

XML Primer for SAS® Programmers

Statistics Canada
SAS Technology Centre
Systems Development Division

Introduction

- Short History of XML
 - The Origins of XML
 - HTML and XML similarities and differences
- XML Syntax
- Read and create XML documents with LIBNAME
- Introduction to SAS XML Mapper
- References
- Questions & Comments

Origins of XML

- SGML – Standard Generalized Markup Language
- HTML – Hypertext Markup Language
- XML – Extensible Markup Language

HTML & XML

Similarities & Differences

HTML and XML Structure

Structure of HTML & XML Documents

```
<CONTENTS>
<SECTION1> Short History of XML
</SECTION1>
  <SUBSECTION>
    <SUBSECTION11>- The Origins of XML
    </SUBSECTION11>
    <SUBSECTION12>- HTML and XML
    </SUBSECTION12>
  </SUBSECTION>
<SECTION2 >XML Syntax</SECTION2>
<SECTION3> Introduction to XML Mapper
</SECTION3>
</CONTENTS>
```

XML Syntax (Basic Rules)

- Elements begin with an open tag <element_name>
- Elements can end with </element_name> or </>

XML Syntax (Basic Rules)

- All tags must be fully nested

XML Syntax (Basic Rules)

- A tag may optionally include values and attributes

XML Syntax (Basic Rules)

- A comment is some text delimited by '`<!--`' and '`-->`'

IE Presentation of XML document XML as a medium for data exchange XML in SAS

- Data Step
 - Write an XML file
- LIBNAME engine
 - Read an XML file
 - Write an XML file in a SAS data set
- SAS XML Mapper tool
 - Create a map for reading an XML file in a SAS data set

Write XML with a Data Step Write XML using a LIBNAME Statement Read XML using a LIBNAME Statement Read XML using XML Mapper

- SAS XML Mapper is an XMLMap support tool
- SAS XML Mapper is a Java-based application
- SAS XML Mapper provides a graphical interface
- You generate an XMLMap via a familiar drag-and-drop motif.

Read XML using XML Mapper

- **Availability**

SAS XML Mapper is available for installation from your SAS Installation Kit.
SAS XML Mapper is on the SAS Client-Side Components Volume 1 CD.

Read XML using XML Mapper Read XML using XML Mapper Read XML using XML Mapper Write XML using XML Mapper Read XML using XML Mapper Read XML using XML Mapper Read XML using XML Mapper

References

- SAS 9.1 XML LIBNAME Engine (User's Guide)
- Paper 240-30 "XML Primer for SAS Programmer," Jack N Shoemaker

- Paper 036-29 “XML in Data Step”, Michael Palmer
- Paper 119-29 “Reading and Writing XML files from SAS” Miriam Cisternas
- Tutorial: www.sas.com/rnd/base/topics/sxle82/prod82
- XMLMAP: www.sas.com/rnd/base/topics/sxle82/index.html
- Resources: www.sas.com/rnd/base/index-xml-resources.html

Questions / Comments