SYNASC – Workshop GlobalComp
2nd Workshop on Global Computing Models and Technologies

Passing and returning data to and from a SOAP-based web service

Adina Ploscar
West university of Arad
Satu Mare,Romania
adina_ploscar@yahoo.com

Florin Boian
Babes-Bolyai University
Cluj Napoca,Romania
florin@cs.ubbcluj.ro

Abstract - The web is changing from a set of static documents to a collection of Web Services. Computer science is entering a new generation. In a world of services, it is the service that counts for a customer and not the software or hardware components which implement the service. Service-oriented architectures are rapidly becoming the dominant computing paradigm. For a client is very important to pass or retrieve data to and from a service. The paper discuss the possibility of that in a SOAP-based web service. We'll discuss the possibility of passing/returning simple or richer data types and also binary data. We'll see if it's possible and how it's possible.

Centralized and Decentralized Techniques for the Real-Time Scheduling of Deadline-Constrained Out-of-Order Data Transfers

Mugurel Ionut Andreica, Eduard-Marius Dragomir, Nicolae Tapus¸
Computer Science and Engineering Department
Politehnica University of Bucharest
Bucharest, Romania
Email: mugurel.andreica@cs.pub.ro, eduard.dragomir@yahoo.com, nicolae.tapus@cs.pub.ro

Abstract—In the first part of this paper we analyze several centralized and decentralized decision making methods for the case of deadline-constrained real-time out-of-order data delivery. We perform a simulation study in which we implement several data transfer scheduling algorithms and compare their results. In the second part we propose a peer-to-peer architecture with mixed components (both centralized and distributed) for optimizing reliable out-of-order data transfers, but without deadline constraints. We also provide experimental results which validate the concepts behind the peer-to-peer architecture. Finally, the paper also considers an offline data transfer optimization problem for which we provide novel algorithmic solutions.

Continuation Semantics for Multiset Rewriting. Towards a Denotational Semantics for Membrane Computing

Gabriel Ciobanu
Romanian Academy
Institute of Computer Science
Blvd. Carol I no.8, 700505 Ias¸i, Romania
Email: gabriel@iit.tuiasi.ro

Eneia Nicolae Todoran
Technical University of Cluj-Napoca
Department of Computer Science
Baritiu Str. no. 28, 400027 Cluj-Napoca, Romania
Email: eneia.todoran@cs.utcluj.ro

Abstract—We present a (compositional) continuation semantics for an abstract concurrent language $\mathcal{L}_{MR}$. $\mathcal{L}_{MR}$ embodies two important features encountered in membrane computing (MC): the semantics of parallel composition is based on the concept of maximal parallelism and computations are specified by means of multiset rewriting rules. As far as we know this is the first paper that presents a compositional semantics for this combination of concepts. Other features, such as the nested structure of a MC system are lacking from $\mathcal{L}_{MR}$. The semantic model given in this paper represents work in progress, a step towards a denotational semantics for MC. Instead of using a mathematical notation, we find convenient to use the functional programming language Haskell as a metalanguage for the denotational semantics.

Modular Platforms for Enterprise Applications
a brief analysis

Cristina Gutiu
Babes Bolyai University
Faculty of Mathematics and Informatics
Email: cristinagutiu@gmail.com

Florian Mircea Boian
Babes Bolyai University
Faculty of Mathematics and Informatics
Email: florin@nessie.cs.ubbcluj.ro

Abstract—Within the current article the aim is to make a short analysis about which are the emerging platforms used to build enterprise applications and what implementations are offered for them within the industry. The specific technology to be investigated is OSGi, a very interesting raise in the last two years within the providers of the enterprise servers, ESBs and other middleware products, as a module-based development specification, with strong emphasis in the Service Oriented concepts. The current study will check how OSGi can go to the Enterprise level under the name of Distributed OSGi and what support are providing some of existing or in-work implementations of this specification.

A Local Search Approach for Recovering an Internal State of RC4 Stream Cipher

Bogdan Crainicu
"Petru Maior" University of Târgu Mureş
N. Iorga, No. 1
Târgu Mureş , MS 540088, ROMANIA
cbogdan@upm.ro

Abstract— RC4 is one of the most widely used stream cipher. This paper propeses an algorithm based on a Tabu search variant which tries to reconstruct the internal state of RC4. We use the attack approach presented by Knudsen et al. in [8], and the tree representation of the output word Zt and the tree of general conditions presented by Tomašević et al. In [20]. Although the results of analitical calculations are slightly better than those given in [8] and [20], the attack remains impractical due to the high complexity.

Improved resources sharing environment

Ana-Maria Mirea, Constantin Teodorescu-Mihai, Doina Preda, Mircea Preda
Department of Computer Science, University of Craiova
Al. I Cuza street, 13, 200585, Romania
Email: ammirea@acm.org, constantintm@ymail.com, doinapreda@yahoo.com, mpreda@acm.org

Abstract—Peer-to-Peer systems allow to connect directly two equipments without other intermediates. In this way, the participants to a Peer-to-Peer network can efficiently communicate and share resources. The article introduces an improved and general model for Peer-to-Peer networks that can accommodate with almost all sharing networks in current use (KaZaa, BitTorrent, μ-Torrent and Direct Connect network). The proposed model copes well with a high dynamics of the members (the members enter and leave the network very often) and with uncooperative members. The model does not involve special control measures from the site administrators like strong login requirements, strong requirements for membership, etc.