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## SEMANTIC SERVICE ALIGNMENT USING CONCEPT DESCRIPTION REFINEMENT

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**ABSTRACT.** Due to the heterogeneity of the semantic web, the integration of client applications and services using slightly different ontologies is a major challenge, shown by the significant research effort directed towards aligning ontologies and identifying matching concepts. A novel method for service selection by matching a query with services, represented by input and output parameters and a description, is presented. The query matching relies on a concept translation and mapping using bridge rules and by replacing a concept by an equivalent representation, a bag of concepts. By translating a concept description between ontologies we obtain the equivalent representation of the same concept using terms from the other ontology, used later to determine the mapped concept or verify existing mappings.