

Define the read/write rules

Read/write rules perform a variety of roles in a FrameMaker XML application. You will start by adding the essential rules for element type mapping.

1. Create a new read/write rules file by selecting **StructureTools > New Read/Write Rules**.

A read/write rules file is an unstructured text file. The file initially looks like this:

```
fm version is "9.0";
/*
 * Include all ISO entity mapping rules.
 */

#include "isoall.rw"
```

2. The #include directive for "isoall.rw" is not required for XML, so it may be removed.
3. Add a mapping rule for the `Xref` element. This rule identifies the element as a FrameMaker cross-reference then maps the cross reference format property to the `formatprop` attribute.

```
element "xref" {
    is fm cross reference element "Xref";
    attribute "formatprop" is fm property cross-reference
    format;
}
```

4. The mapping for a table is more complex because each table part needs a separate rule. The rule for `table` will ensure that cell border ruling override properties, number of columns and the width of each column are written to XML.

```
element "table" {
    is fm table element "Table";
    attribute "frame"
    {
        is fm property table border ruling;
        value "top" is fm property value top;
        value "bottom" is fm property value bottom;
        value "topbot" is fm property value top and bottom;
        value "all" is fm property value all;
        value "sides" is fm property value sides;
        value "none" is fm property value none;
    }
    attribute "colsep" is fm property column ruling;
    attribute "rowsep" is fm property row ruling;
    attribute "numcols" is fm property columns;
    attribute "colwidths" is fm property column widths;
}
```

HI ,
I tried to create my XML Application following this PDF. And I have a problem to add the Strcured Application element (the circled step 2),could you please take some time to show me how to do this in detail?

thanks a lot!

```
at "tablehead" {  
  fm table heading element "TableHead";  
  
at "tablebody" {  
  fm table body element "TableBody";  
  
at "row" {  
  fm table row element "Row";  
  
at "cell" {  
  fm table cell element "Cell";
```

For the Graphic element identifies the FrameMaker element type and provides rules for the export of the contents of an anchored frame. In this case graphics will be exported to a file name based on the document's file name. The default behavior is retained for embedded graphic files.

```
at "graphic" {  
  fm graphic element "Graphic";  
  after anchored frame {  
    notation is "CGM";  
    export to file "$(docname).cgm";
```

6. Save the new read/write rules file into the same folder as the other application components.

Note: In each of the read/write rules above, the element names have been slightly changed so that the XML saves as all lowercase while Capitalized names are used in FrameMaker.

Create a DTD

An XML application needs a DTD or schema for validation. In this section you will create a DTD from the EDD. FrameMaker cannot save an EDD as an XML schema.

1. Open the EDD that you created in the previous chapters.
2. Add the StructuredApplication element then type in the name of the XML application that you created in the previous section.
3. Select **StructureTools > Save as DTD...**
4. Enter a file name in the **Save As DTD** dialog. It is recommended that you use the *.dtd* extension.

5. If your EDD is valid you shouldn't see an error log. However, it is possible to build SGML style General rules in FrameMaker that are not permitted in XML.
6. A message dialog will tell you that FrameMaker has finished writing the DTD. The DTD is now ready to be used.

Update the application definition

Now that you have a DTD for validation it can be referenced in the `structapps.fm` file.

1. Add the DTD element and type the path and file name for the DTD, for example `"C:\QuickStart\document.dtd"`.

Update the structured template

The EDD has just been changed, so you need to update the application's structured template. Remember to do this whenever you change the EDD.

1. Open the structured template.
2. Open the EDD if its not already open.
3. Select **File > Import > Element Definitions...**
4. Select the EDD, then click **Import**.
5. Save the Template.

XML error logs

If the FrameMaker document was not valid when the file was saved you will see a Save as XML Log.

Note: This error was deliberately created by deleting a required `Title` element.

Save as XML Log

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Source Document: C:\QuickStart\QuickStart1.fm

Destination Document: C:\QuickStart\QuickStart1.xml

XML Parser Messages (Document Instance)

Error at file C:\QuickStart\QuickStart1.xml.26F, line 24, char 43, Message: Element 'Paragraph' is not valid for content model '(Title,((Paragraph|Anchor))* ,Section*)'

How to interpret the XML Log message The file name referenced in the parser message `QuickStart1.xml.26F` is a temporary file that FrameMaker creates while writing the real XML file. By the time you read the error message the temporary file will have been deleted. However,