

# Extending Social Networks with Service Delivery Capabilities for User-Centric Service

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**Abstract** - According to the latest research results, service trading and execution platforms promote automated discovery, composition, contracting and adaptive execution of web services. This vision has not yet arrived in the business sector which is still dominated by manual services listed in person or company profiles in traditional business service directories and social networks. A combination of features from both sides yields powerful, user-centric service trading platforms.

**Keywords** - SOA, Internet of Services, Social Networks, SaaS.

## I. INTRODUCTION

Social network sites on the web are popular means to express personal and professional relationships among people and companies [1]. They are especially popular with custom service providers like freelancers and consultants, but less commonly used for traditional service branches, for which registration with service directories is the preferred means to reach potential customers. The separation of approaches is unfortunate as it leaves an unused opportunity to achieve a continuous service search and usage process. A combination would bring the ability to offer and deliver a wider range of automatic and hybrid services through a common user interface. In this article we would like to present a concept for the extension of a social networking site with service delivery capabilities.

## II. SCOPE OF SERVICES AND SOCIAL NETWORKS

We consider a concept constrained by certain informal models for the roles of the involved people and the types of services to trade. Three roles can be distinguished: Service providers, service consumers and service platform operators. Any social network user shall have the ability to offer or consume services, while the operator privilege needs to be assigned explicitly by existing trusted operators. Services are deployed as packages, which in turn may be downloaded again to facilitate service sharing. Each service is owned by the provider and can be updated only by this person. The ownership attribute makes it possible to display the list of offered service for each person. Similarly, the list of used services is displayed based on short-term usage and long-term contracting relationships. Thus, each person in the social network may simultaneously act as provider and consumer.

Regarding the scope of social networks and other service brokering options, we consider a functionality commonly found in both business-oriented social networking sites and traditional service directories.

## III. IMPLEMENTATION

The service delivery functionality has been realised with a custom installation of the TECJIA Service Platform [2]. This modular service-oriented middleware offers platform services for service provisioning, discovery, contracting, execution, monitoring and adaptation. Its main focus is service delivery in open environments such as the Internet of Services with inherently implied heterogeneity of service implementation and description technologies.

While most of the platform functionality is properly separated from individual web-based interface services and each such interface can be styled individually through CSS, it would cause a lot of work. Thus, the proper solution is creating an additional unified user interface on top of the functional platform services. Among the available frameworks to construct social network sites, "Noosfero" was chosen to be the most suitable one as it already includes the ability to let registered users create virtual organizations to offer products. However, a number of extensions to Noosfero were required to achieve a seamless integration between the social network software and the service platform, such as service platform integration, style, internationalization georeferencing and additional integration aspects such as regular provider and consumer notifications about violated SLAs during the service execution.

## III. CONCLUSION AND FUTURE WORK

The combination of social networks with service delivery platforms has been proposed, explained and achieved through an integration of two existing software projects. The creation of a service community has thus become possible. Based on this work, we plan to actually launch a service community to evaluate the feasibility of medium-scale service hosting in open environments. We also intend to integrate user interface services and client delivery options in order to increase the attractiveness of the portal.

## REFERENCES

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