Ch. 12: XML Namespaces

Seoul National University Internet Database Laboratory
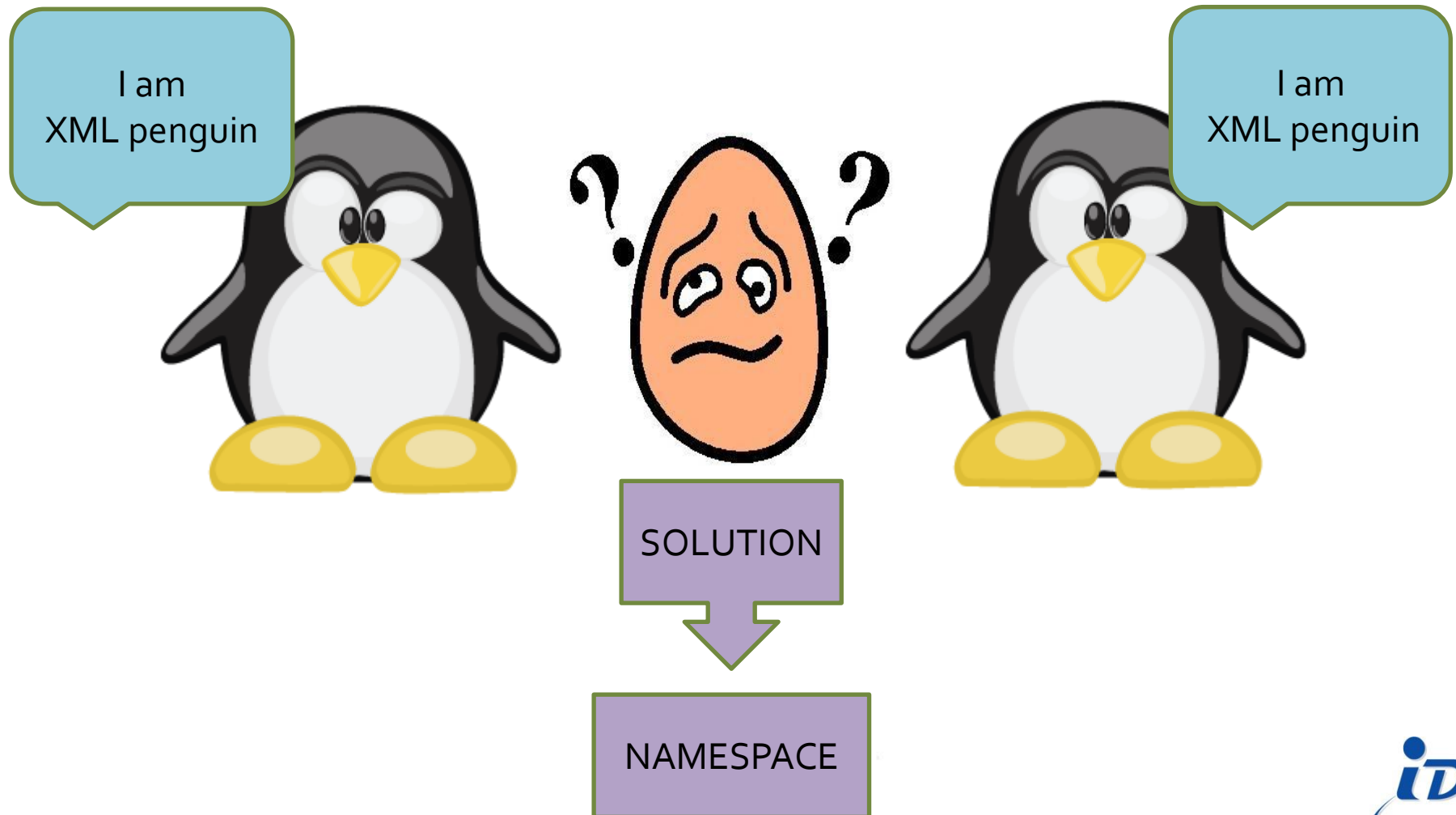
July, 2015

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Designing a Namespace Name

- XML namespaces are used for providing uniquely named elements and attributes in an XML document

Designing a Namespace Name

- **A namespace must have a unique and permanent name**
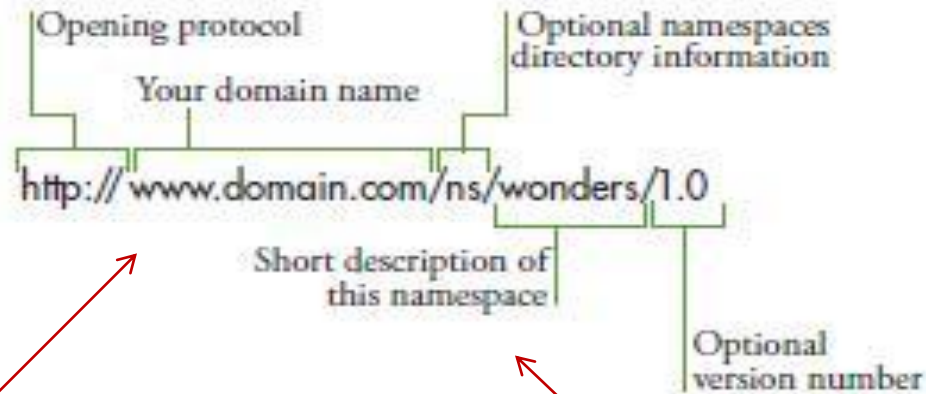 - Namespace names are written in the form of URI

Figure 12.1

To start with the domain name

To add descriptive information

Declaring a Default Namespace

- With default namespace declaration, all the document's elements are part of 'http://www.kehogo.com/ns/wonders/1.0'

[xml]
```
<ancient_wonders
  xmlns="http://www.kehogo.com/ns/wonders/1.0">

<wonder>
  <name language="English">
    Colossus of Rhodes </name>
  <name language="Greek">
    Κολοσσός της Ρόδου </name>
  <location> Rhodes, Greece </location>
  <height units="feet"> 107 </height>
```

To declare an XML namespace

To identify the name of the namespace

Figure 12.2

Tips: declaring a default namespace for the root element means all the elements in the document are considered to be from that namespace

Declaring a Default Namespace

- You can declare a namespace name as the default namespace for your XML document

[xml]

```
<ancient_wonders
    xmlns=http://www.kehogo.com/ns/wonders/1.0 >

<wonder>
  <name language="English">Colossus of Rhodes</name>
  <name language="Greek">Κολοσσός της Ρόδου</name>
  <location>Rhodes, Greece</location>
  <civilization
    xmlns=http://www.kehogo.com/ns/ancient_civ/2.3 >
    <name>Greece</name>
    <locale>Mediterranean Sea</locale>
    <period>750 BC - 146 BC</period>
  </civilization>
  <height units="feet">107</height>
```
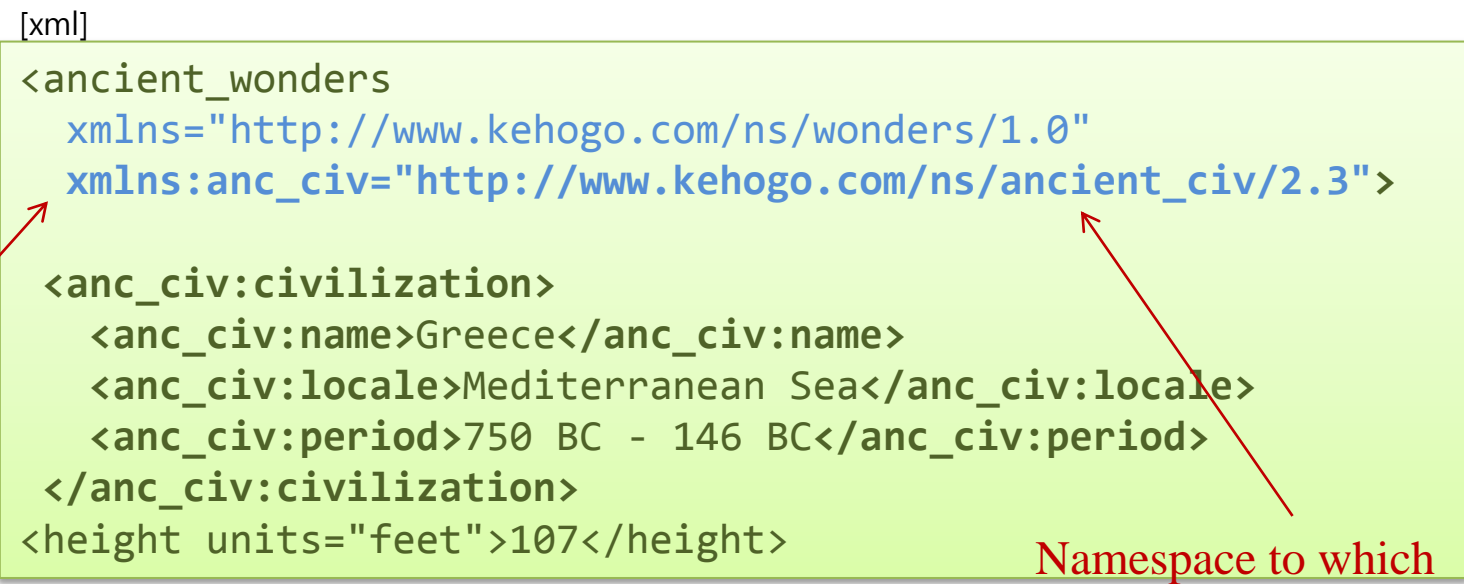
Figure 12.3

Declaring a Namespace Name Prefix

- Declaring a default namespace for an element applies to all that element's children

- You can declare a special nickname (prefix) to label specific individual elements

[xml]

```xml
<ancient_wonders
  xmlns="http://www.kehogo.com/ns/wonders/1.0"
  xmlns:anc_civ="http://www.kehogo.com/ns/ancient_civ/2.3">

 <anc_civ:civilization>
   <anc_civ:name>Greece</anc_civ:name>
   <anc_civ:locale>Mediterranean Sea</anc_civ:locale>
   <anc_civ:period>750 BC - 146 BC</anc_civ:period>
 </anc_civ:civilization>
<height units="feet">107</height>
```

Nickname for the namespace

Namespace to which the prefix refers

Figure 12.4

Declaring a Namespace Name Prefix

- **anc_civ namespace prefix is not declared in root element**
  - It is declared in anc_civ:civilization element
  - Therefore it can be only used for that elements and its children

[xml]

```xml
<ancient_wonders
      xmlns="http://www.kehogo.com/ns/wonders/1.0">
<wonder>
  <name language="English">Colossus of Rhodes</name>
  <name language="Greek">Κολοσσός της Ρόδου</name>
  <location>Rhodes, Greece</location>
  <anc_civ:civilization
    xmlns:anc_civ = http://www.kehogo.com/ns/ancient_civ/2.3 >
  <anc_civ:name>Greece ...
```

Figure 12.5

Labeling Elements with a Namespace Prefix

- Once you've declared a prefix for a namespace name, you can use that prefix to label individual elements

[xml]

```
<ancient_wonders
  xmlns="http://www.kehogo.com/ns/wonders/1.0"
  xmlns:anc_civ = http://www.kehogo.com/ns/ancient_civ/2.3 >

  <anc_civ:locale>Mediterranean Sea</anc_civ:locale>
  <anc_civ:period>750 BC - 146 BC</anc_civ:period>
  <anc_civ:gods>
    <anc_civ:god>Helios</anc_civ:god>
    <anc_civ:domain>Sun</anc_civ:domain>
  </anc_civ:gods>
  <story>
    In 294 BC, the people of the
    island of Rhodes began building…
```

To indicate the namespace to which this element belongs

To indicate the name of the element you wish to use

Figure 12.6
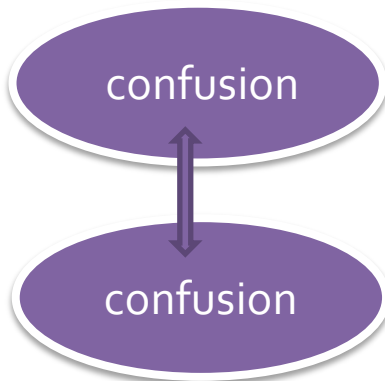
How Namespace Affect Attributes

- You could associate an attribute with a specific namespace by prefixing it

No confusion

[xml]
```
<source sectionid="101"
        newspaperid="21"  />
<map sectionid="a942"/>
```

Figure 12.7

confusion

confusion

[xml]
```
<main_image file="colossus.jpg"
  w="528" h="349"/>
```

```
<main_image file="local"/>
```

```
<main_image anc_civ:file="local"
  wow:file="colossus.jpg"
  w="528" h="349"/>
```

Figure 12.8

To prepend the attribute with a specific namespace