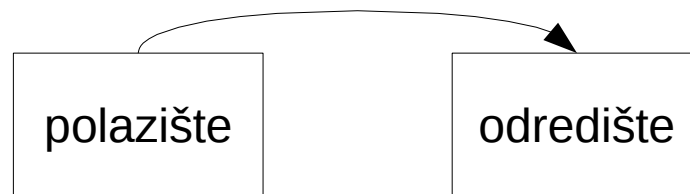


**XLink**

# Šta je XLink

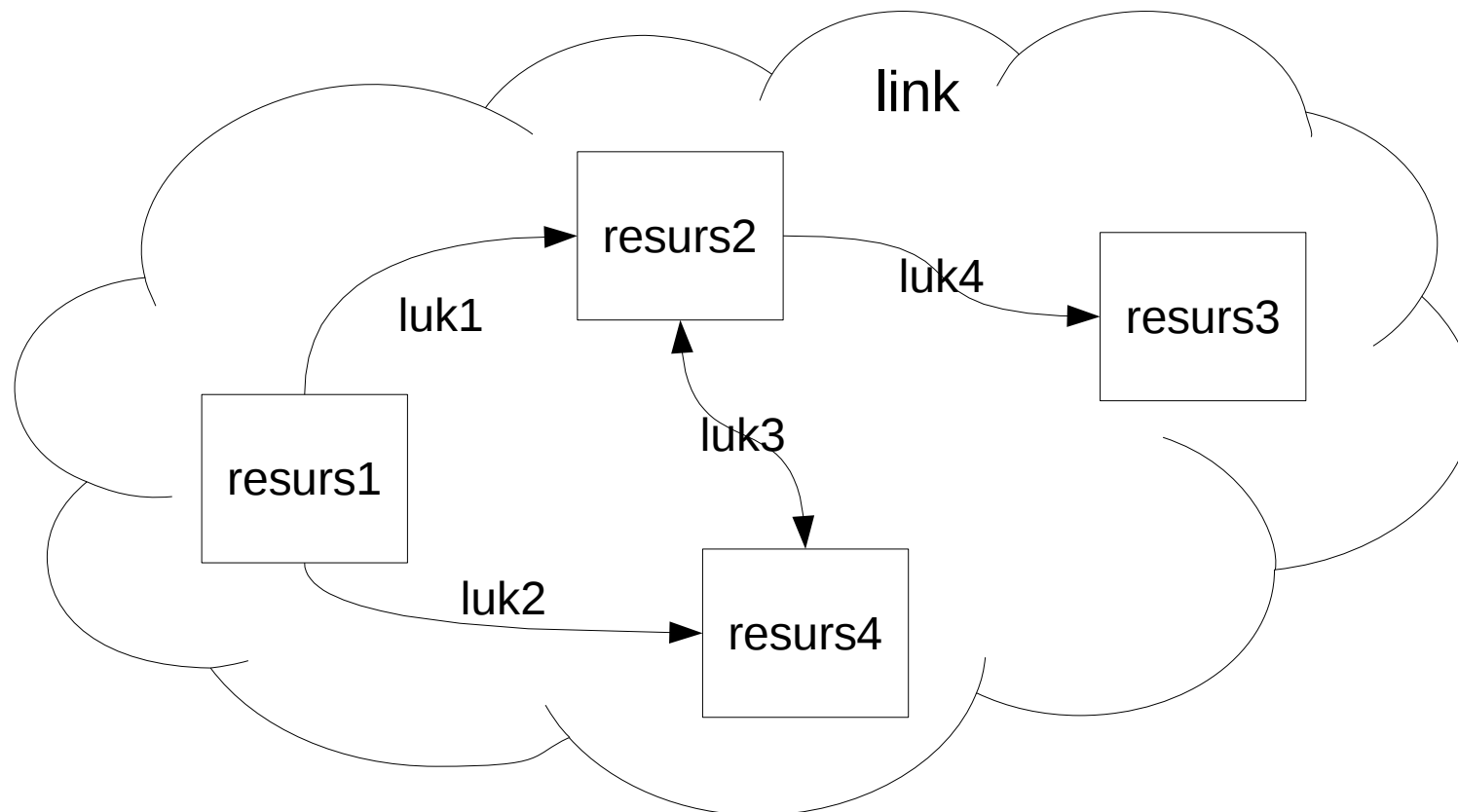
---

- jezik za definisanje linkova između (delova) dokumenata
- pojam linka je opštiji nego u HTML-u
  - HTML link povezuje dva resursa jednom *usmerenom* granom
    - polazište
    - odredište
  - link je uvek smešten u polazištu



# XLink link

- link povezuje dva ili više resursa
- resurs je identifikovan URI-jem
- link ima jedan ili više lukova



# XLink link

---

- gde je smešten link?
  - u nekom od resursa koji učestvuju u linku
  - negde drugde
- HTML: link je uvek definisan u polazišnom resursu jedinog luka
  - HTML link je jednostavna varijanta XLink linka

# XLink link

---

- definisanje linka
  - za definisanje linka koriste se globalni atributi definisani u `http://www.w3.org/1999/xlink`
  - uobičajeni prefiks u XML dokumentima za ovaj namespace je `xlink`
  - ne postoje posebni elementi za definisanje linka, svaki element iz nekog dokumenta može poslužiti toj svrsi

# XLink link

---

- atributi linka
  - `xlink:type` - tip linka
  - `xlink:href` - URI resursa
  - `xlink:role` - mašinski čitljiv opis uloge resursa
  - `xlink:title` - ljudski čitljiv opis uloge resursa
  - `xlink:show` - kako će resurs biti prikazan kada se dobavi
  - `xlink:actuate` - kada će resurs biti dobavljen
  - `xlink:from` - polazište linka
  - `xlink:to` - odredište linka

# xlink:type

---

- `xlink:type` je obavezan atribut u elementu koji definiše link
- opisuje ulogu elementa koji ga sadrži u samom linku
- od njegove vrednosti zavisi koji drugi atributi će biti prisutni
- šest mogućih vrednosti
  - `simple`
  - `extended`
  - `locator`
  - `arc`
  - `resource`
  - `title`

# xlink:href

---

- `xlink:href` sadrži adresu resursa koji učestvuje u linku
- adresa je u URI obliku
- primer  
`<myElement xlink:href="http://www.ftn.ns.ac.yu/">`



# xlink:role i xlink:title

---

- `xlink:role` predstavlja mašinski čitljiv opis uloge resursa u linku
- `xlink:title` predstavlja tekstualni opis prilagođen čoveku

- primer

```
<element xmlns:name="http://www.ftn.ns.ac.yu/name"
  xlink:type="simple"
  xlink:href="http://www.somewhere.com"
  xlink:role="name:first"
  xlink:title="Retrieve first name">
```

Click here!

```
</element>
```

# xlink:actuate i xlink:show

---

- `xlink:actuate` navodi kada će resurs biti dobavljen
  - `onLoad` - resurs se dobavlja čim se dokument (koji sadrži link) učitava
  - `onRequest` - resurs se dobavlja kada korisnik to zatraži
  - `undefined` - aplikacija može da ga tretira kako hoće
  - možemo definisati sopstvene vrednosti u QName obliku, npr. `ftn:EveryFiveMinutes` (`ftn` je prefiks za neki namespace)

# xlink:show

---

- `xlink:show` opisuje kako će se resurs prikazati kada se učitaa
  - `new` - biće prikazan u novom prozoru
  - `replace` - biće prikazan u prozoru u kome je link aktiviran
  - `embed` - biće prikazan u polaznom dokumentu na mestu linka
  - `undefined` - aplikacija može da ga tretira kako hoće
  - možemo definisati sopstvene vrednosti u QName obliku
- primer

```
<JobList xlink:type="simple"
          xlink:show="replace"
          xlink:actuate="onRequest"/>
```

# xlink:from i xlink:to

---

- `xlink:from` i `xlink:to` definišu luk
- njihova vrednost je jednaka vrednosti atributa `role` na mestu gde se definiše resurs

# Vrste linkova

---

- XLink poznaje dve vrste linkova
  - simple
    - povezuje dva resursa jednim jednosmernim lukom
  - extended
    - opšti oblik linka

# Simple link

---

- definicija simple linka

- xlink:type="simple"
- xlink:href="URI-odredišta"

- primer

```
<SomeElement  
  xlink:type="simple"  
  xlink:href="http://somewhere.com"  
  xlink:title="Click to go somewhere"  
  xlink:show="new">  
  Click me!  
</SomeElement>
```

```
<a href="http://somewhere.com/"  
  title="Click to go somewhere"  
  target="_blank">  
  Click me!  
</a>
```



HTML

# Simple link

---

- primer: person

```
<person>
```

```
  <name>...</name>
```

```
  <picture>...</picture>
```

```
  <homepage>...</homepage>
```

```
</person>
```

# Simple link

---

- primer: person

```
<person>
```

```
  <name>...</name>
```

```
  <picture xlink:type="simple"
```

```
    xlink:href="picture.jpg"
```

```
    xlink:actuate="onRequest"
```

```
    xlink:show="embed"
```

```
    xlink:title="Click to see"/>Picture</picture>
```

```
  <homepage>...</homepage>
```

```
</person>
```



# Simple link

---

- primer: person

```
<person>
```

```
  <name>...</name>
```

```
  <picture>...</picture>
```

```
  <homepage xlink:type="simple"
```

```
    xlink:href="http://www.ftn.ns.ac.yu/personal/"
```

```
    xlink:actuate="onRequest"
```

```
    xlink:show="replace">Homepage</homepage>
```

```
</person>
```

# Simple link

---

- primer: person

```
<person>
```

```
  <name xlink:type="simple"  
    xlink:href="name.xml"  
    xlink:actuate="onLoad"  
    xlink:show="embed" />
```

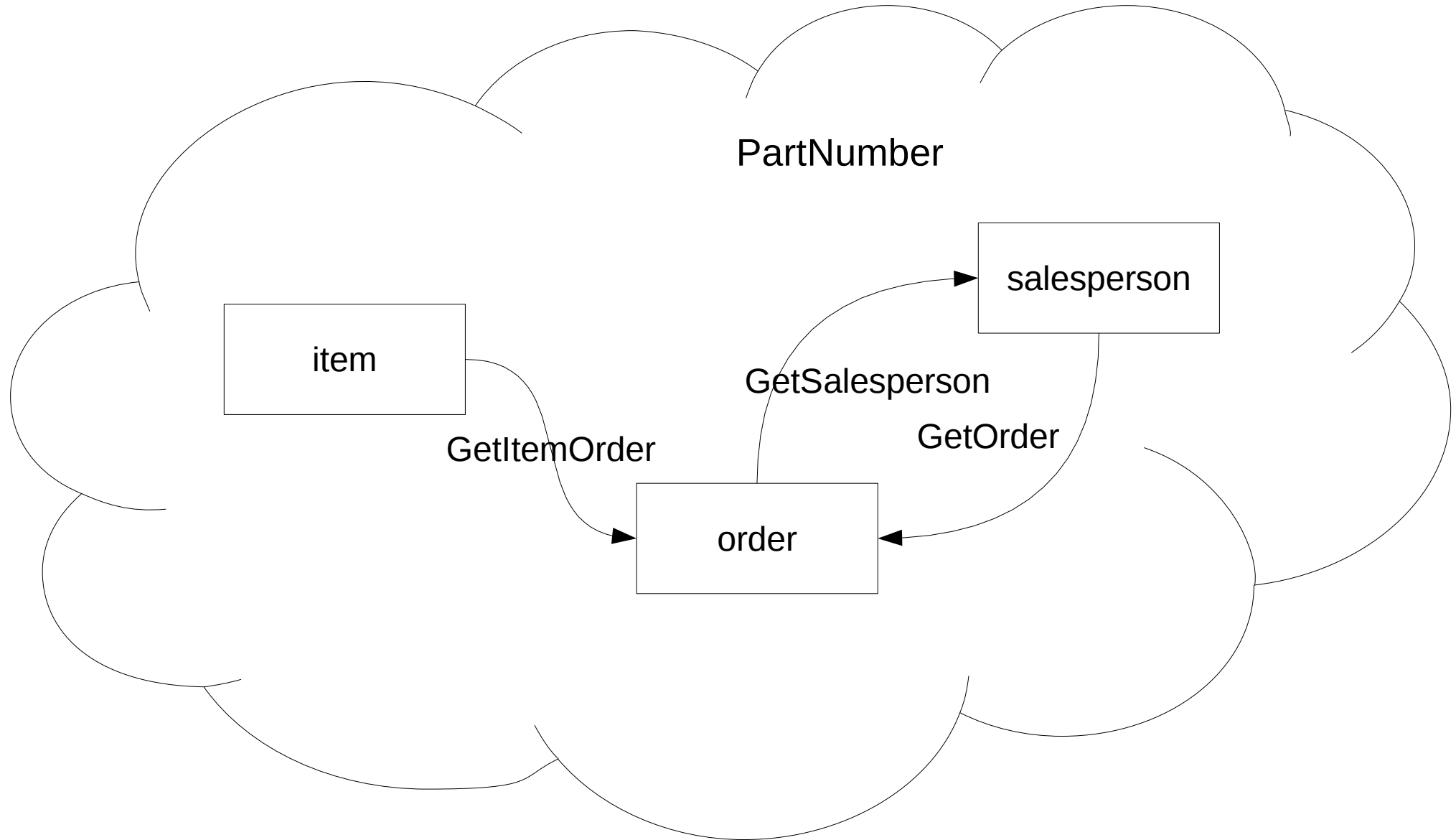
```
  <picture>...</picture>
```

```
  <homepage>...</homepage>
```

```
</person>
```

# Extended link

- `xlink:type="extended"`
- primer



# Extended link

- svaki deo linka opisan je posebnim elementom u dokumentu

```
<PartNumber xmlns:xlink="http://www.w3.org/1999/xlink"
  xmlns:op="http://foo.com/OrderProcessingSystem"
  xlink:type="extended">
  <item xlink:type="resource">...</item>
  <salesperson xlink:type="locator"/>
  <order xlink:type="locator"/>
  <GetOrder xlink:type="arc"/>
  <GetSalesperson xlink:type="arc"/>
  <GetItemOrder xlink:type="arc"/>
</PartNumber>
```

ugrađeni resurs

udaljeni resurs

luk

# Extended link

---

- ugrađeni resurs

```
<PartNumber xmlns:xlink="http://www.w3.org/1999/xlink"
  xmlns:op="http://foo.com/OrderProcessingSystem"
  xlink:type="extended">
  <item xlink:type="resource"
    xlink:role="op:item"
    xlink:title="Item">
    <part-number>E16-25A</part-number>
    <description>Production-Class Widget</description>
  </item>
  <salesperson xlink:type="locator"/>
  <order xlink:type="locator"/>
  <GetOrder xlink:type="arc"/>
  <GetSalesperson xlink:type="arc"/>
  <GetItemOrder xlink:type="arc"/>
</PartNumber>
```

# Extended link

---

- udaljeni resurs 1

```
<PartNumber xmlns:xlink="http://www.w3.org/1999/xlink"
  xmlns:op="http://foo.com/OrderProcessingSystem"
  xlink:type="extended">
  <item xlink:type="resource">...</item>
  <salesperson xlink:type="locator"
    xlink:href="http://foo.com/JohnDoe.xml"
    xlink:role="op:salesperson"
    xlink:title="Salesperson"/>
  <order xlink:type="locator"/>
  <GetOrder xlink:type="arc"/>
  <GetSalesperson xlink:type="arc"/>
  <GetItemOrder xlink:type="arc"/>
</PartNumber>
```

# Extended link

---

- udaljeni resurs 2

```
<PartNumber xmlns:xlink="http://www.w3.org/1999/xlink"
  xmlns:op="http://foo.com/OrderProcessingSystem"
  xlink:type="extended">
  <item xlink:type="resource">...</item>
  <salesperson xlink:type="locator"/>
  <order xlink:type="locator"
    xlink:href="http://sernaferna.com/order256.xml"
    xlink:role="op:order"
    xlink:title="Order"/>
  <GetOrder xlink:type="arc"/>
  <GetSalesperson xlink:type="arc"/>
  <GetItemOrder xlink:type="arc"/>
</PartNumber>
```

# Extended link

---

- luk 1

```
<PartNumber xmlns:xlink="http://www.w3.org/1999/xlink"
  xmlns:op="http://foo.com/OrderProcessingSystem"
  xlink:type="extended">
  <item xlink:type="resource">...</item>
  <salesperson xlink:type="locator"/>
  <order xlink:type="locator"/>
  <GetOrder xlink:type="arc"
    xlink:from="op:salesperson"
    xlink:to="op:order"
    xlink:show="replace"
    xlink:actuate="onRequest"
    xlink:role="op:GetOrder"
    xlink:title="Last order processed."/>
  <GetSalesperson xlink:type="arc"/>
  <GetItemOrder xlink:type="arc"/>
</PartNumber>
```



# Extended link

---

- luk 2

```
<PartNumber xmlns:xlink="http://www.w3.org/1999/xlink"
  xmlns:op="http://foo.com/OrderProcessingSystem"
  xlink:type="extended">
  <item xlink:type="resource">...</item>
  <salesperson xlink:type="locator"/>
  <order xlink:type="locator"/>
  <GetOrder xlink:type="arc"/>
  <GetSalesperson xlink:type="arc"
    xlink:from="op:order"
    xlink:to="op:salesperson"
    xlink:show="replace"
    xlink:actuate="onRequest"
    xlink:role="op:GetSalesperson"
    xlink:title="Salesperson's name"/>
  <GetItemOrder xlink:type="arc"/>
</PartNumber>
```

# Extended link

---

- luk 3

```
<PartNumber xmlns:xlink="http://www.w3.org/1999/xlink"
  xmlns:op="http://foo.com/OrderProcessingSystem"
  xlink:type="extended">
  <item xlink:type="resource">...</item>
  <salesperson xlink:type="locator"/>
  <order xlink:type="locator"/>
  <GetOrder xlink:type="arc"/>
  <GetSalesperson xlink:type="arc"/>
  <GetItemOrder xlink:type="arc"
    xlink:from="op:item"
    xlink:to="op:order"
    xlink:show="new"
    xlink:actuate="onRequest"
    xlink:role="op:GetItemOrder"
    xlink:title="Last order placed for this item"/>
</PartNumber>
```

# Extended link

---

- element sa `xlink:type="extended"` obuhvata
  - resurse: elemente sa `xlink:type="resource"` ili `xlink:type="locator"`
  - lukove: elemente sa `xlink:type="arc"`
- resursi i lukovi mogu da obuhvataju element sa `xlink:type="title"` sa tekstualnim opisom