

# Table of Contents

## Architectures

The Architecture of ALIEN <i>D. Scott Alexander, Jonathan M. Smith</i>	1
Designing Interfaces for Open Programmable Routers <i>Spyros Denazis, Kazuho Miki, John Vicente, Andrew Campbell</i>	13
Rcane: A Resource Controlled Framework for Active Network Services <i>Paul Menage</i>	25
The Protean Programmable Network Architecture: Design and Initial Experience <i>Raghupathy Sivakumar, Narayanan Venkitaraman, Vaduvur Bharghavan</i>	37
A Dynamic Pricing Framework to Support a Scalable, Usage-Based Charging Model for Packet-Switched Networks <i>Mike Rizzo, Bob Briscoe, Jérôme Tassel, Konstantinos Damianakis</i>	48
Active Information Networks and XML <i>Ian Marshall, Mike Fry, Luis Velasco, Atanu Ghosh</i>	60
Policy Specification for Programmable Networks <i>Morris Sloman, Emil Lupu</i>	73
A Self-Configuring Data Caching Architecture Based on Active Networking Techniques <i>Gaëtan Vanet, Yoshiaki Kiriha</i>	85
Interference and Communications among Active Network Applications <i>Luca Delgrossi, Giuseppe Di Fatta, Domenico Ferrari, Giuseppe Lo Re</i>	97

## Platforms

The Grasshopper Mobile Agent Platform Enabling Short-Term Active Broadband Intelligent Network Implementation <i>C. Bäumer, T. Magedanz</i>	109
--	-----

LARA: A Prototype System for Supporting High Performance Active Networking <i>R. Cardoe, J. Finney, A.C. Scott, W.D. Shepherd</i>	117
A Programming Interface for Supporting IP Traffic Processing <i>Ariel Cohen, Sampath Rangarajan</i>	132
New Generation of Control Planes in Emerging Data Networks <i>Nelu Mihai, George Vanecek</i>	144
An Active Networks Overlay Network (ANON) <i>Christian Tschudin</i>	156
Autonomy and Decentralization in Active Networks: A Case Study for Mobile Agents <i>Ingo Busse, Stefan Covaci, André Leichsenring</i>	165
Towards Active Hardware <i>David C. Lee, Mark T. Jones, Scott F. Midkiff, Peter M. Athanas</i>	180
The Impact of AN on Established Network Operators <i>Arto Juhola, Ian Marshall, Stefan Covaci, Thomas Velte, Seppo Parkkila, Mike Donohoe</i>	188

### **Active Management and Control**

Using Active Processes as the Basis for an Integrated Distributed Network Management Architecture <i>Dominic P. A. Greenwood, Damianos Gavalas</i>	199
ANMAC : An Architectural Framework for Network Management and Control Using Active Networks <i>Samphel Norden, Kenneth F. Wong</i>	212
An Active Network Approach to Efficient Network Management <i>Danny Raz, Yuval Shavitt</i>	220
Virtual Networks for Customizable Traffic Treatments <i>Jens-Peter Redlich, Masa Suzuki, Steve Weinstein</i>	232

Flexible Network Management Using Active Network Framework <i>Kiminori Sugauchi, Satoshi Miyazaki, Kenichi Yoshida, Keiichi Nakane, Stefan Covaci, Tianning Zhang</i>	241
Managing Spawned Virtual Networks <i>Andrew T. Campbell, John Vicente, Daniel A. Villela,</i>	249
Active Organisations for Routing <i>Steven Willmott, Boi Faltings</i>	262
A Dynamic Interdomain Communication Path Setup in Active Network <i>Jyh-haw Yeh, Randy Chow, Richard Newman</i>	274
Active Network Challenges to TMN <i>Bharat Bhushan, Jane Hall</i>	285
Survivability of Active Networking Services <i>Amit Kulkarni, Gary Minden, Victor Frost, Joseph Evans</i>	299
<b>Security</b>	
A Secure Plan <i>Michael Hicks, Angelos D. Keromytis</i>	307
Control on Demand <i>Gísli Hjálmtýsson, Samrat Bhattacharjee</i>	315
Agent Based Security for the Active Network Infrastructure <i>Stamatis Karnouskos, Ingo Busse, Stefan Covaci</i>	330
<b>Author Index</b>	<b>345</b>