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# Introduction to XML Namespaces

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**Web Engineering, SS 2007**

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# XML Namespaces – Why?

- **Part of the core XML standards family**
    - **Namespaces in XML 1.0 (Second Edition)**
    - **W3C Recommendation 16 August 2006**
  - **Mean enabling mixing more markups within one document**
    - **XHTML** with **SVG** (graphics) fragments
    - **XHTML** with **MathML** (math notation) fragments
  - Each NS is **uniquely identified by its URI**
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# XML Namespaces – What?

- **XML NS logically distinguishes so-called namespaces that apply to nodes in the doc**
    - For each NS, a separate **schema** (markup) may be defined / usually *XML Schema, Relax NG...*
    - **Not compatible with DTD** – if namespaces are used, only limited use of DTD is possible
    - NS applies **only** to **elements** and **attributes**
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# XML Namespaces – Default

## ■ Default namespace

- Applies just to elements **without prefix**
- declared by `xmlns="URI"` in the **element** or its **ancestor**
- always the **nearest** declaration applies!
- example:
  - `<party xmlns="http://www.austria.gv.at/ns/1.0" url="http://www.spoe.at">SPÖ</party>`

# XML Namespaces – Prefixed

## ■ Prefixed namespace

- applies to **elements and attributes** with the **prefix**
- declared by `xmlns:prefix="URI"` in the **element** or its **ancestor**
- always the **nearest** declaration applies!
- example:
  - `<breg:party xmlns:breg="http://www.austria.gv.at/ns/1.0" url="http://www.spoe.at">SPÖ</party>`

# XML Namespace Example

(prefixed) namespace declaration

```
<?xml version='1.0' encoding='UTF-8'?>
```

```
<staff organization="Bundesregierung
```

```
  xmlns:breg="http://www.austria.gv.at/ns/1.0"
```

```
  xmlns="http://generic-ns.org/ns/1.0">
```

```
<person id="agu">
```

```
  <name>Alfred Gusenbauer</name>
```

default namespace declaration

```
  <breg:party url="http://www.spoe.at">SPÖ</breg:party>
```

```
</person>
```

```
<person id="wmo">
```

element **person** is in the namespace

<http://generic-ns.org/ns/1.0>

```
  <name>Wilhelm Molterer</name>
```

```
  <breg:party url="http://www.oevp.at">ÖVP</breg:party>
```

```
</person>
```

```
</staff>
```

attribute **url** is NOT in ANY namespace

prefix

element **party** is in the namespace

<http://www.austria.gv.at/ns/1.0>

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# XML Namespaces – Resources

- The Specification on W3C
    - <http://www.w3.org/TR/REC-xml-names/>
  - ZVON XMLNS Tutorial
    - <http://www.zvon.org/xxl/Namespactutorial/Output/index.html>
  - W3Schools
    - [http://www.w3schools.com/xml/xml\\_namespaces.asp](http://www.w3schools.com/xml/xml_namespaces.asp)
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