**CLOUD APPLICATION DEVELOPMENT – INVENTRY MANAGEMENT**

**LITERATURE SURVEY**

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This paper describes MADONA methodology, and focuses on the requirements expression phase, by describing RIVAL -a Requirement Vocabulary- based on Linked USDL principles. MADONA allows business stake holders to perform the automatic development of business applications; and combines cloud services discovery and composition with service development using cloud platforms, when the discovery process does not return a service meeting the business stakeholder’s requirements. The description of developed services is stored, and the latter are used in the future workflows. MADONA is implemented as “Services Orchestration as a Service.” It uses the “Juju” [11] cloud orchestration tool to deploy cloud services in several IaaS. A cloud orchestration tool is available without the underlying physical resources needed for the deployment of services. It allows us to deploy and compose supplied services abstracting from the technical details, i.e. (i) the management of the dependencies between services, (ii) the deployment of selected services, (iii) the scalability of the deployed services.

RIVAL describes functional and non-functional requirements for business application development. Functional requirements describe service features. Non-functional requirements describe user preferences and QoS parameters. The rest of this paper is organized as follows. Section  
2014 IEEE/WIC/ACM International Joint Conferences on Web Intelligence (WI) and Intelligent Agent Technologies (IAT) 978-1-4799-4143-8/14 $31.00 © 2014 IEEE DOI 10.1109/WI-IAT.2014.1113  
2014 IEEE/WIC/ACM International Joint Conferences on Web Intelligence (WI) and Intelligent Agent Technologies (IAT)978-1-4799-4143-8/14 $31.00 © 2014 IEEE DOI 10.1109/WI-IAT.2014.11  
132 illustrates how the marketplace’s services are described. Section 3 presents the proposed MADONA methodology. Section 4 introduces MADONA’s architecture. We describe the implementation and evaluate our work in section 5. Section 6 describes the work related to existing cloud software development approaches. Section 7 draws final conclusions and describes our future work.

**[2] Imelda Irakoze, “Cloud-based Mobile Application”, 16th May 2013**

The goal of this project was to use cloud computing to improve the  
computing ability of mobile devices. Processing power, storage capacity, battery  
lifetime, and display size present a concern for developers when creating  
applications for mobile devices. In addition to this, with all the diverse types of  
smartphone operating systems on the market today, a need arises for a way to  
create cross-platform applications and cloud computing offers a solution to that.  
Cloud computing is emerging as a dominant computing platform for providing  
scalable services to a global client base. Therefore, a cloud computing platform was  
used to develop a mobile application that supports cloud-based services. Eclipse was  
used as a development environment for the Android application, and as Eclipse  
offers a Google plugin, it was also used to deploy the application to Google App  
Engine. Once the development environment was fully configured, it allowed the  
creation and deployment of a mobile application: My Notes to the Google App Engine cloud.  
The results showed that cloud computing could be used as a backend to take some  
workload off the mobile device. However, My Notes app only characterizes certain  
tasks such as storing, retrieving, and deleting taken notes. In the future, it would be  
useful to test and investigate how a task that requires large computations from the  
mobile devices or tasks that are not even possible to be performed on mobile devices, would use the cloud services to benefit mobile phone users.

**[3] Stanley Ewenike, Elhadj Benkhelifa and Claude Chi Belushi, “Cloud Based Collaborative Software Development”**

Cloud computing is a technology trend that is changing the IT landscape and changing collaboration [3]. One of its most notable advantage lies in its adaptability to varying contexts of use, its extensibility, as well as, the numerous possibilities and opportunities it presents for all stakeholders to collaborate [37]. However, not unlike most emerging paradigms, mixed  
feelings trail adoption of the Cloud [4], [5], [38]. For collaborative software development, the benefits include, but are not limited to, cost savings, scalability, agility for business and development peak period needs, motivation for innovation and increased R&D [29]. On the other hand, there are fears about: security issues; vendor lock-in and interoperability  
issues, portability issues; automation, performance issues; availability issues; handling uncertainty about: heterogeneity and content type, location of client, bandwidth unpredictability, dynamic workload variations, workflow schedules, architecture and resource optimization; availability and integrity of relevant information within participating teams and systems; context awareness and reproducibility within contexts; amongst others [27], [37], [39]. Some of these challenges and issues listed here are partly inherited since Cloud Computing itself, is a paradigm that leverages a couple of other technologies [40]