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Consultant-as-a-Service: A Semantic-Driven and Interactive Approach to Mobile Decision Support Services

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This paper introduces a new approach to service sophistication where the users with no prior knowledge about a public domain's list of services can conveniently and effectively use those services in companion with complementary utility services. Such a decision support service utilizes techniques from semantic analysis that are orchestrated through a new cloud-based concept namely "Consultant-as-a-service" that coaches the user to select the desired organization's business services and seamlessly connect them with the proper third-party applications (e.g., map, search engine, calendar, email, voice, video) in the user's mobile device (smart phone or tablet). The proposed consultant service utilizes a domain-dependant database of search trees to interact with the user and gradually collect the user's context through a set of guided questions. The populated user context will allow the consultant service to suggest the services with maximal match with the user's accumulated context. The consultant service also uses concept lattice analysis to provide service recommendations to the user based on the knowledgeable of the preferred services by the current and previous customers of the organization. Such smart decision services can be provided for a variety of strategic business domains such as: banking, insurance, government, healthcare, and on-line shopping. A prototype application has been developed using Xcode IDE which runs on the iPhone mobile device.

Keywords: Consultant service; Cloud; Semantic analysis; Context driven; Decision support service; Mobile services.

1. Introduction

Most large organizations world-wide are equipped with a variety of services for their clients, which are considered as effective means to offer their services to the current clients and to attract new clients. While extensive efforts and budgets have been invested to develop long lists of sophisticated business services, the effective and