level hooks . . . 205
1.1 Hooks for replication . . . 205
1.2 Hooks for flexible binding . . . 206
1.2.1 Hooks for flexible reference redirection . . . 206
1.2.2 Hooks for quality of service-based flexible binding 207
1.3 Hooks for multiplexing . . . 208
1.4 Hooks for strategies . . . 208

BIBLIOTHEQUE DU CERIST

1.5 Hooks for clustering 210
2 Low-level replication primitives 210
3 Flexible binding primitives 211
3.1 Flexible reference redirection primitives 212
3.2 Quality of service-based flexible binding primitives 212
4 Clustering primitives 212

C Other implementation details 215
1 Cadmium API 215
2 Cadmium internal interface 215
3 Monitoring 215
4 Huffman compression 215

D Raw performance measurements 223
1 Low-level performance measurements 223
1.1 Communication costs 223
1.2 Other costs 226

BIBLIOTHEQUE DU CERIST

BIBLIOTHEQUE DU CERIST

List of Figures

VII.1 Architecture de Cadmium 15

VIII.1 Une Stub-Scion Pair Chain 17

III.1 Triangular routing 48
III.2 Bi-directional tunneling 49
III.3 Odyssey architecture 52

IV.1 Venus state transitions 60
IV.2 CoRe levels and objects 67
IV.3 A distributed object in Globe 68
IV.4 Organization of the Globe subobjects 69

V.1 Hobbes object model 79

VI.1 Taxonomy of adaptation strategies 86
VI.2 Support station model 89
VI.3 Influence of consistency on availability of data 93
VI.4 The redirection of flexible references 95

VII.1 Cadmium design overview 99

VIII.1 A Stub-Scion Pair Chain 106
VIII.2 SSP Chain extension 108
VIII.3 SSP Chain short-cutting 109
VIII.4 Hierarchy of caches with mobile hosts 114
VIII.5 Cooperation of caches with mobile hosts 114
VIII.6 Message exchanges between cache, server and client spaces . 115
VIII.7 Binding redirection towards local replicas 122
VIII.8 How to use the redirection 123
VIII.9 Potential redirection problem 124
VIII.10 Host level multiplexing 127
VIII.11 A Cadmium cluster 129

IX.1 The root class for strategies 135
IX.2 An example type for the replication control strategy collection 135
IX.3 The base class for the replication control strategy collection 136
IX.4 A class example for the replication control strategy collection 136
IX.5 Internal structure of a Cadmium object 139

BIBLIOTHEQUE DU CERIST

IX.6 Class used for creating monitoring objects 153

X.1 Cadmium external API 158
X.2 The generic replication strategy type and class 159
X.3 Basic replication strategy class with a replication strategy function 160
X.4 A new replication strategy type and function 161
X.5 Example of a compression strategy 162
X.6 Extension of the root class for the compression strategy . . . 162
X.7 A notification registration example 163
X.8 Example of notification treatment 163
X.9 A profile example 165

XII.1 oCaml 2.02 local RPC 186
XII.2 Local method call 186
XII.3 Remote method call 187
XII.4 JoCaml remote method call (different hosts) 187
XII.5 Cadmium remote method call (different hosts) 188
XII.6 Average copy and transfer times 189

XIII.1 Cadmium's rationale 193

A.1 Stub structure in JoCaml SSP Chains 200
A.2 Scion structure in JoCaml SSP Chains 201
A.3 JoCaml early short-cutting protocol 202
A.4 Short-cutting effect on JoCaml stubs and scions 203
A.5 JoCaml SSP Chains interface 204

B.1 The stub structure and contents 207
B.2 Alternate stub targets 207
B.3 The binding type 208
B.4 The root class for objects 209
B.5 Cadmium replication API 210
B.6 Partial Cadmium internal replication interface 211

C.1 Cadmium internal interface 216
C.2 Cadmium class for monitoring 217
C.3 Cadmium class for monitoring (end) and its evaluation 218
C.4 Input/output 219
C.5 Prioritized queues 219
C.6 Huffman compression 220
C.7 Command line interface for files 221

D.1 oCaml 2.02 local RPC 224
D.2 Local method call 224
D.3 Remote method call 225
D.4 Cadmium remote method call (different hosts) 225
D.5 JoCaml remote method call (different hosts) 226

BIBLIOTHEQUE DU CERIST

List of Tables

XII.1 Coût de la réplication 25

XII.1 Strategy switches 189
XII.2 Replication cost 190

D.1 Null method call round-trip time 226
D.2 Null method call round-trip time in seconds (Lachesis, Blake) 227
D.3 Time spent in copying objects 227
D.4 Time spent in object transfers 227

BIBLIOTHEQUE DU CERIST