



IcSOC- Trento 2003

# An architectural pattern to extend the interaction model between Web-services

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<http://iaaa.cps.unizar.es>

Department of Computer Science and Systems Engineering



```
<meta name="HTTP-EQUIV"
  content="text/html; charset=iso-8859-1" >
  </meta >
  <meta name="Headline" content="Introduction" >
  <meta alt="IAAA" coords="7,9,167,32"
  <meta name="Section" content="Diseño_Gráfico" >
  <meta name="banner"
  <meta name="Description" content="Some enterprises
  re-engineering, let's take over." >
  <meta name="map"
  <meta name="description" content="Some enterprises
  re-engineering, let's take over." >
  <meta name="introduction" content="Diseño_Gráfico" >
  <meta name="AAA" coords="7,9,167,32"
  <meta name="iaaa"
  <meta name="HTTP-EQUIV"
  </meta >
```





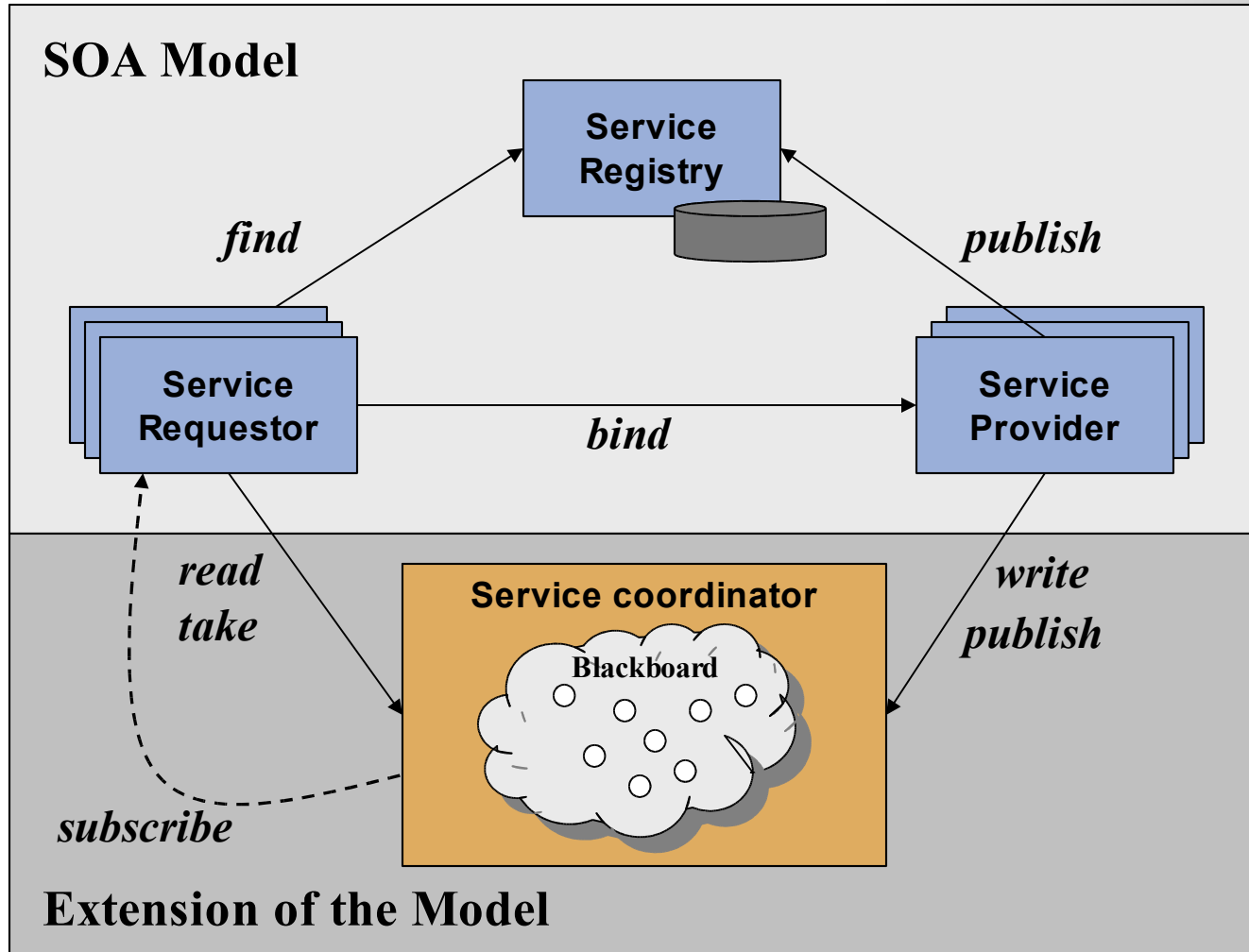
# Motivation

- ❑ **Integration of software applications using traditional DCP**
- ❑ **Internet as a standard middleware**
  - ❖ **Interoperability and portability between products**
  - ❖ **Ubiquitous and standard Web protocols and data formats, such as HTTP, XML and SOAP**
- ❑ **Web-service approach is the most promising way to facilitate application integration through Internet**





# An extension of the SOA model



```

<meta name="HTTP-EQUIV"
content="refresh=1;url=http://www.ibm.com/press/eng/infocent/infocent.nsf/00000000-00000000-00000000-00000000?open" />
<meta name="Headline" content="IBM: A new era of engineering, let's take over." />
<meta name="Section" content="Disruptive Innovation" />
<meta name="Description" content="Some enterprises need an image urgent re-engineering, let's take over." />
<!-- GENMaps -->
<map name="GMap"
href="http://iaa.iris.com/eng/infocent/infocent.nsf/00000000-00000000-00000000-00000000?open" />
</map>

```





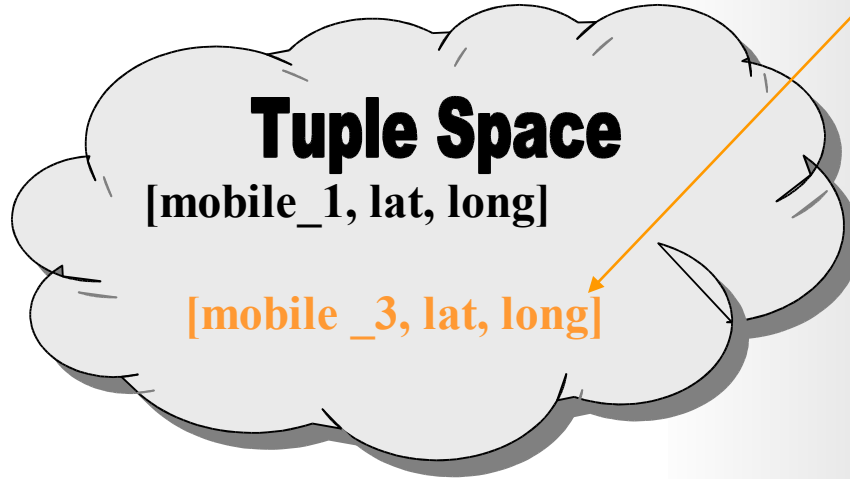
# The Linda model

## Generative Communication

Client

Write [mobile\_3, lat, long]

Client



Client

Client

```

<meta name="HTTP-EQUIV"
content="refresh=1800" />
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map" />
</pre>

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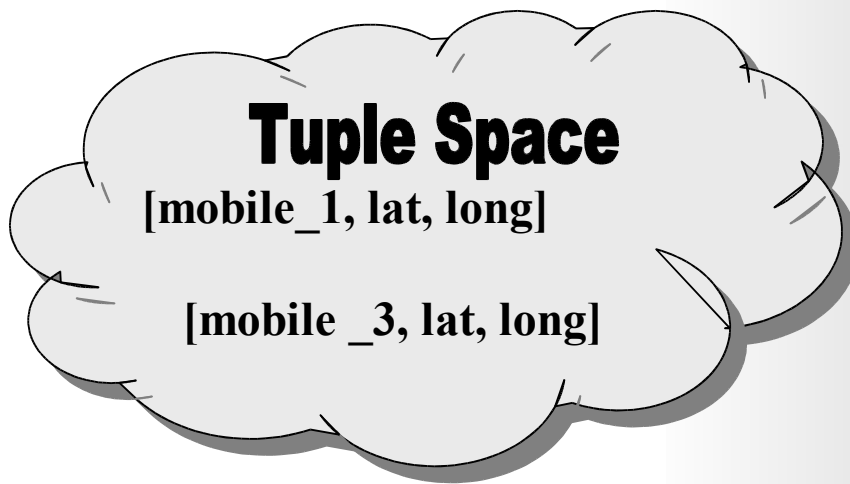




# The Linda model

## Generative Communication

Client



Client

Client

[mobile\_3, lat, long]

Client

```

<meta name="HTTP-EQUIV"
content="refresh=1800" />
<meta r
<meta r
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<!-- GE
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<meta r
<meta r
<map n
"CC" 16' 6" sp:000,"AAA" cono="167,32"
content="text/html; charset=iso-8859-1"
href="http://iaa/index.html/4" />
<!-- GENMaps -->
<meta name="Section" content=
<meta name="Description" cont
<!-- GENMaps -->
n" content="Some enterprises
content="Diseno_Gaico
<map name="GMap"
area alt="IAA"
href="http://iaa.ir65880.com/
map

```















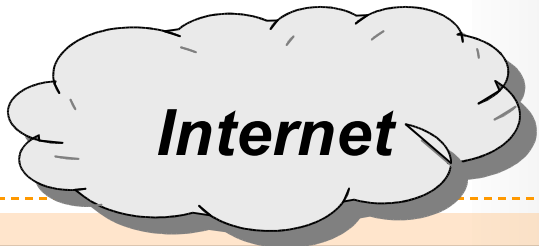
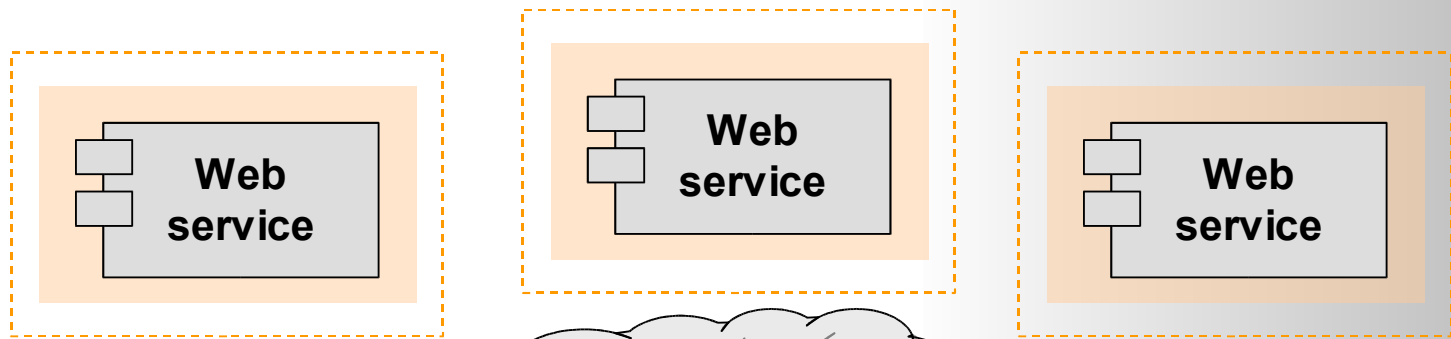




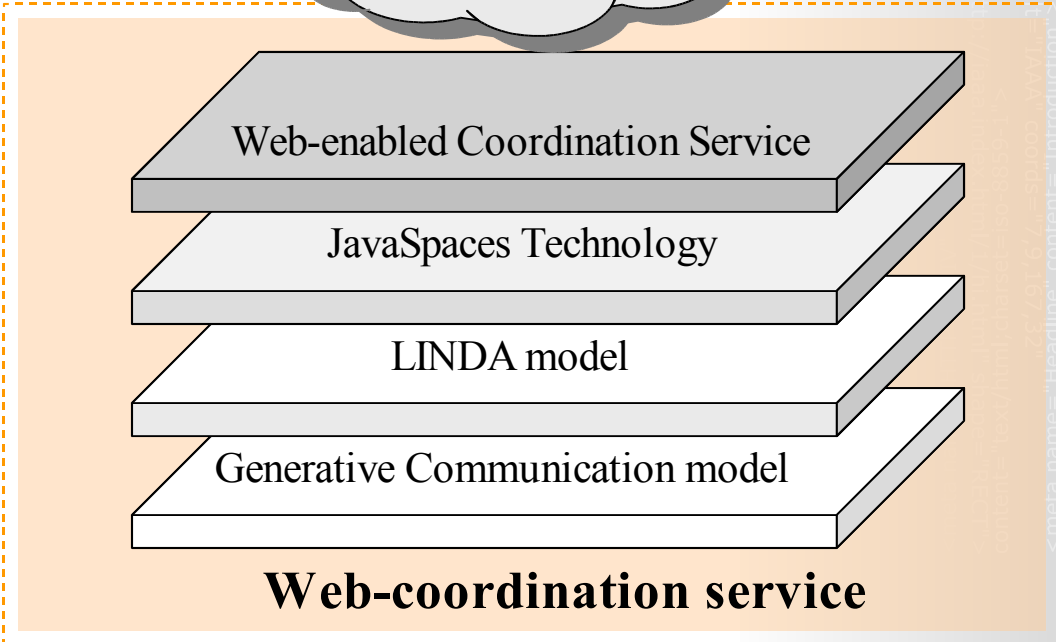




# Web-Coordination service



**HTTP + XML**

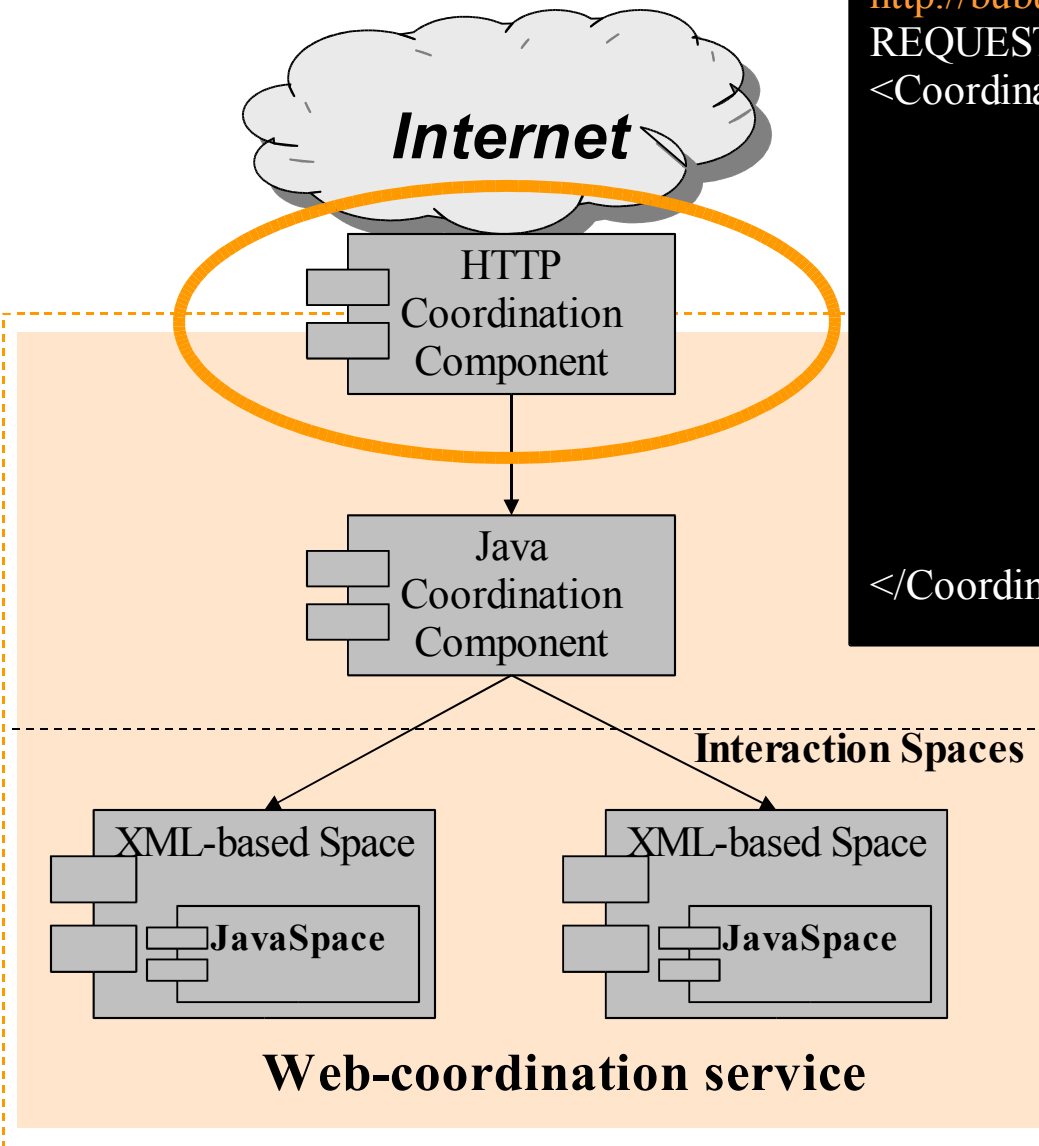


```

<meta name="HTTP-EQUIV"
content="refresh=1;url=http://www.ibm.com/pressroom/pressroom.nsf/00000000-0000-0000-0000-000000000000?open" />
<meta name="Headline" content="IBM's new 're-engineering' let's take over." />
<meta name="Description" content="Some enterprises need an image urgent re-engineering, let's take over." />
<!--GENMAPS-->
<meta name="Section" content="Diseño_Gráfico" />
<map name="Diseño_Gráfico"
<!--GENMAPS-->
<meta name="Section" content="Diseño_Gráfico" />
<meta name="Description" content="Some enterprises need an image urgent re-engineering, let's take over." />
<!--GENMAPS-->
<meta name="Section" content="Diseño_Gráfico" />
<map name="Diseño_Gráfico"

```

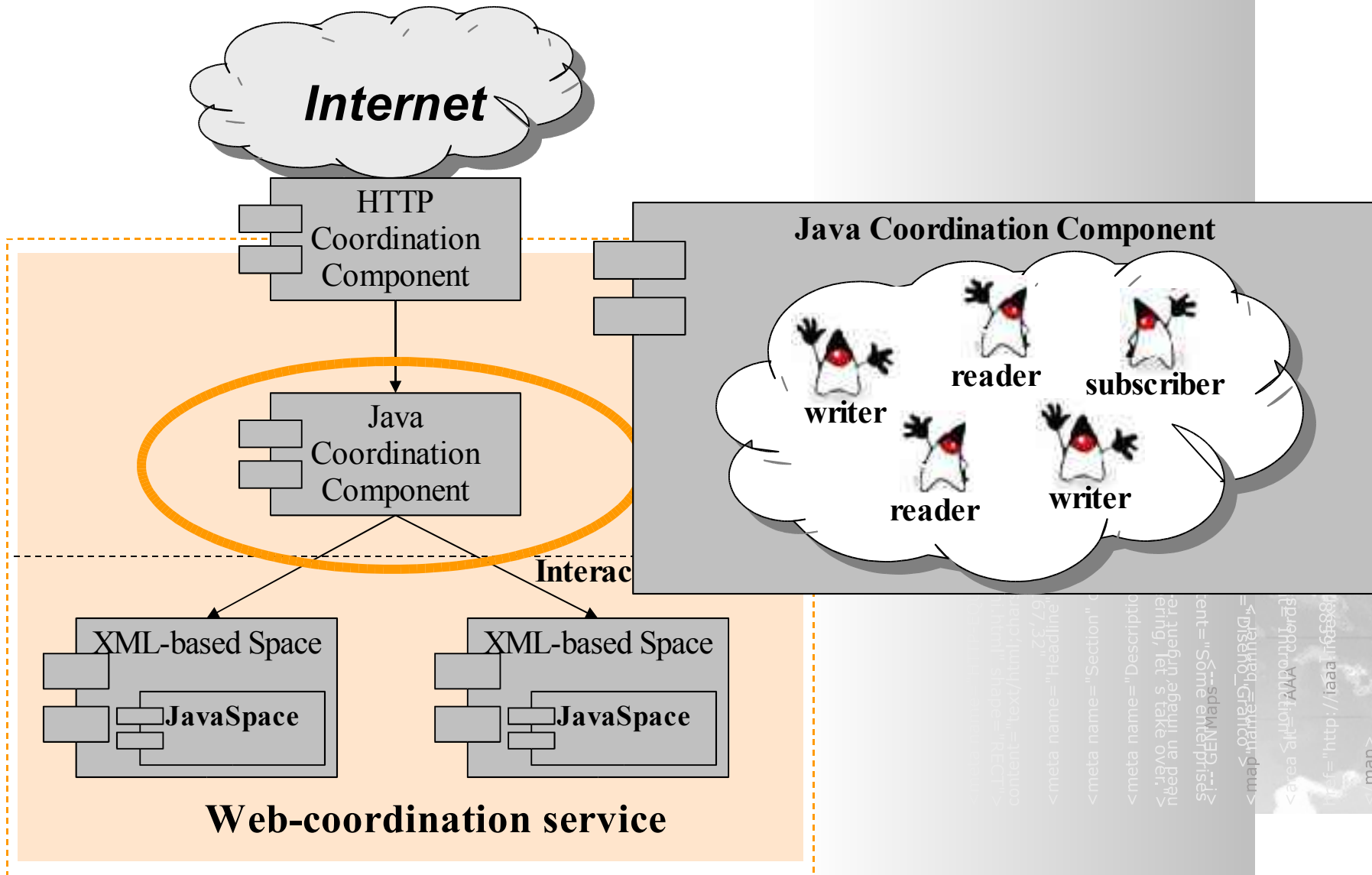
# Web-Coordination service



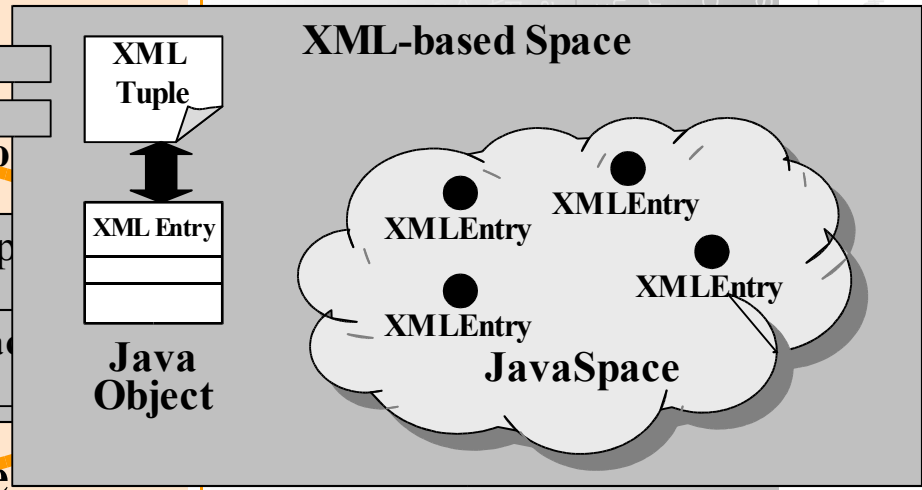
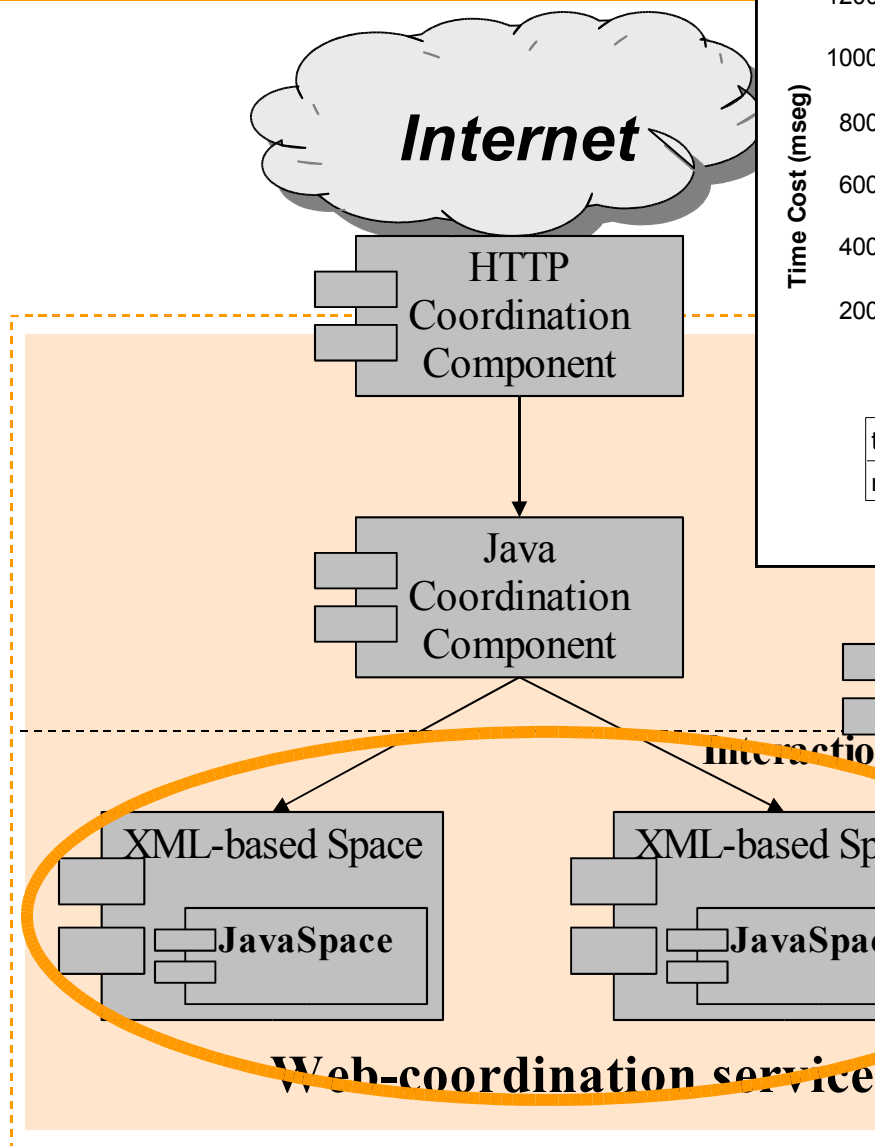
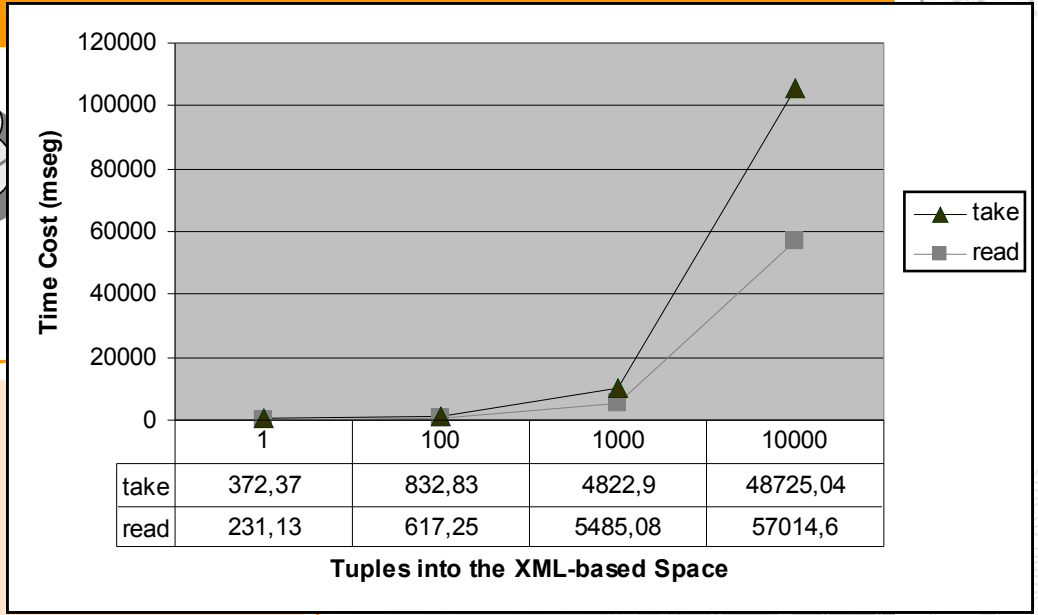
```

http://bubu.cps.unizar.es/CoordinationServlet?
REQUEST=<?xml version="1.0"?>
<CoordinationService>
  <operation>write</operation>
  <tuple>
    <Location>
      <id> vehiculo1 </id>
      <lat> 41.4323 </lat>
      <long> 0.8323 </long>
    </Location>
  </tuple>
</CoordinationService>
  
```

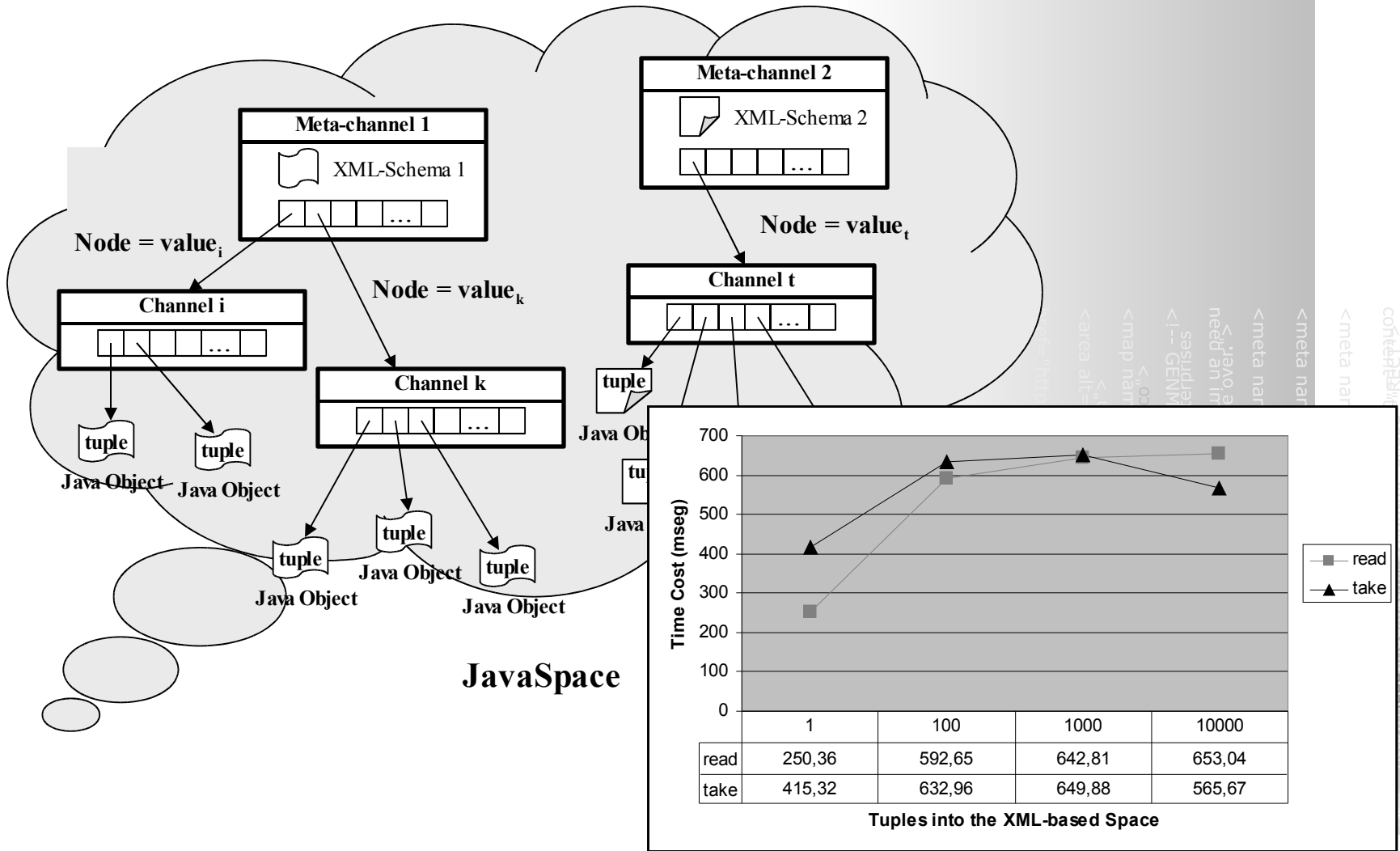
# Web-Coordination service



# Web-Coordination service



# Optimizing the XML-Space









# Future work

- ❑ To discover the real potential of the XML language to express synchronization restrictions and workflows among services
- ❑ To improve the matching functions of the coordination space to support semantic interoperability

```
<meta name="HTTP-EQUIV" content="text/html; charset=iso-8859-1" />  
<meta name="Headline" content="Introducción" />  
<meta name="Section" content="Diseño_Gráfico" />  
<meta name="Description" content="Some enterprising  
engineers have made urgent re-engineering, let's take over." />  
<!-- GENMAPS -->  
<meta name="Section" content="Diseño_Gráfico" />  
<map data-bbox="100 100 900 900" />
```





[alvaper@unizar.es](mailto:alvaper@unizar.es)

```
<meta name="HTTP-EQUIV"
content="text/html; charset=iso-8859-1" >
<meta name="Headline" content="Introduction">
<meta name="Description" content="D&Otilde;a G&Otilde;ficio">
<meta name="Description" content="Some enterprises
need an image urgent re-in&Otilde;eneering, let's take over.">
<!-- GENMAPS-->
<meta name="Description" content="Some enterprises
need an image urgent re-in&Otilde;eneering, let's take over.">
<area id="Image" coords="7,0,67,73" href="http://www.unizar.es/iaaa/iaaa.html" shape="RECT">
</map>
```