

SOAP4ooRexx

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Alexander Seik

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Web Services – Why?

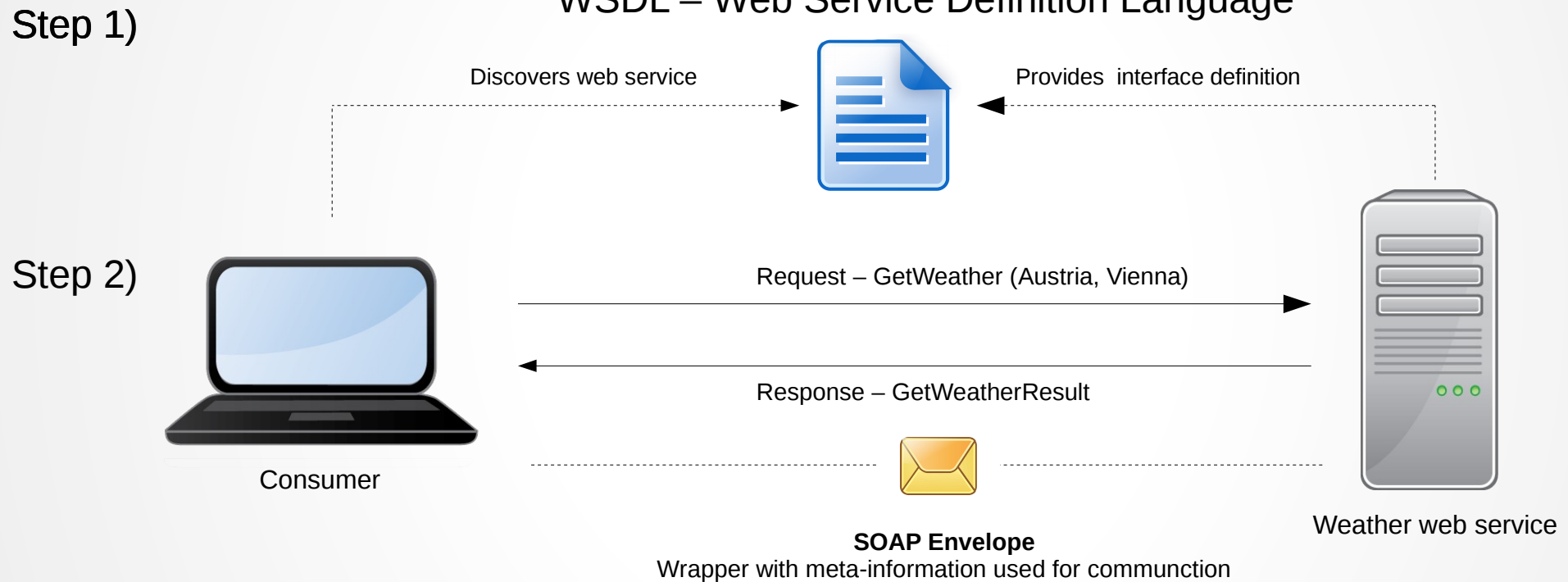
- Make you applications richer
 - New possibilities
- Faster development with: existing components on the web
- A standardized way
- Platform independent

SOAP – A short briefing

- SOAP – Simple Object Access Protocol
... but not as simple as it sounds!
- Standardized protocol for communication between web services and consumers
- XML – based
- Mostly over HTTP/HTTPS
- Current version: 1.2
- W3C Standard

SOAP by example

Weather web service:



WSDL

- WSDL – Web Service Definition Language
- XML-based
- Contains definitions e.g.:
 - Web service address
 - Communication Protocol
 - Methods and Parameters

SOAP Envelope

GetWeather – Request envelope

```
<?xml version="1.0" encoding="utf-8"?>
<soap12:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  xmlns:soap12="http://www.w3.org/2003/05/soap-envelope">
  <soap12:Body>
    <GetWeather xmlns="http://www.webserviceX.NET">
      <CityName>Vienna</CityName>
      <CountryName>Austria</CountryName>
    </GetWeather>
  </soap12:Body>
</soap12:Envelope>
```



Method call

- Envelope gives meta information like: SOAP Version
- Structure of envelope depends on the web service definition

SOAP4ooRexx – Lets start

.SOAPServiceProxy – Class

WSDL Location



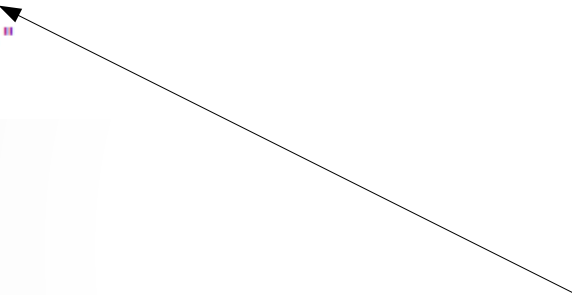
```
soapServiceProxy = .SOAPServiceProxy~new("http://www.websvicex.net/globalweather.asmx?WSDL")  
  
::requires "SOAP4ooRexx.cls"
```



SOAP4ooRexx Class Package

SOAP4ooRexx - Report

```
soapServiceProxy = .SOAPServiceProxy~new("http://www.websvicex.net/globalweather.asmx?WSDL")  
soapServiceProxy~report()  
  
::requires "SOAP4ooRexx.cls"
```



Generates HTML report of the whole WSDL
Easier to read and sample code is included

SOAP4ooRexx – How to

```
soapServiceProxy = .SOAPServiceProxy~new("http://www.webservices.net/globalweather.asmx?WSDL")
soapService = soapServiceProxy~serviceByName("GlobalWeather")
GetWeather = soapService~soap.createOMEElement("GetWeather")
CityName = soapService~soap.createOMEElement("CityName")
CityName~om.setText("Wien")
GetWeather~om.addChild(CityName)
CountryName = soapService~soap.createOMEElement("CountryName")
CountryName~om.setText("Austria")
GetWeather~om.addChild(CountryName)
resultObject = soapService~soap.sendSOAPRequest("GetWeather", GetWeather)
say resultObject~GetWeatherResult
::requires "SOAP4ooRexx.cls"
```

Select web service

Object Model: Method and Parameters

Send request to web service

say the result

SOAP4ooRexx – Shortcut

```
soapServiceProxy = .SOAPServiceProxy~new("http://www.websvicex.net/globalweather.asmx?WSDL")
soapService = soapServiceProxy~defaultService()

resultObject = soapService~getWeather("Wien","Austria")

say resultObject~GetWeatherResult
::requires "SOAP4ooRexx.cls"
```

Short Version, useful when the service complexity is not high

Demonstration

SOAP4ooRexx

- SOAP4ooRexx a generic client for consuming SOAP 1.2 based web services
- Written in ooRexx and Java
- Requires: ooRexx, BSF4ooRexx and Java
- Project status: Work in progress
- Version: 1.0 Beta
- Based on Apache Axis2

Outlook

Questions?