



Project Number: **215219**  
 Project Acronym: **SOA4ALL**  
 Project Title: **Service Oriented Architectures for All**  
 Instrument: **Integrated Project**  
 Thematic Priority: **Information and Communication Technologies**

# Prototype Installation Documentation

## Task 9.4: C2C eCommerce Prototype

### D9.4.3 OpenData/Mobile Prototype

<b>Activity:</b>	Activity 3 – Use Case Activities
<b>Work Package:</b>	WP 9 – C2C Service eCommerce
<b>Due Date:</b>	M36
<b>Submission Date:</b>	22/02/2011
<b>Start Date of Project:</b>	01/03/2008
<b>Duration of Project:</b>	36 Months
<b>Organisation Responsible of Deliverable:</b>	TIE
<b>Revision:</b>	1.0
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<b>Project co-funded by the European Commission within the Seventh Framework Programme (2007-2013)</b>		
<b>Dissemination Level</b>		
<b>PU</b>	Public	<b>X</b>

## Version History

<b>Version</b>	<b>Date</b>	<b>Comments, Changes, Status</b>	<b>Authors, contributors, reviewers</b>
1.0	22/02/2011	Release Version	All

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## Executive summary

This deliverable will provide a prototype implementation showing how external information from the linked open data (LOD) principle can be integrated and used in combination with SOA4All and the wide applicability of the SOA4All project results in the mobile domain.

For providing a real world use case, a mobile application in the real estate domain was created allowing iPhone users to query localized information by invoking a range of services via the SOA4All infrastructure. Information can be combined with local information from LOD such as UK crime rates or school and neighbourhood information.

This document describes the software implementation of the first official prototype of the SOA4ALL subproject SOA4RE, the SOA4RealEstate iPhone app. The software is being distributed via the Apple App Store, which is meant as the single point of distribution of iOS software and is common sense for iPhone users as the installation procedure doesn't require any user interaction. The document does not aim in providing a detailed explanation of the usage. Instead of this, the software was designed to be fully intuitive. This document only gives a brief overview about how to launch the application and about the system requirements. Because of this, the document is kept as short as possible.

# 1. Introduction

## 1.1 Purpose and Scope

In order to show the value that can be generated from SOA4ALL, a simple use-case for the possibilities of the platform was intended to be delivered by this project. As many smartphone-platforms and especially the Apple iPhone pose very popular platforms for software developers, SOA4ALL is used from a smartphone client app named SOA4RealEstate as a simple use case to combine multiple web-services annotated for SOA4ALL in software for end-users to find real estate properties in Great Britain.

The main benefit of using SOA4ALL is that services that might offer interesting information can easily be discovered and incorporated dynamically to make more information available to the user that might influence his decision which real estate properties are more interesting to him based on available data like the data.gov.uk initiative or completely different services. For example, a user might want to buy a property in a crime free area based on the schools in the area that fit the needs of his children.

## 1.2 Structure of the document

The rest of this document is structured as follows:

- Section 2 is describing the purpose and involvement of SOA4All
- Section 3 is covering the system requirements of the prototype
- Section 4 is covering the setup (installation) of the software
- Section 5 is briefly describing how to use the prototype.

Please note that this document is kept as short as possible on purpose. Its only purpose is to guide readers though the installation of the prototype.

## 2. Purpose and Involvement of SOA4All

The application targets the following:

1. Firstly, the iPhone app acts as a **proof-of-concept**, showing that the SOA4All concepts and the SOA4All prototype developments of WP1-6 **can be applied to a mobile environments**
2. Secondly, the prototype gives a **guideline for developers**. Since the prototype code is **published under open source**, developers can download it and see how they can use SOA4All in iPhone apps. They can modify the code and develop own mobile applications on top of SOA4All.

Within the prototype, users will not notice that SOA4All components are acting in the background. Within the prototype, the following SOA4All components are used:

- **Service Annotation & iServe**
  - For annotating restful and SOAP based services and publishing them in iServe
- **Service Discovery**
  - For finding location based services automatically
  - For wrapping service descriptions into XML for better consumption on iPhone side
  - Dynamic creation of forms on top on the discovery results (beta, exploitable)
- **Services and data stores**
  - Coming from e.g. UK Open Data Initiatives, e.g. Police Stations, Nestoria, Schools, Bus Stations, Train Stations...
- **Service Execution**
  - After typing in all data
  - At the moment: one-by-one
  - Future: Asynchronous

## 3. Requirements & Preparations

### 3.1 For Users

Users can easily install the software on their Apple iPhone, iPod Touch or iPad if they have installed the iOS 4.2 release, if any older operating system is used on the device, the device needs to be updated by connecting it to the paired computer which will automatically open iTunes and prompt the user for the update of the iOS software.

### 3.2 For Developers

The SOA4ALL tools are web-based and can be used with any modern browser like Firefox 3.6 or Chrome. The annotations of webservices can be made using the iServe Browser on <http://iserve.kmi.open.ac.uk/browser.html> - but this process is not subject of this document. All other tools and further documentation can be found under <http://www.soa4all.eu/tools.html> .

## 4. Installation (Deployment)

When a user has at least the version 4.2 of the iOS software, he can download the software from the App Store - application (see fig. 1), that is used for all software installation on the device. Installation of the prototype is very easy.



Figure 1: The iOS App Store icon

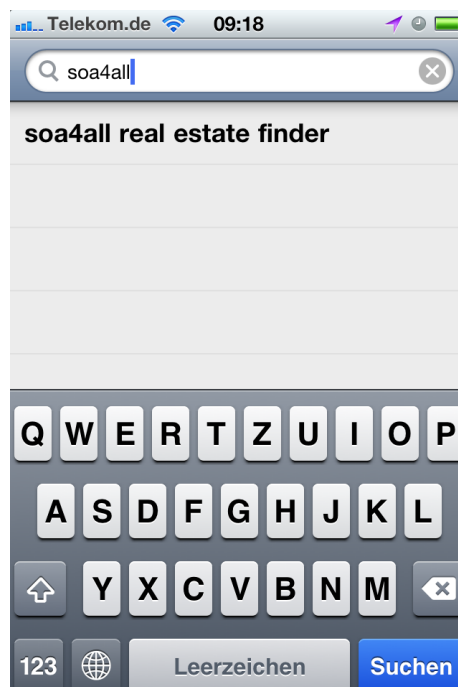


Figure 2: Search bar inside the App Store

After opening the application, the user needs to tap on the “search” icon and then enter soa4all in the search bar. When the name of the software “soa4all real estate finder” appears, tap on that (see fig. 2). An entry in a list appears, tap on that (see fig. 3).



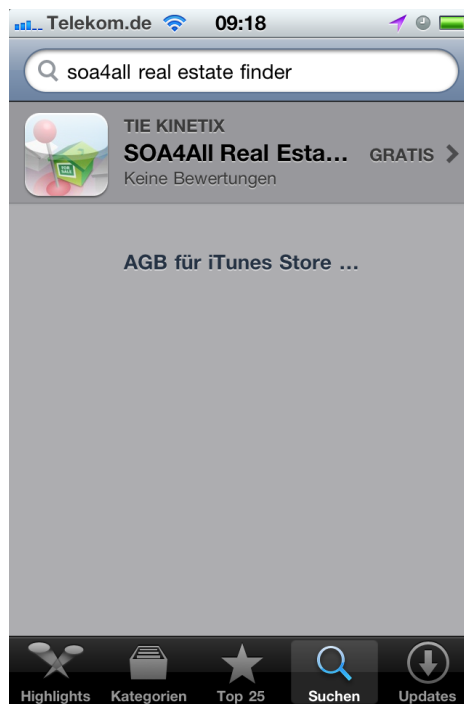


Figure 3: The application is found with the search term soa4all

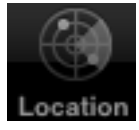





Figure 4: Tap on "install" to install the app

The detail view of the application opens, and you need to install it by tapping on the “install” button at the top right hand (see fig. 4). The application then is installed to the device.

## 5. Execution

The usage of the application can be split into four different steps:

	1. User starts app on his iPhone and selects a location
	2. User enters criteria, e.g. looking for a house with 5 rooms
	3. User refines search with location based criteria, e.g. Looking for a house in a low crime area of London with a bus stop located in the neighborhood
	4. User gets combined results and explores them on a map

Tap on the application icon to launch the application (see fig. 5).

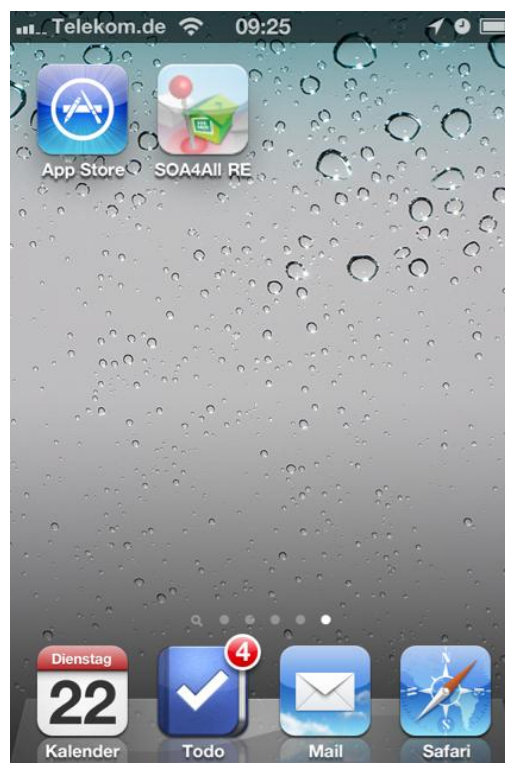


Figure 5: Tap on the icon to execute the app

When the application launches, you are presented the tabbed user interface and start on the first tab, labelled “location”. On this tab, you can touch and hold the red pin to define where to look for real estate properties and use the top number-selector to define a radius in kilometres.



Figure 6: Screenshots of the search specification

On the second tab (labelled “Search Criteria”), you can define the parameters for the real estate object to search, like minimum price, maximum price or the minimum number of bathrooms and bedrooms.

The third tab (labelled “Services”) contains all services that have been annotated as useful for this application. If a service is turned on with its switch-control, the app will try to include the results of this service into the final view.

This final view is on the fourth tab labelled “results”. On this map you will see all real estate objects that fall into the criteria you have chosen, and all additional information that can be gathered from the services you activated.



Figure 6: Screenshots of the services and the results tabs