

# XML Namespaces

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**Namespaces**

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# XML Namespaces and Programming-Language Modules

- XML namespaces are akin to namespaces, packages, and modules in programming languages
- Disambiguation of element – and attribute – names from different XML applications (“spaces”) through different prefixes
- A *prefix* is separated from the local *name* by a “:”, obtaining *prefix:name* tags
- Namespaces can be seen as a layer on top of XML 1.0, since *prefix:name* is again a valid tag name and namespace bindings are ignored by some tools

# Namespace Bindings

- Prefixes are bound to namespace URIs by attaching an `xmlns:prefix` attribute to the prefixed element or one of its ancestors,  $prefix:name_1, \dots, prefix:name_n$
- The value of the `xmlns:prefix` attribute is a URI, which may or (unlike for schemas!) may not point to a description of the namespace
- An element can use bindings for multiple namespaces via attributes `xmlns:prefix1, \dots, xmlns:prefixm`
- More at <http://www.w3.org/TR/xml-names> and <http://www.w3.org/2001/tag/doc/nsDocuments>

# Namespaceless Example: Address Variant

Namespaceless XML Markup:

```
<address>  
  <name>Xaver M. Linde</name>  
  <street>Wikingerufer 7</street>  
  <town>10555 Berlin</town>  
  <bill>12.50</bill>  
  <phone>030/1234567</phone>  
  <phone>030/1234568</phone>  
  <fax>030/1234569</fax>  
  <bill>76.20</bill>  
</ address>
```

*bill is ambiguous  
tag (name clash  
from two XML  
applications)*

# Two-Namespace Example: Snail-Mail and Telecoms Address Parts

## Namespace XML Markup:

```
<mail:address xmlns:mail="http://www.deutschepost.de/"
              xmlns:tele="http://www.telekom.de/">
  <mail:name>Xaver M. Linde</mail:name>
  <mail:street>Wikingerufer 7</mail:street>
  <mail:town>10555 Berlin</mail:town>
  <mail:bill>12.50</mail:bill>
  <tele:phone>030/1234567</tele:phone>
  <tele:phone>030/1234568</tele:phone>
  <tele:fax>030/1234569</tele:fax>
  <tele:bill>76.20</tele:bill>
</mail:address>
```

*bill disambiguation  
through **mail** and  
**tele** prefixes*

- The root element, **mail:address**, as well as the children **mail:name**, **mail:street**, **mail:town**, and **mail:bill**, use the **mail** prefix, bound to a deutschepost URI
- The **tele:phone**, **tele:fax**, and **tele:bill** children use the **tele** prefix, bound to a telekom URI