# Demonstration of Web Services Configuration

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## 1. Introduction

Web service composition can provide a value-chain between customers and suppliers. The increasing number of services, and thus possible combinations, demands the development of dynamic and automatic techniques for their composition. Current commercial solutions are limited and are primarily static and manual. Automation requires reasoning about (semantic descriptions of) the services. In this demonstration we present our initial work [2] involving the semantic description of Web services using DAML-S [3] and how our Agent Factory [1] has used these descriptions in its design process to derive a Web service configuration.

## 2. Web Service configuration

*Web Services* are defined by the Stencil group as "loosely coupled, reusable software components that semantically encapsulate discrete functionality and are distributed and programmatically accessible over standard Internet protocols". The definition captures the self-contained, modular, composable and distributed nature of WSs. *DAML-S* is a DAML+OIL ontology conceptually divided into three sub-ontologies for specifying what a service *does,* how the service *works,* how the service is *implemented*. The *Agent Factory* has been developed as a servicing facility for automated re-design of software agents. The design process within the Agent Factory is one of configuration. This demonstration is configuring web-services described in DAML-S by an Agent Factory.

## 3. Demonstration

In [2] WS configuration is performed by the Agent Factory. Instead of agent components the Agent Factory configures WSs. The Agent Factory bases configuration on a template or design pattern, explicitly reasoning about requirements, the design process and the design artefact. The full paper [2] specifies a design trace of a configuration process in which existing web-services are combined. The DAML-S descriptions are the basis for the configuration process of which the resulting configuration is depicted in Figure 1.

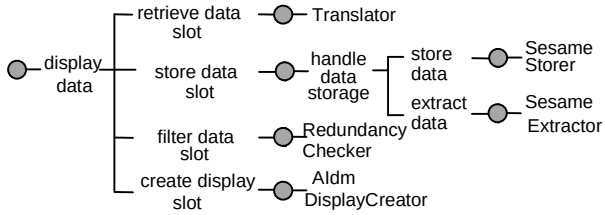


**Figure 1. Resulting configuration of conceptual building blocks of WSs.**

This demonstration features the prototype of this configuration process, supporting the work presented in [2].

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## References

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