



Transaction Processing Facility

SOAP on TPF

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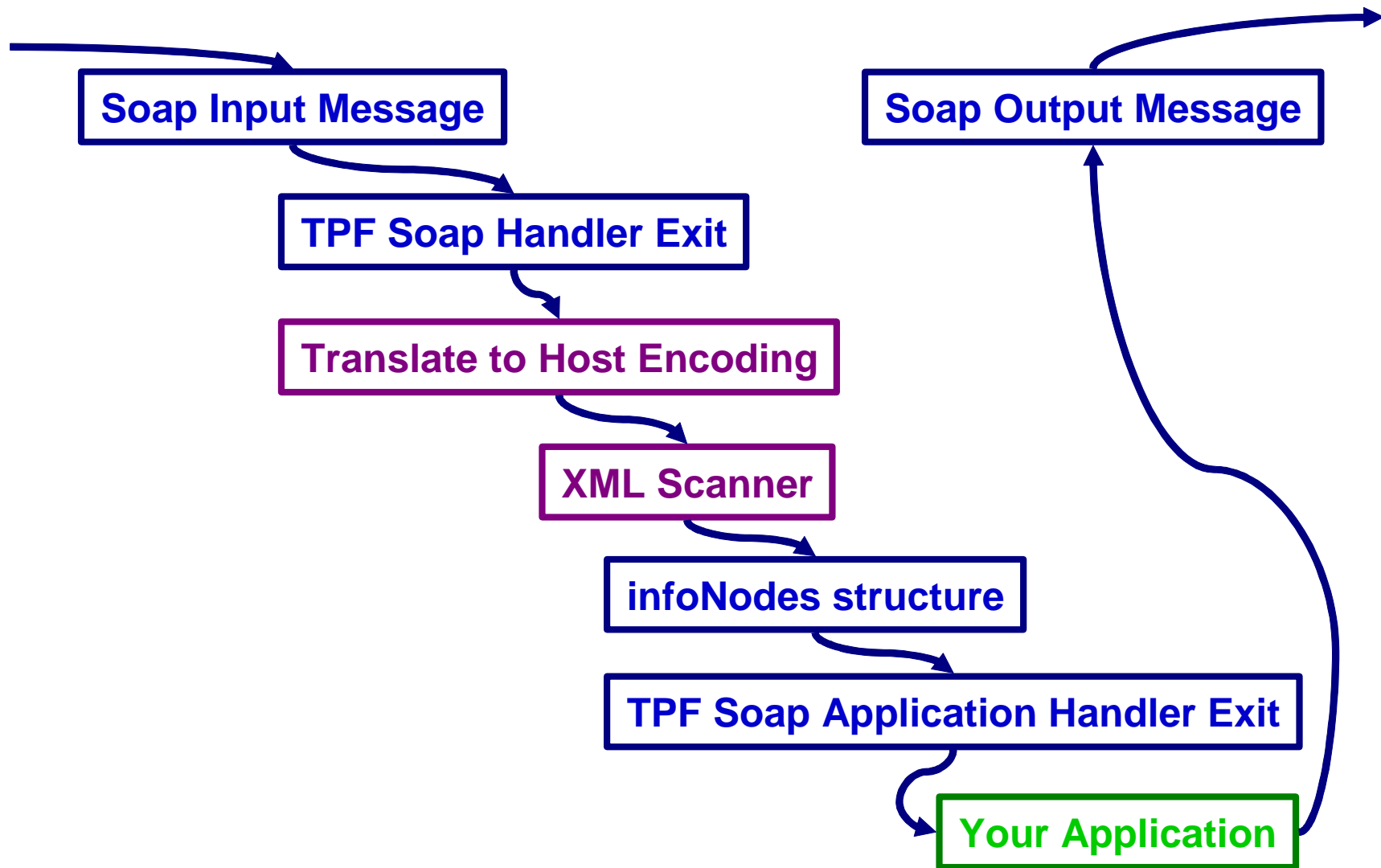
What is SOAP?

- Simple Object Access Protocol
 - ▶ Lightweight XML-based messaging protocol
 - ▶ Used to encode the information in web service request and response messages before sending them over a network
- SOAP is part of a larger picture called Web Services
 - ▶ Web service is an application that is written to meet Internet and Extensible Markup Language (XML) technology standards
 - ▶ Performs a specific task and is made available to other users through a network
 - ▶ Built on the ability to exchange information between different systems
 - ▶ Developed by the World Wide Web Consortium (W3C), SOAP is a lightweight protocol intended for this exchange of structured information

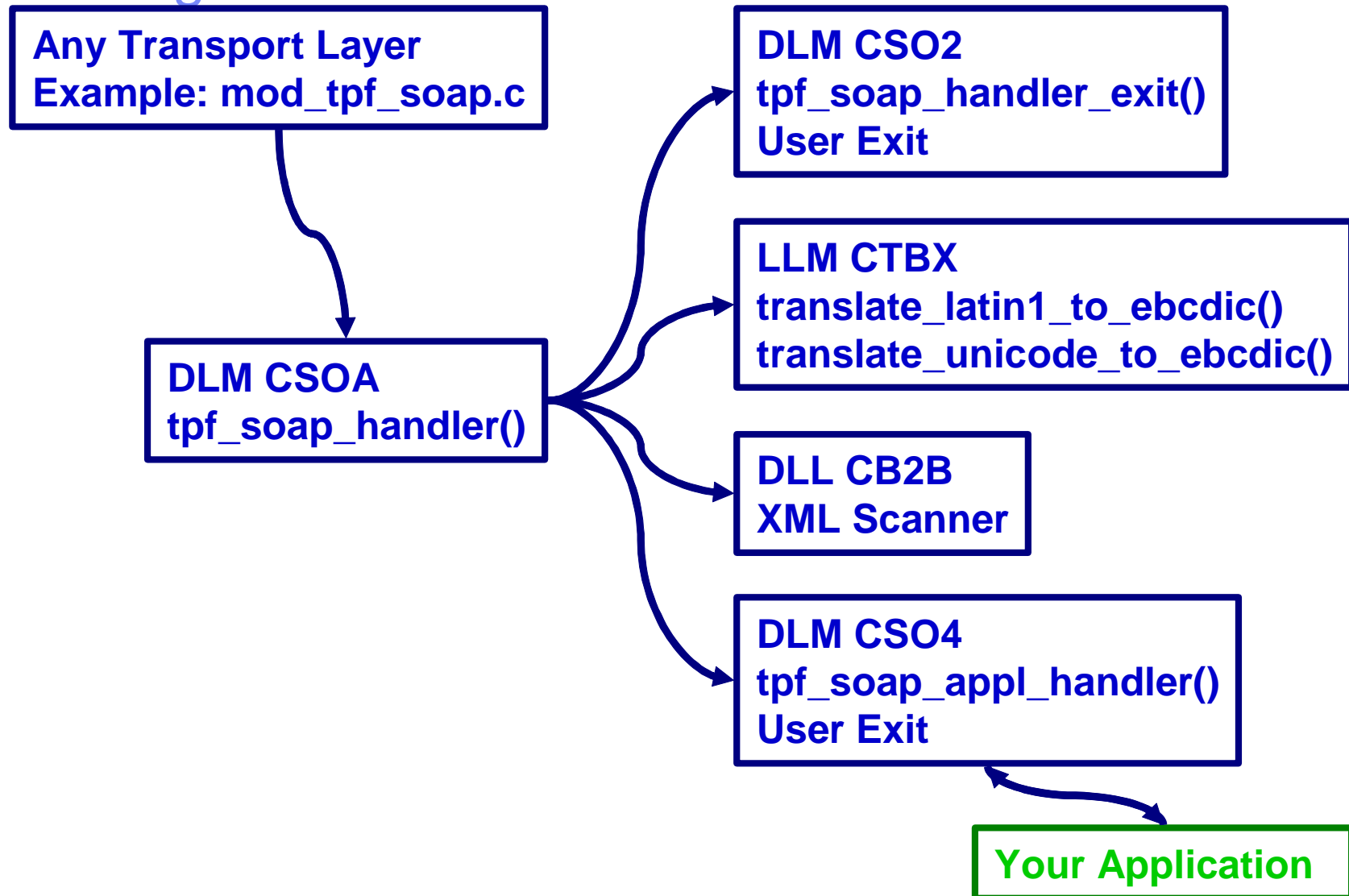
SOAP on TPF

- SPE PJ29396 on PUT18
 - ▶ TPF SOAP 1.2 Server Support
 - ▶ TPF SOAP support delivers the ability to process SOAP messages on the TPF system.
 - ▶ Also adds TPF-specific C functions for converting EBCDIC to or from Unicode and Latin1.
- PJ29500 on PUT18
 - ▶ SPPGML fix
- PJ29681 on PUT19
 - ▶ User exit enhancement
- PJ29716
 - ▶ Fix compiler warnings

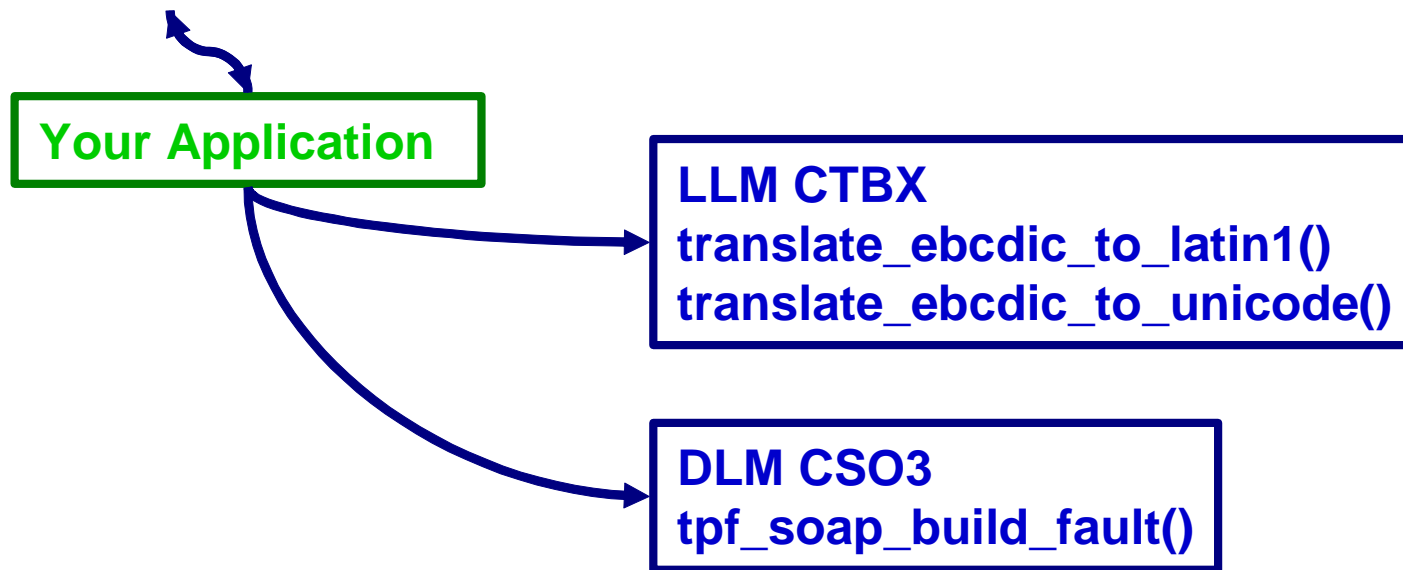
SOAP Message Flow



SOAP Program Flow Part 1



SOAP Program Flow Part 2



Parameters Passed to Application

- soapMsg* input message
 - ▶ Raw XML version of input message
- infoNodes* input message
 - ▶ Structured, tree-like, navigable version of input message
- commsBinding*
 - ▶ Application routing information
 - ▶ Binding (For example HTTP via apache)
- soapMsg* output message
 - ▶ To be created by your application

soapMsg Structure

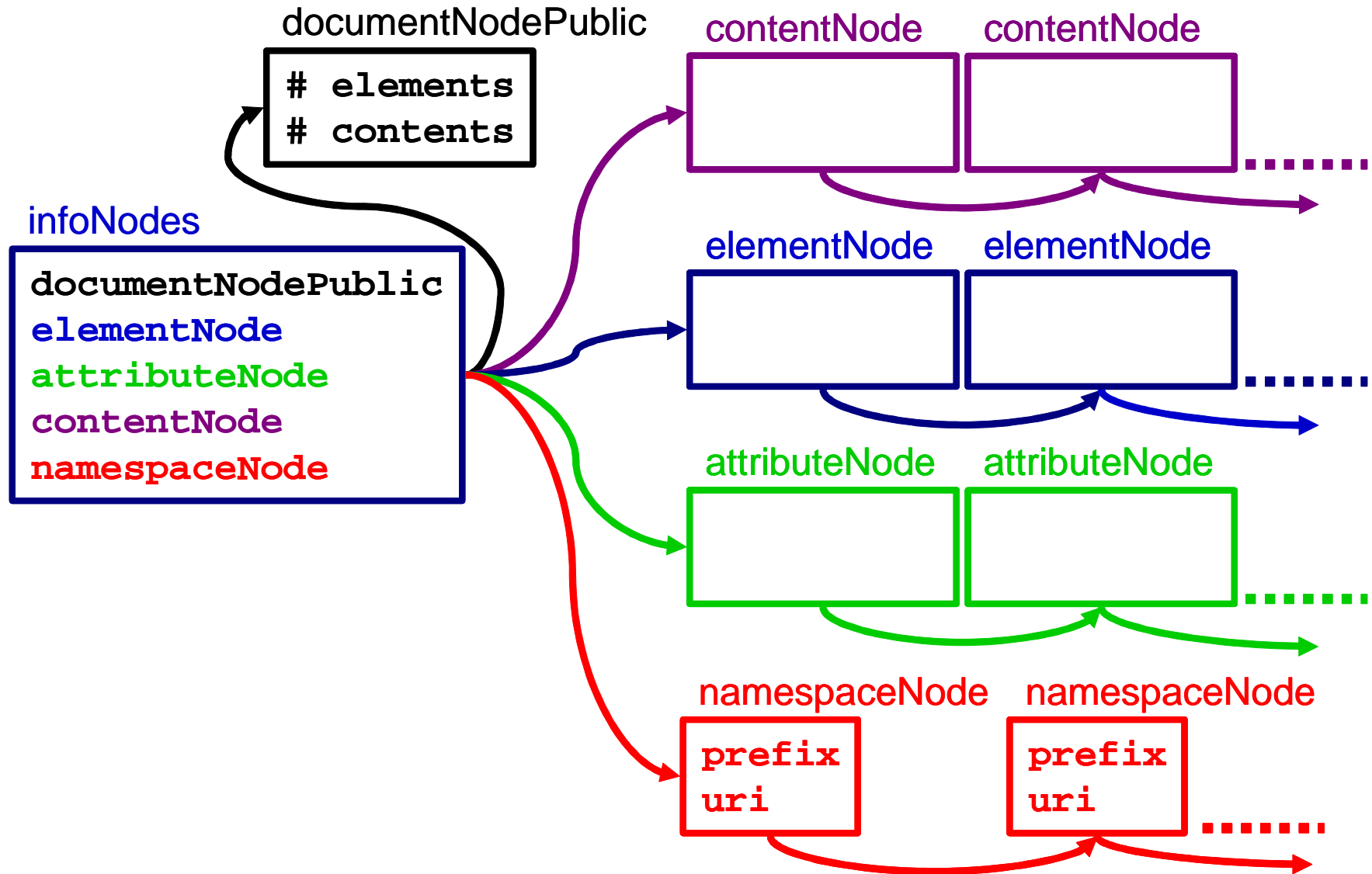
soapMsg

```
XMLptr  
msgLength  
options  
version:          SOAP1_1/SOAP1_2  
serverEncoding:  Ebcdic  
clientEncoding:  Ascii/Unicode
```

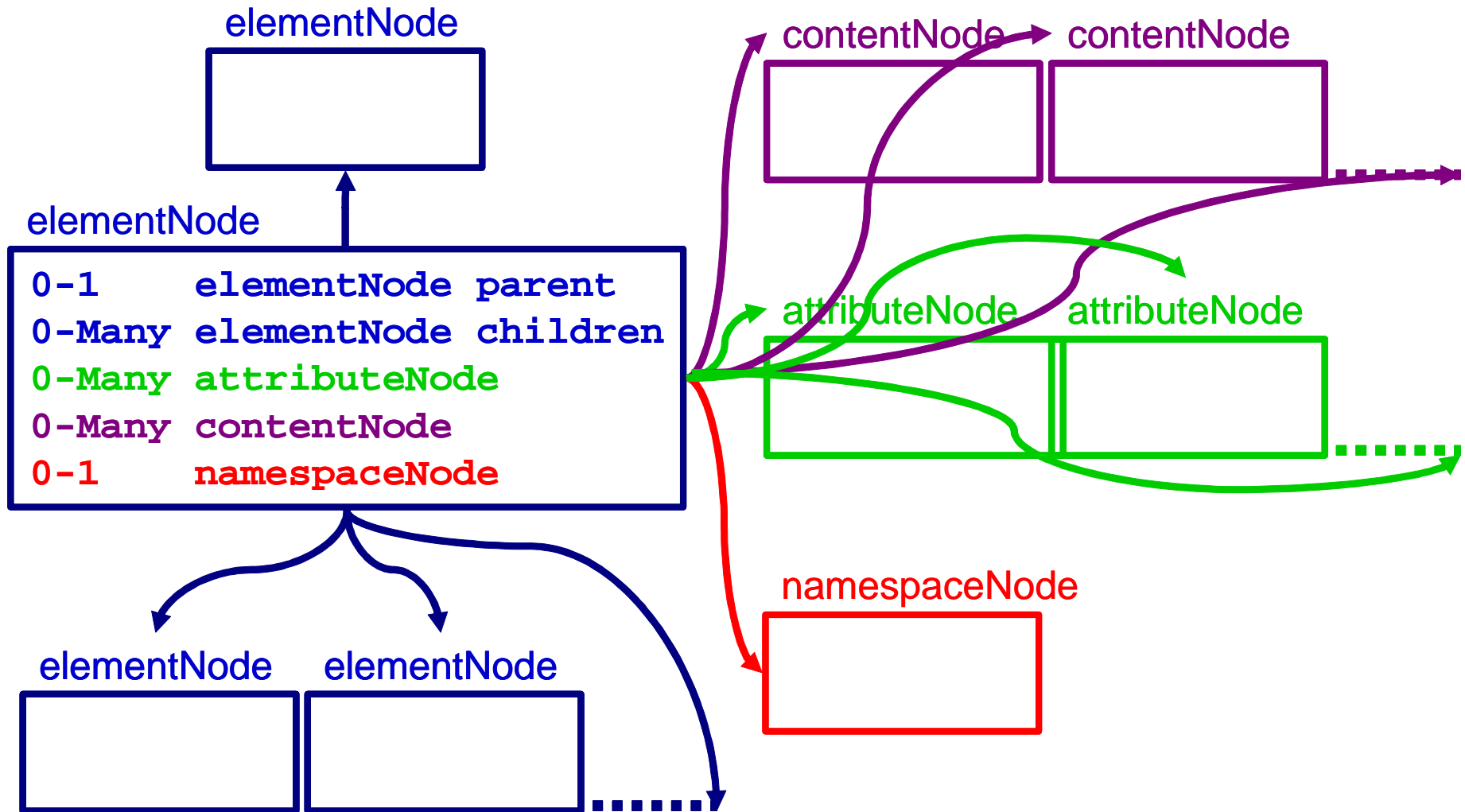
XMLptr

```
<?xml version="1.0" encoding="iso-8859-1"?>  
<!--sample SOAP XML message-->  
<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://www.w3.org/2001/06/soap-envelope">  
<SOAP-ENV:Body>  
...  
</SOAP-ENV:Body>  
</SOAP-ENV:Envelope>
```

infoNodes Structure



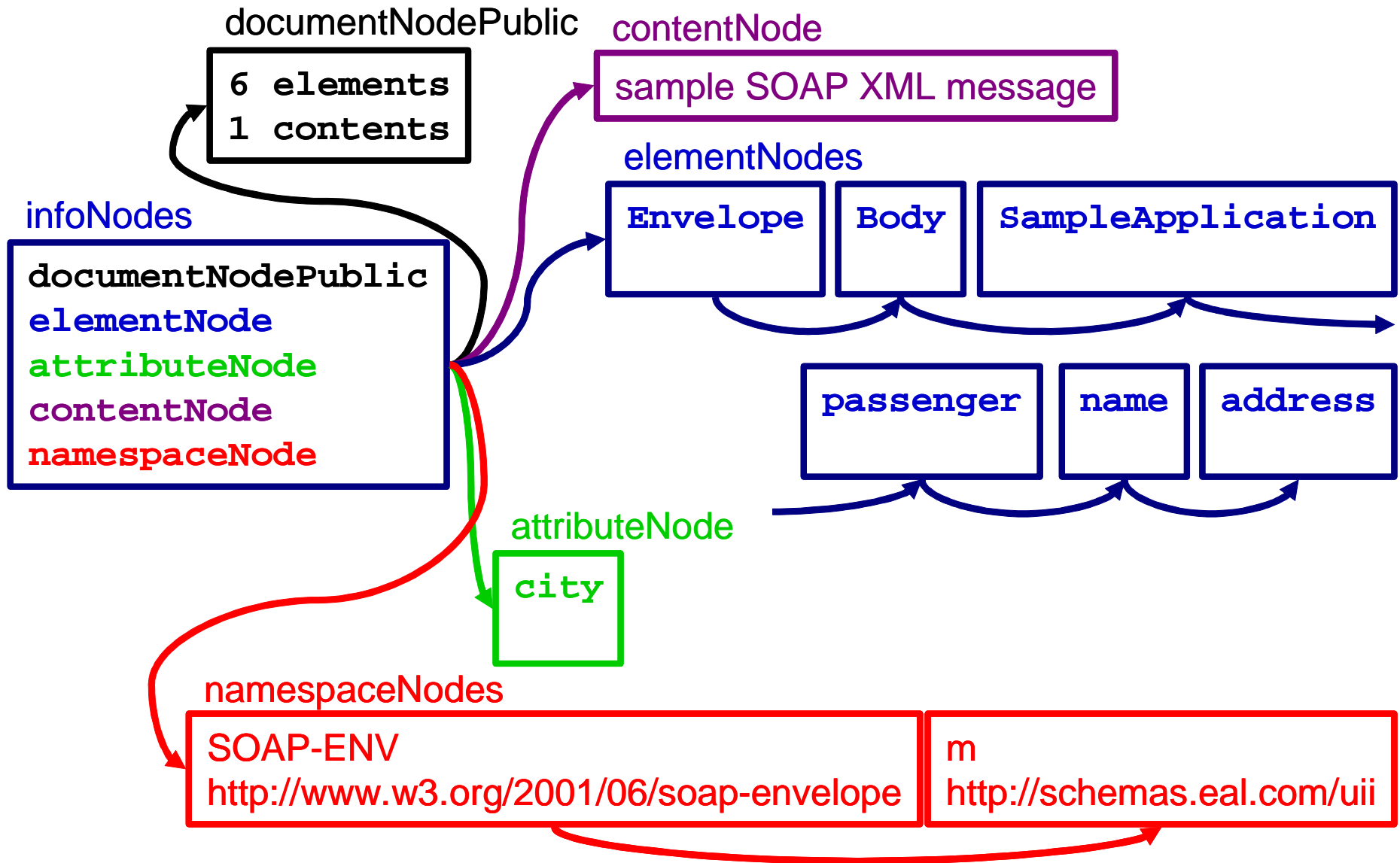
infoNodes Relations



SOAP Message Example

```
<?xml version="1.0" encoding="iso-8859-1"?>
<!--sample SOAP XML message-->
<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://www.w3.org/2001/06/soap-envelope">
<SOAP-ENV:Body>
  <m:SampleApplication xmlns:m="http://schemas.eal.com/uii">
    <m:passenger>
      <m:name>John Doe</m:name>
      <m:address city="Anytown">123 Main Street</m:address>
    </m:passenger>
  </m:SampleApplication>
</SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```

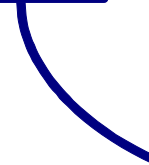
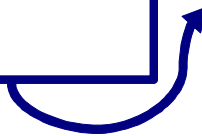
infoNodes Example 1



infoNodes Example 2

elementNode

elementNode



More Information

- Handout Document
 - ▶ TPF Users Group Programming Challenge Spring 2004