USER DOCUMENTATION

Customizing Printouts (XML and XSL)

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1 Overview of Printing in ALEPH

This document is intended primarily for system librarians. It explains the **ALEPH** printing process and shows how printouts can be customized.

1.1 A New Print Setup?

In **ALEPH 500™**, from version 15, the printing mechanism is based on the XML (eXtensible Markup Language) and XSL (eXtensible Style Language) standards.

This printing setup contains a number of features that allow per-site tailoring and control:

- Multi-tier architecture integrating:
  - Data retrieval (XML)
  - Data translation (XML)
  - Data formatting (XSL)
- Input file (XML) containing all potential data from any relevant Oracle Z table. Adding data to the display is easy
- Option to execute external programs
- Built-in support of UTF-8
- Incorporation of fast-growing standards (XML/XSL), so help and support are readily available
- Support of include files (XSL), so common blocks can be contained in common functions
- Print history

1.2 Why Customize Templates?

ALEPH reports and letters are based on formatted templates, designed by the Ex Libris development team. Depending on your library setup and user base, you may want to:

- Add or change text
- Translate text into other languages
- Add or delete fields and columns
- Change fonts, styles, and color schemes
- Add graphics and logos

This document contains information on the XML and XSL templates and elements used in the ALEPH print mechanism. For modifications, the information provided in *Chapter 4, Customizing XSL Templates* should be sufficient.

1.3 What is XML?

XML is a standard for data description optimized for delivery via the Web, from server to client, or even from server to server. It looks similar to HTML as it contains

elements with tags and text between them. The difference is that an XML data file contains tags which contain semantic information, but which do not contain any presentation information (font, colors, spacing, and so on). This is contained in the XSL style sheet. A style sheet is basically a statement of display rules, specifying the display attributes of elements in the source code.

The separation of content and styling information enables the same data file to be displayed in different ways. It also enables users to view the data file according to their preferences and abilities, just by modifying the style sheet.

An example taken from an ALEPH XML template (`acq-s-order-slip.xml`):

```
<z72-vendor-address-occ1>AMERICAN METEOROLOGICAL SOCIETY</z72-vendor-
address-occ1>
<z72-vendor-address-occ2>45 BEACON STREET</z72-vendor-address-occ2>
<z72-vendor-address-occ3>BOSTON, MA 02108</z72-vendor-address-occ3>
```

The data represents different parts of the vendor's address. Tags such as `<z72-vendor-address-occ1>`, `<z72-vendor-address-occ2>`, `<z72-vendor-address-occ3>` and so on, are self-describing. That is, they refer to the type of data contained within, and do not contain styling information.

1.4 What is XSL?

XSL is a style sheet language that takes an XML file as input and can display it in many different ways. We refer here to HTML output.

A possible XSL section for the XML example above might be:

```
<xsl:template name="vendor-address">
   <xsl:call-template name="table-open-full"/>
   <tr><td width="70%"><xsl:value-of select="//z72-vendor-address-
occ1"/></td><td></td></tr>
   <tr><td width="70%"><xsl:value-of select="//z72-vendor-address-
occ2"/></td><td></td></tr>
   <tr><td width="70%"><xsl:value-of select="//z72-vendor-address-
occ3"/></td><td></td></tr>
   <xsl:call-template name="table-close"/>
```

As you can see, the XSL contains a combination of HTML tags, containing display information, and field tags, matching field tags in the XML file, containing descriptive information.

If we combine this XSL example with the XML example, we get the following HTML:

```
<tr>
 <td width="70%">AMERICAN METEOROLOGICAL SOCIETY</td>
<tr>
  <td width="70%">45 BEACON STREET</td>
<tr>
  <td width="70%">BOSTON, MA 02108</td>
</tr>
```

The resulting printout looks like this:

AMERICAN METEOROLOGICAL SOCIETY
45 BEACON STREET
BOSTON, MA 02108

This is a very simple example. We will see how XML and XSL are used in the ALEPH printing mechanism and look at a number of different examples.

1.5 How Does the ALEPH Printing Mechanism Work?

A print request (batch or online) creates a data file in raw XML format. The data file includes all the data fields of all the records that have been retrieved for the printed output. If produced via batch services, the file is stored in the library's `/print` directory. Otherwise the files are saved under the module's `/files` directory. Each data field is identified by an XML tag.

For each report and letter in ALEPH, a print template is defined. This template determines:

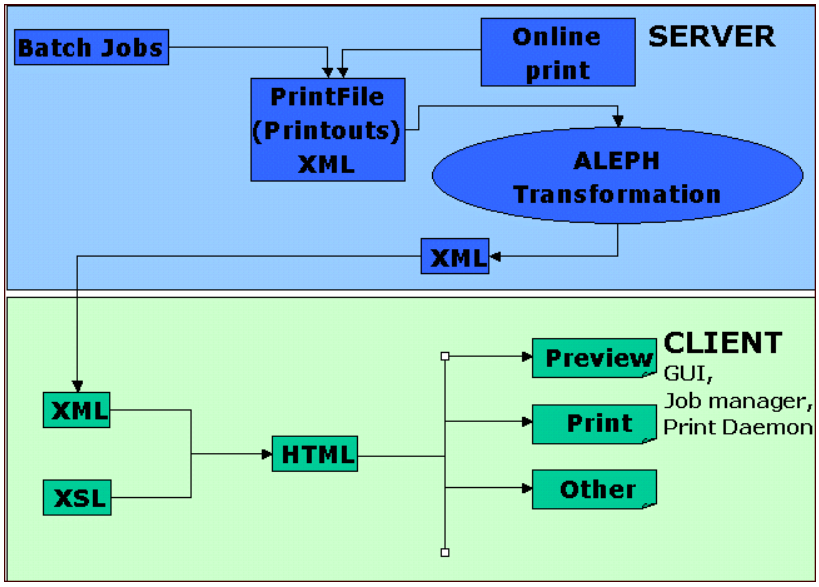
- Which fields of the XML file are part of the report or letter
- How these fields are displayed

The print templates are XSL files which are located in the bibliographic library's `/form_<lng>` directory. For example, the print template for the **Acquisitions Order Slip** is `acq-s-order-slip.xsl`. The XSL files themselves contain little or no styling information so they are are not stylesheets in the conventional sense - rather, they contain tags which call functions contained in global XSL files.

These global XSL files are in general use in ALEPH reports and letters, and they are referred to by all the specific XSL templates (for example, `funcs.xsl`, `funcs-address.xsl`, `funcs-bib-info.xsl` and so on). They contain definitions for the rendering of common report blocks such as the standard salutations (greetings), signatures,
These XML data files are translated from database data into meaningful formatted data.

The XSL data files are then packaged and transferred to the workstation. This is similar to the way cataloging templates and tables are packaged and transferred.
sublibrary addresses, patron addresses, bibliographic information, and so on.

The XSL print templates generate HTML pages from the XML data. This occurs on your workstation, using an XSL processor included in your **ALEPH** package. The resulting HTML page is print output, suitable for both online printing from a GUI module, and printing through the Job Manager (for printouts produced by batch services).



In principle, you can maintain XSL print templates (translate, add / remove fields, and so on) without actually knowing XSL, and rely on the patterns found in ALEPH's default XSL files.

1.6 XSLT and ALEPH

The XSLT (eXtensible Style Language Transformations) portion of XSL makes it possible for one XML document to be transformed into another according to an XSL Style sheet. ALEPH templates use a very small set of XSLT elements. These are briefly described in *section 6.1 XSLT Elements in ALEPH*.

1.7 For More Information

XML, XSL and XSLT are complex and evolving languages and ALEPH only uses a small number of elements. For more information on these languages, we recommend the following books:

XML By Example by Benoit Marchal. December 1999 Que Press Inc.; ISBN 0789722429
XSLT Programmer's Reference (2nd Edition) by Michael H. Kay. April 2001 Wrox Press Inc; ISBN: 1861005067

We do not recommend that you visit the W3C (World Wide Web Consortium) Web site (www.w3.org). W3C is the independent body that sets the standards for XML and XSL. Their Web site is targeted to advanced XML users.

2 XML in ALEPH

The data for printouts in **ALEPH** is packaged in XML files. The structure of these files is very simple: at the beginning of the file, there are several tags for general information such as the name of the template, the language category, and so on:

```
<?xml version="1.0"?>
<printout>
<form-name>acq-s-order-slip</form-name>
<form-language>eng</form-language>
<form-format>01</form-format>
```

This is the opening part of each XML file. `printout` is a tag, which encloses all the XML. The `form-name`, `form-language`, and `form-format` fields help the system to locate the relevant XSL stylesheet.

Next comes the actual data for the query (a search question which tells ALEPH which information to retrieve). The data is contained in one or more `section` tags depending on the specific query:

`<section-01>`

General information of the form.
Usually appears only once in a printout.

`<section-02…. and so on>`

These sections can be repeated.

The data can be transformed (for example, `20020415` into `15/04/2002`) before the XML is created, according to special user-defined rules (for more details see the *ALEPH Translation Mechanism* section (2.1)) .

Every print output has its own XSL file that defines which tag contents are included, and how they appear.

Single Section XML Files

Some queries, such as the **acquisitions arrival slip**, contain information for just one item. The data for this query will have just one section. It looks like this:

```
<printout>
<form-name>acq-arrival-slip</form-name>
<form-language>eng</form-language>
<form-format>00</form-format>
<section-01>
<sub-library-address-1-occ1>Archives Department</sub-library-address-
1-occ1>
<sub-library-address-1-occ2>Lincoln Library</sub-library-address-1-
occ2>
<sub-library-address-1-occ3>808 Log Lane</sub-library-address-1-occ3>
<sub-library-address-1-occ4>Chicago,IL 60614</sub-library-address-1-
occ4>
<sub-library-address-1-occ5>thechoice@exlibris-usa.com</sub-library-
address-1-occ5>
<sub-library-address-1-occ6>Tel# 173.404.5527</sub-library-address-1-
occ6>
<sub-library-address-1-occ7></sub-library-address-1-occ7>
```

```
<bib-info>## Federal Credit Agencies :## A Series of Research Studies
Prepared for the Commission on Money and Credit.##   Englewood
Cliffs, N.J., : Prentice Hall, [1963].## 491 p. : illus., tables. ;
24 cm.</bib-info>
<z68-doc-number>000000500</z68-doc-number>
<z68-sequence>00014</z68-sequence>
<z68-order-type>Monograph</z68-order-type>
<z68-order-number>969</z68-order-number>
<z68-open-date>20/03/2001</z68-open-date>
<z68-order-status>Sent to Vendor</z68-order-status>
<z68-order-status-date>18/07/2001</z68-order-status-date>
<z68-arrival-status>Complete</z68-arrival-status>
</section-01>

</printout>
```

Multiple Section XML Files

Some queries have data that refers to multiple items. For example, the **Patron Circulation Summary,** accessed from the **Circulation** GUI, contains the following structure:

`Section-01` – once for patron details
`Section-02` – repeated for loans
`Section-03` – repeated for holds

This type of query generates a very large XML file, composed of data and data tags from all of the relevant Oracle Z tables. Here are a few samples of the XML file generated when the query is run:

`<section-01>` containing the patron details:

```
…/…
<z302-id>0245</z302-id>
<z302-proxy-for-id></z302-proxy-for-id>
<z302-primary-id></z302-primary-id>
<z302-name-key>alex johns 0245</z302-name-key>
<z302-open-date>23/08/2000</z302-open-date>
<z302-update-date>23/07/2002</z302-update-date>
<z302-con-lng>ENG</z302-con-lng>
<z302-alpha>L</z302-alpha>
<z302-name>Alex, Johns</z302-name>
<z302-title>Dr.</z302-title>
…/…
```

The first `<section-02>` containing details of a loan

```
…/…
<bib-info>Journal of sounds</bib-info>
<z36-doc-number>000007592</z36-doc-number>
<z36-item-sequence>000030</z36-item-sequence>
<z36-id>0245</z36-id>
<z36-number>000003680</z36-number>
<z36-material>ISSUE</z36-material>
<z36-sub-library>Law Library</z36-sub-library>
<z36-status>Active</z36-status>
<z36-loan-date>14/07/2002</z36-loan-date>
…/…
```

The second <section-02> containing details of a second loan

```
…/…
<section-02>
<bib-info>##Smith, K. : The List of Requests</bib-info>
<z36-doc-number>000005869</z36-doc-number>
<z36-item-sequence>000001</z36-item-sequence>
<z36-id>0245</z36-id>
<z36-number>000001594</z36-number>
<z36-material>BOOK</z36-material>
<z36-sub-library>Lincoln Library</z36-sub-library>
<z36-status>Active</z36-status>
<z36-loan-date>12/03/2002</z36-loan-date>
…/…
```

After that, the first <section-03>, containing details of a hold request:

```
…/…
<bib-info>: Euclidean Quantum Gravity /Editors, G.W. Gibbons, S.W.
Hawking</bib-info>
<z30-doc-number>3326</z30-doc-number>
<z30-item-sequence>20</z30-item-sequence>
<z30-barcode>3326-20</z30-barcode>
<z30-sub-library>Science Library</z30-sub-library>
<z30-material>Book</z30-material>
<z30-item-status>OrderInitiation</z30-item-status>
<z30-open-date>17/05/2002</z30-open-date>
<z30-update-date></z30-update-date>
<z30-cataloger>DEMO</z30-cataloger>
<z30-date-last-return></z30-date-last-return>
<z30-hour-last-return></z30-hour-last-return>
…/…
```

And then a second <section-03>, containing details of another hold request:

```
…/…
<section-03>
<bib-info>: Lectures in computer science</bib-info>
<z30-doc-number>3434</z30-doc-number>
<z30-item-sequence>30</z30-item-sequence>
<z30-barcode>1701</z30-barcode>
<z30-sub-library>Archives Library Köln</z30-sub-library>
<z30-material>Book</z30-material>
<z30-item-status>OrderInitiation</z30-item-status>
<z30-open-date>17/06/2002</z30-open-date>
<z30-update-date></z30-update-date>
…/…
```

And finally, a third <section-03>

```
<section-03>
<bib-info>## Hawking, S. W. (Stephen W.) : A Brief History of Time :
From the Big Bang to Black Holes /Stephen W. Hawking ; Introduction
by Carl Sagan ; illustrations by Ron Miller.</bib-info>
…/…
```

The resulting HTML file, after XSL processing, looks like this:

23/07/2002
Bor-list-00

Patron Circulation Summary

Ex Libris University Libraries
222 Aleph Causeway
Chicago, IL 60614
thechoice@exlibris-usa.com
Tel# 773.404.5527

<section-01> patron information

Dr. Alex Johns
119 Station Road
Hayes, Middlesex, UK
UB3 4BX
Alex.Johns@exlibris.co.uk

Patron ID: 0245

Loans

Bib Info	Due Date	Description	Sublibrary	Collection	Item status	Call No. 1	Barcode	Proxy ID
Journal of sounds	17/07/2002	2000 1 1	Law Library		One Day Loan		* 7 5 9 2 - 3 0 *	
The List of Requests/ Smith, K.	12/09/2002		Lincoln Library	ILL	ILL Home Loan		* 5 8 6 9 - 1 *	

Holds

Bib Info	Description	Sublibrary	Collection	Call No. 1	Open Date	End Request Date
Euclidean Quantum Gravity /Editors, G.W. Gibbons, S.W. Hawking.		Science Library	General		15/07/2002	31/12/2002
Lectures in Computer Science		Archives Library Köln	General		17/06/2002	17/06/2003
Hawking, S. W. (Stephen W.) : A Brief History of Time: From the Big Bang to Black Holes /Stephen W. Hawking ; Introduction by Carl Sagan ; illustrations by Ron Miller		Science Library	Depository	QB981 .H377	02/08/2001	02/08/2002

2.1 The ALEPH Translation Mechanism

The ALEPH translation mechanism is responsible for changing the data from database data to meaningful formatted data.

Database Data	Printform Data
20020415 →	15/04/2002
Y →	Yes
000430 →	430

In `xxx01/form_<lng>` there are two types of files:

- `xxxx[-nn].xsl` - the XSL print templates. these are explained in *Chapter 3, XSL in ALEPH*.
- `global.trn` and `[form name].trn` (for example, `serials-claim-report.trn`). These are ALEPH tables which contain data relating to the ALEPH translation rules. Here is an extract from the `global.trn` ALEPH table:

```
!                                              m
!                                              /
!tag                                 type      s parameters
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!-!!!!!!!!!!-!-!!!!!!!!!!!!!!!!!->
! general values
.../...
z68-material-type                    pc-tab-exp s acq_order_material
z68-method-of-aquisition             pc-tab-exp s acq_order_method
z68-no-units                         integer    s
z68-open-date                        date       s
z68-order-date                       date       s
z68-order-delivery-type              pc-tab-exp s acq_order_delivery
z68-order-group                      pc-tab-exp s acq_order_group
z68-order-status                     pc-tab-exp s acq_order_status
z68-order-status-date                date       s
z68-order-type                       text       s m=monograph s=serial
o=standing
.../...
```

Col. 1 : field name - XML tag

Col. 2 : data type - ALEPH translation method

Col. 3 : single / multiple – use either `S` or `M`

Col. 4 : (additional) parameters

`M` is used in Col. 3 when data is composed of several codes delimited by spaces, and each is less than 100 characters.

Example:

```
<p-currency-name>usd gbp jpy</p-currency-name>
```

The ALEPH translatation table has:

```
!tag                                type         parameters
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!-!!!!!!!!!!-!-!!!!!!!!!!!!!!!!!->
p-currency-name                     currency   m
```

And the result is a comma-delimited list of ALEPH translations:

```
<p-currency-name>us dollar, british pound, japanese yen</p-currency-
name>
```

First, the mechanism searches for ALEPH translation rules in the specific `<form name>.trn` ALEPH table. If a rule is found for the specific field, it is translated using this rule. If not, the mechanism starts to browse the `global.trn` file. If a rule is found, the data is translated using this rule. If not, then the original data are inserted into the XML file.

The special ALEPH translation keyword `NONE` indicates no ALEPH translation whatsoever.

The sequence of the translation file depends on the information contained in the standard header of any XML template. For example:

```
<form-name>acq-s-order-slip</form-name>
<form-language>GER</form-language>
<form-format>01</form-format>
```

The form number (`<form-format>`) can be any 2-digit number. If the `xxxxx-nn.xsl` is not found, the mechanism searches for `xxxxx.xsl`.

The language (`<form-language>`) can be any defined language. If the directory is not found, the default is `form_eng`.

The ALEPH `xxx.trn` file is searched in the following order:

`/usm01/form_ger/acq-s-order-slip-01.trn` (format of the form)
`/usm01/form_ger/acq-s-order-slip.trn` (name of the master version of the form)
`/usm01/form_ger/global.trn` (file containing global `trn` definitions)

If the translation file is not found, the system will search again based on `$control_lng`.

ALEPH translation rules can contain more than one instruction. For example, you can choose to translate a decimal number in two steps:

1. Delete leading zeros
2. Delete the + sign for positive numbers

XML before ALEPH Translation	XML after ALEPH Translation
<?xml version="1.0"?> <printout> <form-name>acq-m-order-info</form-name> <form-language>eng</form-language> <form-format>00</form-format> <section-01> <form-date>**20020219**</form-date> <z68-doc-number>**000000230**</z68-doc-number> <z68-sequence>**00007**</z68-sequence> <z68-order-type>**m**</z68-order-type> <z68-open-date>**20011021**</z68-open-date> <z68-order-status>**sv**</z68-order-status> <z68-arrival-status>**c**</z68-arrival-status> <z68-sub-library>**urlec**</z68-sub-library>	<?xml version="1.0"?> <printout> <form-name>acq-m-order-info</form-name> <form-language>eng</form-language> <form-format>00</form-format> <section-01> <form-date>**19/02/2002**</form-date> <z68-doc-number>**230**</z68-doc-number> <z68-sequence>**7**</z68-sequence> <z68-order-type>**monograph**</z68-order-type> <z68-open-date>**21/10/2001**</z68-open-date> <z68-order-status>**sent to vendor**</z68-order-status> <z68-arrival-status>**complete**</z68-arrival-status> <z68-sub-library>**uelec reading room**</z68-sub-<....

What Can be Translated?

The values listed here refer to the ALEPH translation codes in col. 2 (data type).

`add-sign -` adds a minus (`-`) or a plus (`+`) depending on the credit/debit value (`c`, `d`).

`cash-statu/cash-desc` – returns the relevant text for cash status and description (for example, `paid, not paid`) using the `cash_status_heading` parameter in `error_<lng>.`

`collection` – returns the full name of the item collection, using `tab40.<lng>.`

`credit-txt/debit-txt` – replaces signs with text. Adds text specified in the parameter for sums proceeded by `+` or `-`.

`currency` – returns the currency text as defined in the **Z83** currency table.

`date` – retrieves a date string and separates the year, month, day with /. No parameter required.

`decimal` - formats decimal numbers by deleting leading zeros before the decimal number, and deleting zeros after the decimal point.

`del-sign -` removes `+` or `-` from `prefix.`

`integer` – formats non-decimal numbers by suppressing leading zeros.

`ITEM-STA` – returns the item status using `tab15.<lng>.`

`LOAN-STA` – returns the loan status including due date, transit, lost, recall, and so on.

`LOCATION/LOCATION_B` – formats call numbers.

`NONE` – returns the original value, no parameter required.

`OBJ-CODE -` returns the Budget object code text as defined.

in `pc_tab_exp_field.<lng>` or other values as needed.

`pc-tab-exp` – translates a code value to text, using `pc_tab_expand_field.<lng>`

`SIGN1` – provides accounting notation for signed numbers:

- *number* is translated to *(number)*. For example, *-2013* becomes *(2013)*.
+ *number* is translated to *number*. For example, *+2013* becomes *2013*.

`SIGN2` - provides accounting notation for signed numbers:

- *number* is kept as *–number*. For example, *-2013* stays as *–2013*.
+ *number* is translated to *number*. For example, *+2013* becomes *2013*.

`SUB-LIB` – returns the sublibrary name as defined in `tab_sub_library.<lng>.`

TEXT – Free text translation. Replaces the code with the next word coming immediately after the = sign, and puts in the param-column the codes and the values combined with the = sign. If you want to put more than one code, separate them with one or more blanks (for example, A=abc B=def). You can put up to 100 codes in the parameters column. Each parameter can be a maximum of 100 characters long. If the replaced text is more than one word, combine the words with the _ sign (for example, hello_world).
TIME – separates hours, minutes, seconds with /. No parameter required.
Z30-MATER – returns the item material type, using tab25.**<lng>**.

The translate_on / translate_off Mechanism

To use the translate_on / translate_off mechanism, from the command prompt, enter as appropriate:

```
>>translate_on
```

- The translate_off command switches the translation mechanism off.
- The translate_on command switches the translation mechanism on.

The translate_on / translate_off mechanism is useful when analyzing problems or checking real data. When using the translate_on / translate_off mechanism, you must restart the servers/batch queue.

2.1.1 Translating Due Dates

In XML-XSL printouts and in GUI HTML information (based on templates defined in ./usm50/pc_display_eng), z36-due-date can be translated into the "effective due date" by defining the following setting in a .trn file (./usm01/form_eng/global.trn or a specific translation file):

```
!                                              M
!                                              /
!Tag                               Type        S Parameters
!!!!!!!!!!!!!!!-!!!!!!!!!!-!-!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
z36-due-date    DUE-DATE   S z36-recall-date z36-recall-due-date
```

The translation process uses the get_effective_due_date routine: the tab100 variable RECALL-METHOD and the Z36 fields Z36-DUE-DATE, Z36-RECALL-DATE and Z36-RECALL-DUE-DATE are all taken into account in order to generate the effective due date.

2.1.2 Summary of XML in ALEPH

- Each section with the same name contains the same type of data (that is, the same tags).
- The values (tag contents) differ according to the item.
- Most XML files contain one to three different sections (that is, section-01 to section-03).
- The highest possible section number available is 07.
- A data translating mechanism handles format and display related issues.

3 XSL in ALEPH

An XSL file in ALEPH consists of a set of templates. Each template matches a set of elements in the source XML file and then extracts the contents of the matched elements to a resulting HTML file. The resulting HTML file forms the basis for the printout.

3.1 Structure of a Template - acq-s-order-slip.xsl

acq-s-order-slip.xsl is a basic version of an XSL template suited for a serial order slip letter. In this chapter, we will examine it in detail. First, let us take a look at a printout:

15/07/2002

acq-s-order-slip-01

Acquisitions Order Slip

Acquisitions Unit 1
Manag. Building
Ex Libris University
777 Biblio Byway
Chicago, IL 60614
thechoice@exlibris-usa.com
Tel# 773.404.5327

AMERICAN METEOROLOGICAL SOCIETY
45 BEACON STREET
BOSTON, MA 02108

Dear Sir/Madam,

We would like to place an order for the following items:

Fellner, William John, 1905-1983.
Correcting taxes for inflation / William Fellner, Kenneth W. Clarkson, John H. Moore.
Washington : American Enterprise Institute for Public Policy Research, 1975.
47 p. ; 23 cm.

Order Number:	593	**Order Date:**	15/07/2002
No. of Items:	3	**Claim Date:**	04/08/2002
Sublibrary:	Education Library	**Unit Price:**	25.00
		Total Price:	75.00
		Currency:	US Dollar

Trans. Type:	Budget Number:	Open Date:	Currency:	Original Sum:	Local Sum:
Encumbrance	MAR-2002	15/07/2002	US Dollar	75.00	15.00

Sincerely,
Acquisitions Department

Its underlying XSL looks like this:

Master sections (explained later in this chapter)

```
<xsl:stylesheet
   xmlns:xsl="http://www.w3.org/1999/XSL/Transform" version="1.0">
<xsl:include href="funcs.xsl"/>

<xsl:template match="/">
       <xsl:call-template name="header"/>

    <!--section-01 (SPLIT)-->
    <xsl:for-each select="//section-01">
       <xsl:call-template name="section-01"/>
    </xsl:for-each>

    <!--section-02 (GRID)-->
    <xsl:for-each select="//section-02">
       <xsl:if test="position() = 1">
          <xsl:call-template name="section-02">
             <xsl:with-param name="header" select="'header'"/>
          </xsl:call-template>
       </xsl:if>
       <xsl:call-template name="section-02"/>
    </xsl:for-each>

    <!--section-03 (FREE)-->
    <xsl:for-each select="//section-03">
       <xsl:call-template name="section-03"/>
    </xsl:for-each>

    <xsl:call-template name="signature"/>
</xsl:template>
```

Data sections (explained later in this chapter)

```
    <!-- START DATA -->
<xsl:template name="header">
    <xsl:call-template name="header-gen">
       <xsl:with-param name="title" select="'Acquisitions Order
Slip'"/>
    </xsl:call-template>
</xsl:template>

<!--SECTION-01  (SPLIT)-->
<xsl:template name="section-01">
    <xsl:call-template name="sublib-address"/>
    <xsl:call-template name="vendor-address"/>
    <xsl:call-template name="generic-line">
      <xsl:with-param name="line" select="'salutation_string##We
would like to place an order for the following items:'"/>
    </xsl:call-template>
    <xsl:call-template name="salutation-end"/>
    <xsl:call-template name="bib-info-hdr"/>
    <xsl:call-template name="table-split-open"/>
    <xsl:call-template name="display-gen-split">
       <xsl:with-param name="label" select="'Order Number:'"/>
       <xsl:with-param name="value" select="./z68-order-number"/>
    </xsl:call-template>
    <xsl:call-template name="display-gen-split">
       <xsl:with-param name="label" select="'Vendor Ref. No:'"/>
       <xsl:with-param  name="value"  select="./z68-vendor-reference-
no"/>
    </xsl:call-template>
    <xsl:call-template name="display-gen-split">
       <xsl:with-param name="label" select="'No. of Items:'"/>
       <xsl:with-param name="value" select="./z68-no-units"/>
    </xsl:call-template>
```

```
    <xsl:call-template name="display-gen-split">
       <xsl:with-param name="label" select="'Quantity Note:'"/>
       <xsl:with-param name="value" select="./z68-quantity-text"/>
    </xsl:call-template>
    <xsl:call-template name="display-gen-split">
       <xsl:with-param name="label" select="'Subs. start date:'"/>
       <xsl:with-param  name="value"  select="./z68-subscription-date-
from"/>
    </xsl:call-template>
    <xsl:call-template name="display-gen-split">
       <xsl:with-param name="label" select="'Subs. end date:'"/>
       <xsl:with-param  name="value"  select="./z68-subscription-date-
to"/>
    </xsl:call-template>
    <xsl:call-template name="display-gen-split">
       <xsl:with-param name="label" select="'Note:'"/>
       <xsl:with-param name="value" select="./z68-vendor-note"/>
    </xsl:call-template>
    <xsl:call-template name="display-gen-split">
       <xsl:with-param name="label" select="'Sublibrary:'"/>
       <xsl:with-param name="value" select="./z68-sub-library"/>
    </xsl:call-template>
    <xsl:call-template name="table-split-right"/>
    <xsl:call-template name="display-gen-split">
       <xsl:with-param name="label" select="'Order Date:'"/>
       <xsl:with-param name="value" select="./z68-order-date"/>
    </xsl:call-template>
    <xsl:call-template name="display-gen-split">
       <xsl:with-param name="label" select="'Claim Date:'"/>
       <xsl:with-param name="value" select="./z68-eda"/>
    </xsl:call-template>
    <xsl:call-template name="display-gen-split">
       <xsl:with-param name="label" select="'Rush:'"/>
       <xsl:with-param name="value" select="./z68-rush"/>
    </xsl:call-template>
    <xsl:call-template name="display-gen-split">
       <xsl:with-param name="label" select="'Unit Price:'"/>
       <xsl:with-param name="value" select="./z68-unit-price"/>
    </xsl:call-template>
    <xsl:call-template name="display-gen-split">
       <xsl:with-param name="label" select="'Total Price:'"/>
       <xsl:with-param name="value" select="./z68-total-price"/>
    </xsl:call-template>
    <xsl:call-template name="display-gen-split">
       <xsl:with-param name="label" select="'Currency:'"/>
       <xsl:with-param name="value" select="./z68-e-currency"/>
    </xsl:call-template>
    <xsl:call-template name="table-split-close"/>
    <xsl:call-template name="table-open"/>
    <xsl:call-template name="display-gen">
       <xsl:with-param name="label" select="'Send Directly to:'"/>
       <xsl:with-param name="value" select="''"/>
       <xsl:with-param name="display" select="'always'"/>
    </xsl:call-template>
    <xsl:call-template name="table-close"/>
    <xsl:call-template name="patron-address"/>
</xsl:template>

    <!--SECTION-02  (GRID)-->

<xsl:template name="section-02">
  <xsl:param name="header"/>
  <xsl:if test="$header!=''">
   <xsl:call-template name="start-grid"/>
  </xsl:if>
   <tr>
```

```
        <xsl:call-template name="display-grid-gen">
           <xsl:with-param name="label" select="'Trans. Type:'"/>
           <xsl:with-param name="value" select="./z601-type"/>
           <xsl:with-param name="header" select="$header"/>
        </xsl:call-template>
        <xsl:call-template name="display-grid-gen">
           <xsl:with-param name="label" select="'Budget Number:'"/>
           <xsl:with-param name="value" select="./z601-budget-
number"/>
           <xsl:with-param name="header" select="$header"/>
        </xsl:call-template>
        <xsl:call-template name="display-grid-gen">
           <xsl:with-param name="label" select="'Open Date:'"/>
           <xsl:with-param name="value" select="./z601-open-date"/>
           <xsl:with-param name="header" select="$header"/>
        </xsl:call-template>
        <xsl:call-template name="display-grid-gen">
           <xsl:with-param name="label" select="'Currency:'"/>
           <xsl:with-param name="value" select="./z601-currency"/>
           <xsl:with-param name="header" select="$header"/>
        </xsl:call-template>
        <xsl:call-template name="display-grid-gen">
           <xsl:with-param name="label" select="'Original Sum:'"/>
           <xsl:with-param name="value" select="./z601-original-sum"/>
           <xsl:with-param name="type" select="'right'"/>
           <xsl:with-param name="header" select="$header"/>
        </xsl:call-template>
        <xsl:call-template name="display-grid-gen">
           <xsl:with-param name="label" select="'Local Sum:'"/>
           <xsl:with-param name="value" select="./z601-local-sum"/>
           <xsl:with-param name="type" select="'right'"/>
           <xsl:with-param name="header" select="$header"/>
        </xsl:call-template>
   </tr>
</xsl:template>
<!--SECTION-03  (FREE)-->
<xsl:template name="section-03">
</xsl:template>
   <xsl:template name="signature">
        <xsl:call-template name="generic-line">
           <xsl:with-param name="line" select="'####Sincerely,
##Acquisitions Department
'"/>
        </xsl:call-template>
   </xsl:template>
</xsl:stylesheet>
```

Although the code takes up several pages, it is simply a long set of logical rules, translated from top to bottom.

Most ALEPH XSL files have the same structure as `acq-s-order-slip.xsl`:

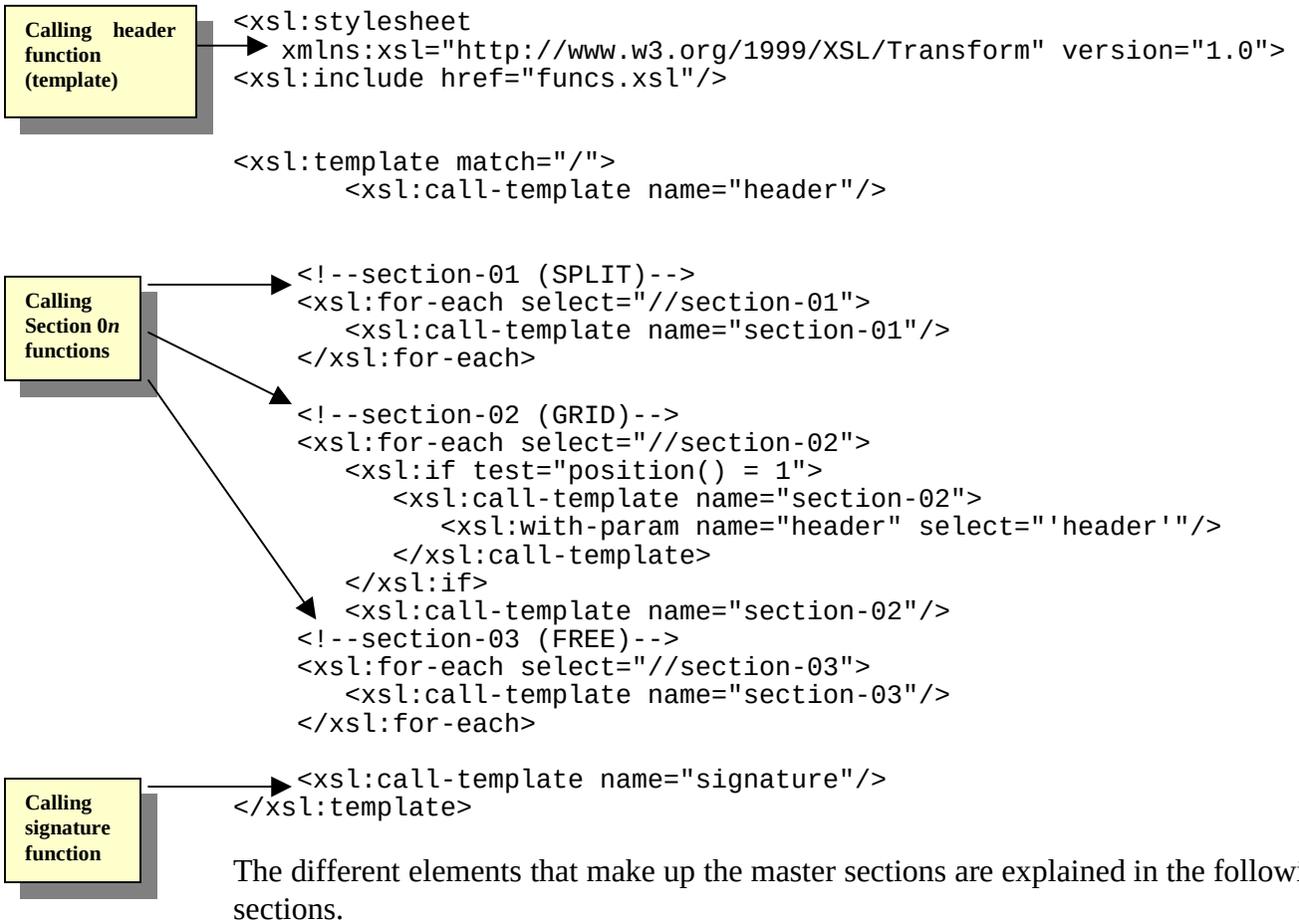
- Master sections
- Data sections

Master sections – contain the functions ensuring that every data section is displayed.
Data sections – contain the functions that display the data of the current visited section.

3.2 Master Sections

In the Master section of `acq-s-order-slip.xsl`, the code consists of three basic elements:

- Calling header function (template)
- Calling section-0*n* functions
- Calling signature function




```
<xsl:stylesheet
   xmlns:xsl="http://www.w3.org/1999/XSL/Transform" version="1.0">
<xsl:include href="funcs.xsl"/>


<xsl:template match="/">
       <xsl:call-template name="header"/>


      <!--section-01 (SPLIT)-->
      <xsl:for-each select="//section-01">
         <xsl:call-template name="section-01"/>
      </xsl:for-each>

      <!--section-02 (GRID)-->
      <xsl:for-each select="//section-02">
         <xsl:if test="position() = 1">
            <xsl:call-template name="section-02">
               <xsl:with-param name="header" select="'header'"/>
            </xsl:call-template>
         </xsl:if>
         <xsl:call-template name="section-02"/>
      <!--section-03 (FREE)-->
      <xsl:for-each select="//section-03">
         <xsl:call-template name="section-03"/>
      </xsl:for-each>

      <xsl:call-template name="signature"/>
</xsl:template>
```

The different elements that make up the master sections are explained in the following sections.

3.2.1 Calling Header Function (Template)

The lines which make up the Calling Header Function always appear at the top of the XSL stylesheet. Although this example is taken from `acq-s-order-slip.xsl`, they are in general use in ALEPH XSL files.

```
<xsl:stylesheet
   xmlns:xsl="http://www.w3.org/1999/XSL/Transform" version="1.0">
```

These lines define XSL version 1.0 as the language on which this file is based.

```
<xsl:include href="funcs.xsl"/>
```

This include line is the first command of all ALEPH XSLs, and ensures that all functions contained in the global `funcs.xsl` file (which contains all general functions) can be used in this file.

```
<xsl:template match="/">
  <xsl:call-template name="header"/>
```

These two lines point to the `header` template, located further down at the beginning of the data sections.

3.2.2 Calling Section-0*n* Functions

The lines which make up the Calling section-0*n* functions always appear underneath the Calling header function. The structure of these lines varies from file to file. These lines ensure that the data sections, consisting of `section-<nn>` templates, are displayed.

A `section-<nn>` template is a repeatable part of each XML; however, a `section-01` usually appears just once. There are three basic formats or layouts in which a given `section-<nn>` can be displayed: **Free; Grid; Split.** Data sections can be in one of three types of layout:

Split - the **Split** layout presents data in two columns (in the `acq-s-order-slip.xsl` template, section-01 is a **Split** layout):

Order Number:	593	**Order Date:**	15/07/2002
No. of Items:	3	**Claim Date:**	04/08/2002
Sublibrary:	Education Library	**Unit Price:**	25.00
		Total Price:	75.00
		Currency:	US Dollar

Grid - the **Grid** layout shows data in row-and-column format with grid lines separating rows and columns (in the `acq-s-order-slip.xsl` template, section-02 is a **Grid** layout).

Trans. Type:	Budget Number:	Open Date:	Currency:	Original Sum:	Local Sum:
Encumbrance	MAR-2002	15/07/2002	US Dollar	75.00	15.00

Free - the **Free** layout presents each data field on a separate line, going down the page (in the `acq-s-order-slip.xsl` template, section-03, the signature section, is a **Free** layout).

Sincerely,
Acquisitions Department

The following example is also taken from `acq-s-order-slip.xsl`:

```
<!--section-01 (split)-->
<xsl:for-each select="//section-01">
   <xsl:call-template name="section-01"/>
</xsl:for-each>
```

In this loop we call a template, `section-01`, which is located under the header template in the data sections. In this case, `section-01` is a **Split** section.

```
<!--section-02 (grid)-->
<xsl:for-each select="//section-02">
   <xsl:if test="position() = 1">
      <xsl:call-template name="section-02">
         <xsl:with-param name="header" select="'header'"/>
      </xsl:call-template>
   </xsl:if>
   <xsl:call-template name="section-02"/>
```

In this loop, a `section-02` template, is called. In this case, `section-02` is a **Grid** section.

```
<!--section-03 (free)-->
<xsl:for-each select="//section-03">
   <xsl:call-template name="section-03"/>
</xsl:for-each>
```

In this loop, a `section-03` template, is called. In this case, `section-03` is a **Free** section.

3.2.3 Calling Signature Function

The lines which make up the Calling signature function always appear after the Calling section-<0*n*> functions.

```
<xsl:call-template name="signature"/>
```

These lines ensure that the signature section, consisting of a `signature` template, appears at the end of the printout.

3.2.4 Functions in the Master Section

There are 2 XSL elements used in the header section of the XSL, `for-each` and `section-0n`:

```
<xsl:for-each select="//section-0n"> :
```

`for-each` instructs the XSL processor to look for every occurrence of the tag "`section-0n`" and to do something with its contents. Each section is visited in the order of its appearance in the XML file.

```
<xsl:call-template name="section-0n"/>:
```

When a "`section-0n`" parameter is encountered, a function called "`section-0n`" is called. The context of this function is the current "`section-0n`". These functions form the core of the rest of the XSL file. These functions are examined later on in this document.

Note that `grid-open` and `table-close` are functions that are not found in the XSL template. They are utility functions used by most templates and defined in one of several common files used by all templates.

3.3 Data Sections

The data part of the XSL includes all the `section-0n` functions that refer to actual fields (tags) of the XML file to be displayed.

Most ALEPH XSL templates have a similar structure, namely:

- For the opening part of the XML, display the form data in the header
- For every `section-01,` display all relevant current `section-01` data
- For every `section-02,` display all relevant current `section-02` data

And so on until the highest `section-0n` of the XML file is reached.

Some basic blocks that appear in many templates, such as `sublibrary address`, `patron address` and so on, do not appear with explicit tag names – instead, they specify functions to handle them.

For explanations of XSL functions used in ALEPH XSL templates and not explained here, refer to section *6.2 ALEPH XSL Functions.*

The following paragraphs describe in detail the data sections of the `acq-s-order-slip.xsl` template.

3.3.1 Header Section

These lines define how the header of the printout will look

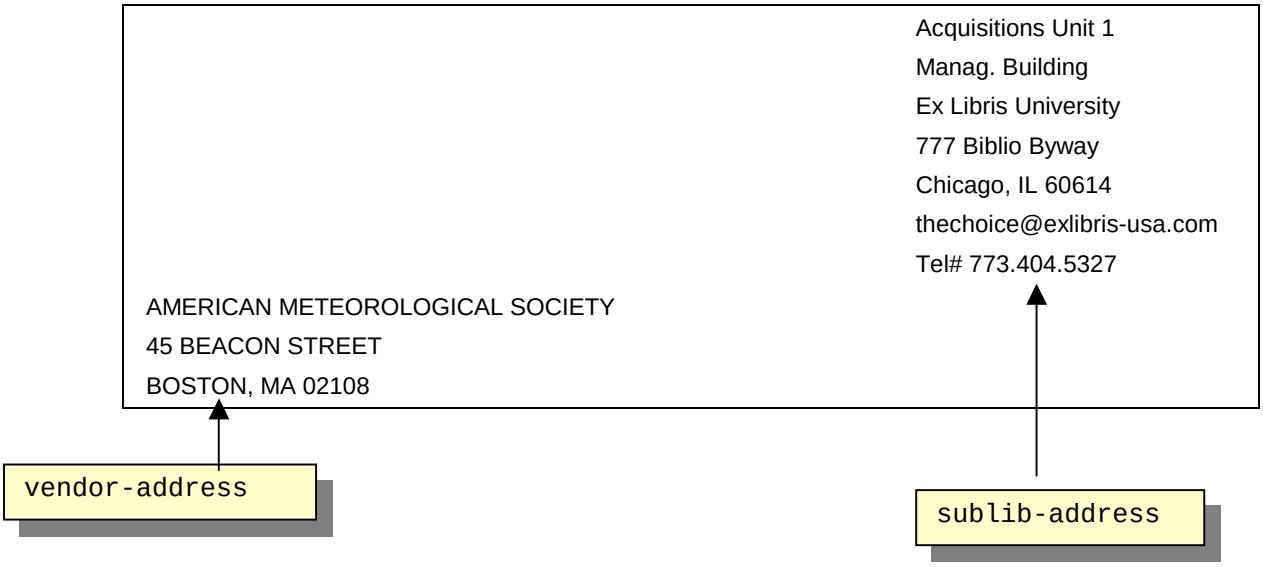
```
    <!-- start data -->
<xsl:template name="header">
    <xsl:call-template name="header-gen">
       <xsl:with-param name="title" select="'Acquisitions Order
Slip'"/>
    </xsl:call-template>
</xsl:template>
```

`header-gen` is a function which is taken from the global `funcs.xsl` template. It takes the general form data from the opening part of the XML file. As you can see, it displays the date, the XML form name and form number, a horizontal line and shows the title in centred alignment.

3.3.2 Section-01 Data Section

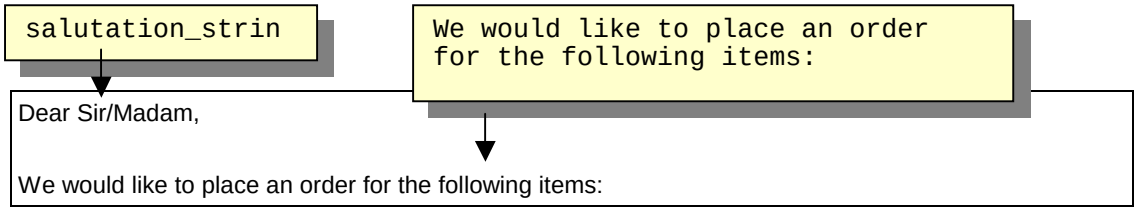
This is how the section-01 displays the sublibrary's address and the vendor's address:

```
<!--section-01  (Split)-->
<xsl:template name="section-01">
    <xsl:call-template name="sublib-address"/>
    <xsl:call-template name="vendor-address"/>
    <xsl:call-template name="generic-line">
    </xsl:call-template>
```



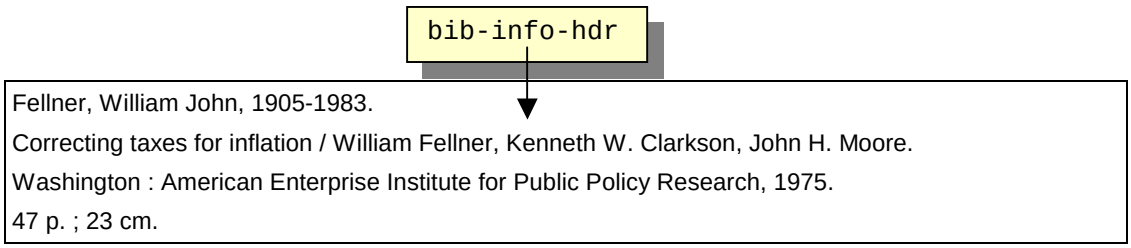
Next, the salutation, called by `generic-line`. Note the use of `##` for a double line break:

```
    <xsl:call-template name="generic-line">
       <xsl:with-param name="line" select="'salutation_string##We
would like to place an order for the following items:'"/>
    </xsl:call-template>
    <xsl:call-template name="salutation-end"/>
```



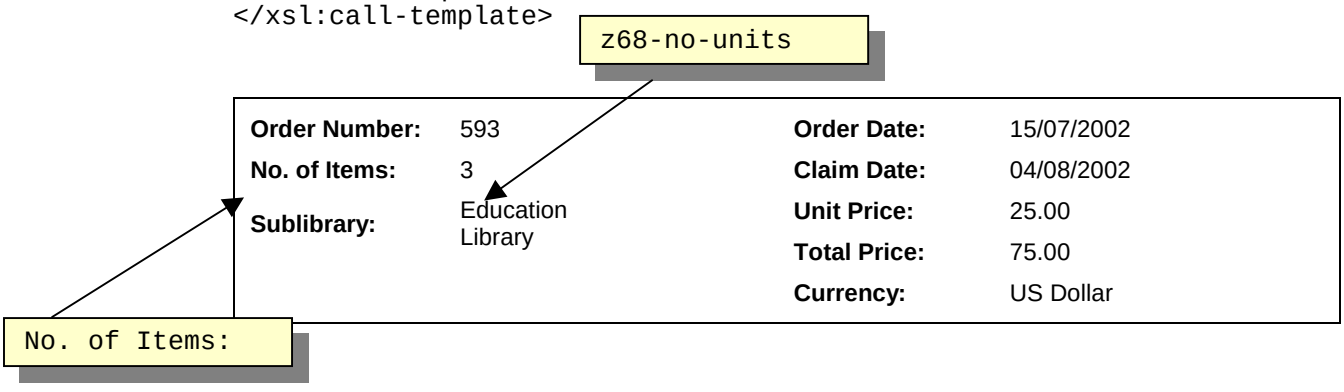
The bibligraphic information concerning the item ordered appears:

```
<xsl:call-template name="bib-info-hdr"/>
```



And now the specifics of the order (note that only these lines in the `section-01` are actually in **Split** format):

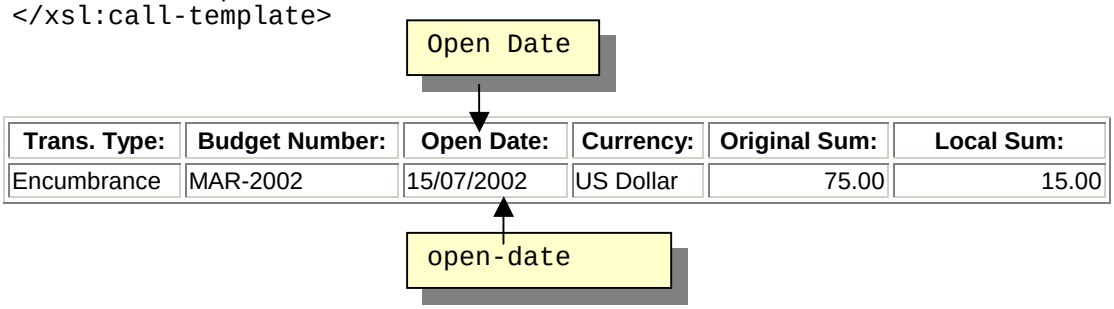
```
<xsl:call-template name="display-gen-split">
   <xsl:with-param name="label" select="No. of Items:'"/>
   <xsl:with-param name="value" select="./z68-no-units"/>
</xsl:call-template>
```



3.3.3 Section-02 (Grid) Data Section

Moving further down, here is a view of part of the `section-02` **Grid**:

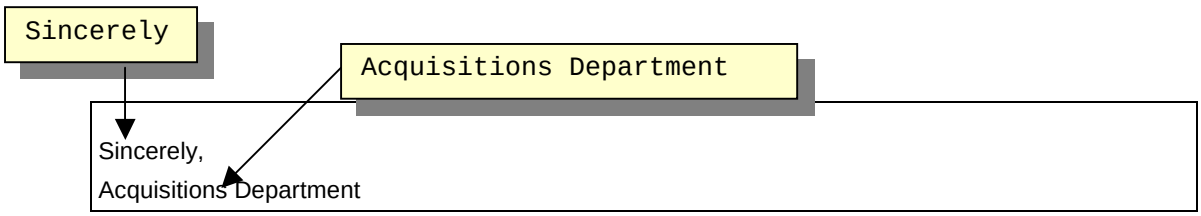
```
<xsl:call-template name="display-grid-gen">
   <xsl:with-param name="label" select="'Open Date'"/>
   <xsl:with-param name="value" select="./open-date"/>
   <xsl:with-param name="header" select="$header"/>
</xsl:call-template>
```



3.3.4 Signature Section (Section-03 (Free))

Finally, the signature lines. In `acq-s-order-slip.xsl`, these lines are in **Free** format:

```
<xsl:template name="signature">
   <xsl:call-template name="generic-line">
      <xsl:with-param name="line"
select="'####Sincerely,##Acquisitions Department'"/>
   </xsl:call-template>
</xsl:template>
```



3.4 Key ALEPH XSL Concepts

3.4.1 Recurrent Blocks

The recurrent blocks are:

```
sublib-address
patron-address
vendor-address
transfer-address
bib-info-hdr
```

The following is an example of a block of data that appears in many templates, always with the same tag name and always displayed in the same way:

```
<xsl:call-template name="sublib-address"/>
```

The "`sublib-address`" function retrieves the relevant tags and adds the necessary HTML tags for the correct display.

3.4.2 Blocks With Parameters

There are others kinds of recurrent blocks: those that need parameters. These are:

```
header-gen
salutation
```

The recurrent block, `header-gen`, (which is explained in *3.3.1 Header Section*) requires a printout's title as a parameter (for example, `<xsl:with-param name="title" select="'Acquisitions Order Slip'"/>`, but `salutation` is more complicated, as it can span many lines and may contain tag data (see following section).

3.4.3 Salutation

`salutation` can span several lines.

```
<xsl:call-template name="generic-line">
       <xsl:with-param name="line"
select='concat("salutation_string##We are sorry to inform you that
the following photocopy, which you requested on   ", //z38-open-date
,", cannot be filled at this time. Please inform us by return mail if
you would like us to supply you with the item when available, or
whether you would prefer to cancel the request.")'/>
       <xsl:with-param name="val1" select="//z38-open-date"/>
    </xsl:call-template>
```

The actual output is:

Dear Sir/Madam,

We are sorry to inform you that the following photocopy, which you requested on 01/01/2002, cannot be filled at this time. Please inform us by return mail if you would like us to supply you with the item when available, or whether you would prefer to cancel the request.

The `generic-line` function is responsible for displaying a line of text in a hardcoded style and width. “Dear Sir/Madam” replaces `salutation_string`. The `##` is the prompt for a new line. The text is concatenated with `z38-open-date`, which is 01/01/2002 in this case.

After all salutation lines have been executed, `salutation-close` must be called.

3.4.4 Regular Data

Regular data that is to be displayed as `label` is displayed using another “common” function – “`display-gen`”, as in:

```
<xsl:call-template name="display-gen">
   <xsl:with-param name="label" select="'Note:'"/>
   <xsl:with-param name="value" select="./z38-note-1"/>
</xsl:call-template>
```

There are several parameters `display-gen` can get. For details see section *6.2 XSL Functions*.

In order to align all values independently of the length of their labels, they must be enclosed in an HTML table. To do this, all `display-gen` parameters must be enclosed between the lines:

```
<xsl:call-template name="table-open"/>
<xsl:call-template name="table-close"/>
```

3.4.5 Grid Sections

A `section-<0n>` template is needed to build a **Grid** layout. A **Grid** section uses the `display-grid-gen` function. **Grid** data and headers are displayed when the `display-grid-gen` function is used. An example:

```
<xsl:call-template name="display-grid-gen">
   <xsl:with-param name="label" select="'Trans. Type:'"/>
   <xsl:with-param name="value" select="./z601-type"/>
</xsl:call-template>
```

which supports this display:

Trans. Type:
Encumbrance

This function can contain many different types of parameter. For further details, see chapter *4, Customizing Templates*.

3.4.6 Differences between Free and Split Sections

The difference between **Free** and **Split** layout is whether the data is enclosed in two columns, or simply line-by-line. Some common functions:

Free: `table-open`; `table-close`
Split: `table-split-open; table-split-right; table-split-close`

In the following example, we can see a "pure" **Split** sections, but both **Free** and **Split** layouts can be mixed in one section – just surround the `display-gen` with the relevant `table-` functions. For more details, see *chapter 4, Customizing Templates*.

```
<!--section-03  (split)-->
<xsl:template name="section-03">
    <xsl:call-template name="table-split-open"/>
    <xsl:call-template name="display-gen">
       <xsl:with-param name="label" select="'additional number 2:'"/>
       <xsl:with-param name="value" select="./z68-order-number-2"/>
    </xsl:call-template>
    <xsl:call-template name="display-gen">
       <xsl:with-param name="label" select="'order group:'"/>
       <xsl:with-param name="value" select="./z68-order-group"/>
    </xsl:call-template>
    <xsl:call-template name="display-gen">
       <xsl:with-param name="label" select="'isbn/issn:'"/>
       <xsl:with-param name="value" select="./z68-isbn"/>
    </xsl:call-template>
    <xsl:call-template name="table-split-right"/>
    <xsl:call-template name="display-gen">
       <xsl:with-param name="label" select="'unit price:'"/>
       <xsl:with-param name="value" select="./z68-unit-price"/>
```

```
    </xsl:call-template>
    <xsl:call-template name="display-gen">
       <xsl:with-param name="label" select="'currency:'"/>
       <xsl:with-param name="value" select="./z68-e-currency"/>
    </xsl:call-template>
    <xsl:call-template name="display-gen">
       <xsl:with-param name="label" select="'price:'"/>
       <xsl:with-param name="value" select="./z68-e-price"/>
    </xsl:call-template>
    <xsl:call-template name="table-split-close"/>
</xsl:template>
```

3.4.7 Signature

`<xsl:call-template name="signature"/>` : this line appears only where a signature is needed. For example, “Sincerely, XX Department”.

4 Customizing XSL Templates

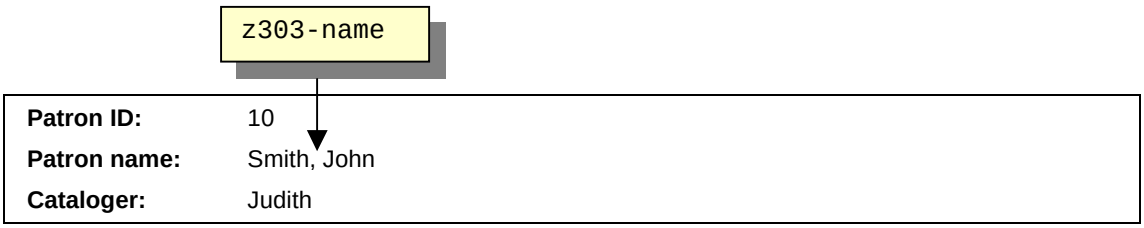
There are several levels of customization and different ways in which to customize.

The rest of this section shows you how you can customize the default XSL templates by using a simple file editor (**vi** on **Unix** or **Notepad** on **Windows**).

4.1 Adding Fields

Before adding a new field to the display, check first if this field is included in the XML printout file. To do this, set your GUI interface print default to raw XML, generate the file, and check the resulting XML file.

Let us take, as an example, `ill-print-letter.xsl`. You want to add `z41-sequence` (ILL request sequence number) after the currently displayed `z303-name`.



The relevant area in the XSL print template is:

```
<xsl:call-template name="display-gen">
   <xsl:with-param name="label" select="'Patron name:'"/>
   <xsl:with-param name="value" select="./z303-name"/>
</xsl:call-template>
<xsl:call-template name="display-gen">
   <xsl:with-param name="label" select="'Cataloger:'"/>
   <xsl:with-param name="value" select="./z41-cataloger"/>
</xsl:call-template>
```

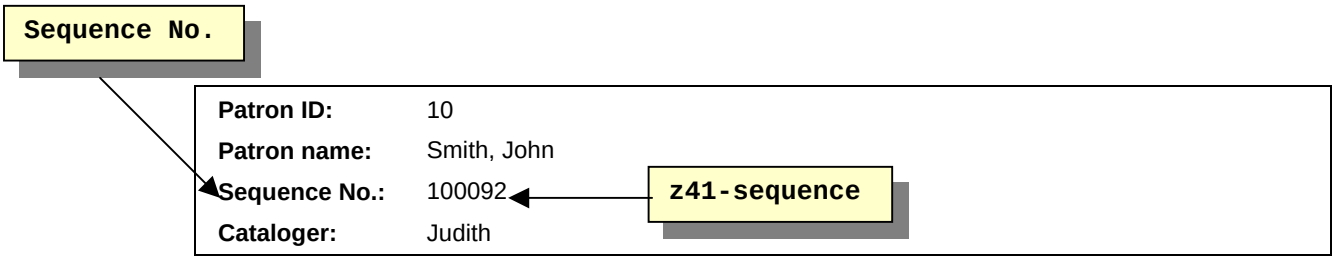
Copy and paste the bold lines:

```
<xsl:call-template name="display-gen">
   <xsl:with-param name="label" select="'Patron name:'"/>
   <xsl:with-param name="value" select="./z303-name"/>
</xsl:call-template>
<xsl:call-template name="display-gen">
   <xsl:with-param name="label" select="'Patron name:'"/>
   <xsl:with-param name="value" select="./z303-name"/>
</xsl:call-template>
<xsl:call-template name="display-gen">
   <xsl:with-param name="label" select="'Cataloger:'"/>
   <xsl:with-param name="value" select="./z41-cataloger"/>
</xsl:call-template>
```

then change the pasted `Patron name` to `sequence:` (or to whichever label you want), and `z303-name` to `z41-sequence`.

The new file looks like this:

```
<xsl:call-template name="display-gen">
   <xsl:with-param name="label" select="'Patron name:'"/>
   <xsl:with-param name="value" select="./z303-name"/>
</xsl:call-template>
<xsl:call-template name="display-gen">
   <xsl:with-param name="label" select="'Sequence No.:'"/>
   <xsl:with-param name="value" select="./z41-sequence"/>
</xsl:call-template>
<xsl:call-template name="display-gen">
   <xsl:with-param name="label" select="'Cataloger:'"/>
   <xsl:with-param name="value" select="./z41-cataloger"/>
</xsl:call-template>
```



4.2 Removing Fields

In `ill-print-letter.xsl`, you want to remove the `z303-name` field.

Patron ID:	10
Patron name:	Smith, John
Cataloger:	Judith

The original is:

```
<xsl:call-template name="display-gen">
   <xsl:with-param name="label" select="'Patron name:'"/>
   <xsl:with-param name="value" select="./z303-name"/>
</xsl:call-template>
<xsl:call-template name="display-gen">
   <xsl:with-param name="label" select="'Cataloger:'"/>
   <xsl:with-param name="value" select="./z41-cataloger"/>
</xsl:call-template>
```

Delete the bold lines:

```
<xsl:call-template name="display-gen">
   <xsl:with-param name="label" select="'Cataloger:'"/>
   <xsl:with-param name="value" select="./z41-cataloger"/>
</xsl:call-template>
```

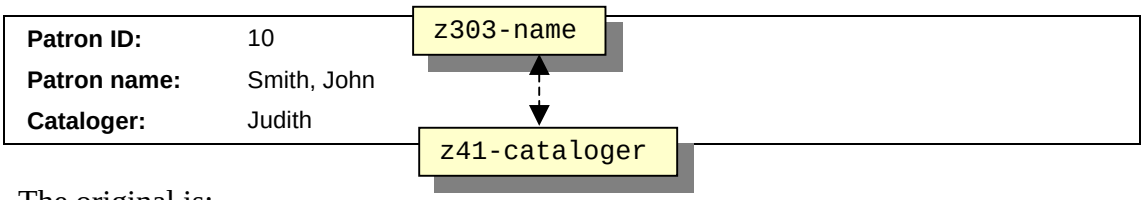
And the patron name is removed from the HTML:

Patron ID:	10
Cataloger:	Judith

4.3 Changing the Order of Fields

The printing order is the order in which the fields appear in the XSL file, therefore you only need to change the order in the file. We will use the same example as before:

In `ill-print-letter.xsl` we want to move `z303-name` after `z41-cataloger`.

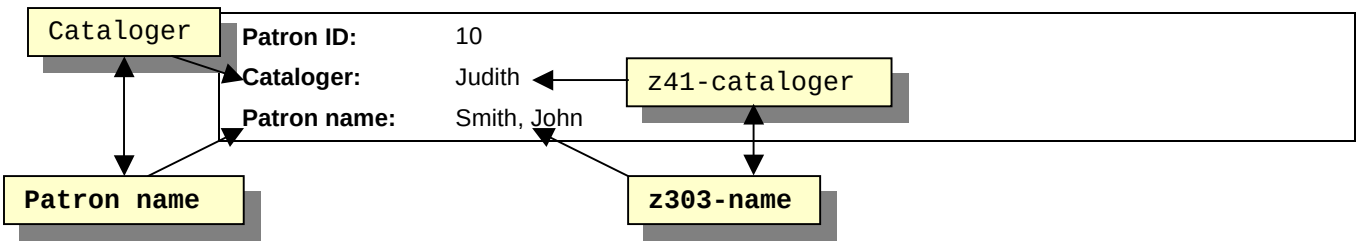


The original is:

```
<xsl:call-template name="display-gen">
   <xsl:with-param name="label" select="'Patron name:'"/>
   <xsl:with-param name="value" select="./z303-name"/>
</xsl:call-template>
<xsl:call-template name="display-gen">
   <xsl:with-param name="label" select="'Cataloger:'"/>
   <xsl:with-param name="value" select="./z41-cataloger"/>
</xsl:call-template>
```

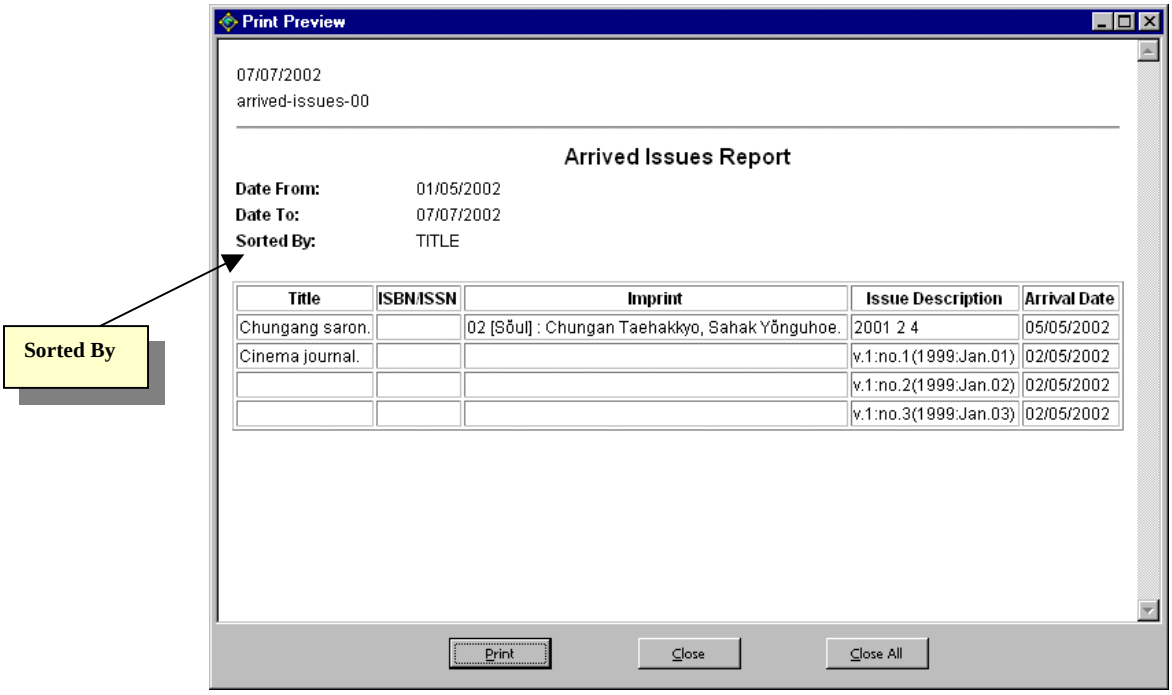
Change it to:

```
<xsl:call-template name="display-gen">
   <xsl:with-param name="label" select="'Cataloger:'"/>
   <xsl:with-param name="value" select="./z41-cataloger"/>
</xsl:call-template>
<xsl:call-template name="display-gen">
   <xsl:with-param name="label" select="'Patron name:'"/>
   <xsl:with-param name="value" select="./z303-name"/>
</xsl:call-template>
```



4.4 Moving Specific Fields in a Report

In certain cases you might want to rebuild a report so that one of the fields (for example, in the `section-01` of the XSL file) prints out in a different location (by itself and without the rest of the data in `section-01`). In the printout example below, the **Sorted By** field appears in the **Free** `section-01`, above the **Grid** `section-02`:



The underlying XSL looks like this:

```
<xsl:stylesheet
   xmlns:xsl="http://www.w3.org/1999/XSL/Transform" version="1.0">
<xsl:include href="funcs.xsl"/>

<xsl:template match="/">
        <xsl:call-template name="header"/>

    <!--section-01 (FREE)-->
    <xsl:for-each select="//section-01">
       <xsl:call-template name="section-01"/>
    </xsl:for-each>

    <!--section-02 (GRID)-->
    <xsl:for-each select="//section-02">
       <xsl:if test="position() = 1">
          <xsl:call-template name="section-02">
             <xsl:with-param name="header" select="'header'"/>
          </xsl:call-template>
       </xsl:if>
       <xsl:call-template name="section-02"/>
    </xsl:for-each>

      </xsl:template>
```

Calling Header Function (Template)

Calling Section-0*n* Functions

End of the Call Functions

Start of Header Data

Start of Section-01 (Free) Data

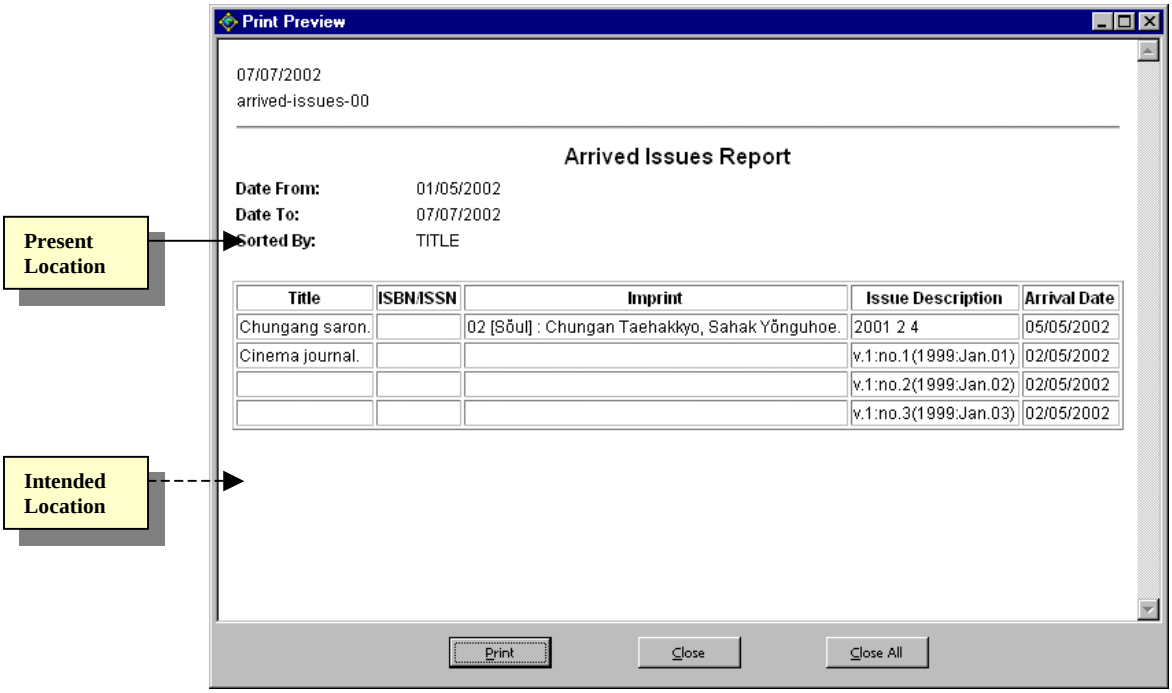
XSL for Sorted By label and value

Start of Section-02 (Grid) Data

End of XSL Template

```
    <!-- START DATA -->
<xsl:template name="header">
    <xsl:call-template name="header-gen">
       <xsl:with-param name="title" select="'Arrived Issues
Report'"/>
    </xsl:call-template>
</xsl:template>

<!--SECTION-01  (FREE)-->
<xsl:template name="section-01">
    <xsl:call-template name="table-open"/>
    <xsl:call-template name="display-gen">
       <xsl:with-param name="label" select="'Date From:'"/>
       <xsl:with-param name="value" select="./date-from"/>
    </xsl:call-template>
    <xsl:call-template name="display-gen">
       <xsl:with-param name="label" select="'Date To:'"/>
       <xsl:with-param name="value" select="./date-to"/>
    </xsl:call-template>
    <xsl:call-template name="display-gen">
       <xsl:with-param name="label" select="'Sorted By:'"/>
       <xsl:with-param name="value" select="./sorted-by"/>
    </xsl:call-template>
    <xsl:call-template name="table-close"/>
</xsl:template>

<!--SECTION-02  (GRID)-->
<xsl:template name="section-02">
  <xsl:param name="header"/>
  <xsl:if test="$header!=''">
   <xsl:call-template name="start-grid"/>
  </xsl:if>
   <xsl:call-template name="table-start-row"/>
       <xsl:call-template name="display-grid-gen">
          <xsl:with-param name="label" select="'Title'"/>
          <xsl:with-param name="value" select="./z13-title"/>
          <xsl:with-param name="header" select="$header"/>
       </xsl:call-template>
       <xsl:call-template name="display-grid-gen">
          <xsl:with-param name="label" select="'ISBN/ISSN'"/>
          <xsl:with-param name="value" select="./z13-isbn-issn"/>
          <xsl:with-param name="header" select="$header"/>
       </xsl:call-template>
       <xsl:call-template name="display-grid-gen">
          <xsl:with-param name="label" select="'Imprint'"/>
          <xsl:with-param name="value" select="./z13-imprint"/>
          <xsl:with-param name="header" select="$header"/>
       </xsl:call-template>
       <xsl:call-template name="display-grid-gen">
          <xsl:with-param name="label" select="'Issue Description'"/>
          <xsl:with-param name="value" select="./z30-description"/>
          <xsl:with-param name="header" select="$header"/>
       </xsl:call-template>
       <xsl:call-template name="display-grid-gen">
          <xsl:with-param name="label" select="'Arrival Date'"/>
          <xsl:with-param name="value" select="./z30-arrival-date"/>
          <xsl:with-param name="header" select="$header"/>
       </xsl:call-template>
   <xsl:call-template name="table-end-row"/>
</xsl:template>
</xsl:stylesheet>
```

Let us assume that you want to place the **Sorted By** field after the table:



In this case you must define a new call function (template). Let us say that you call it `section-01b`.

First, create a new function called `section-01b`.

Start of new section-01b call function

```
<!--SECTION-01  (FREE)-->
<xsl:template name="section-01b">
    <xsl:call-template name="table-open"/>
    <xsl:call-template name="display-gen">
       <xsl:with-param name="label" select="'Sorted By:'"/>
       <xsl:with-param name="value" select="./sorted-by"/>
    </xsl:call-template>
    <xsl:call-template name="table-close"/>
</xsl:template>
```

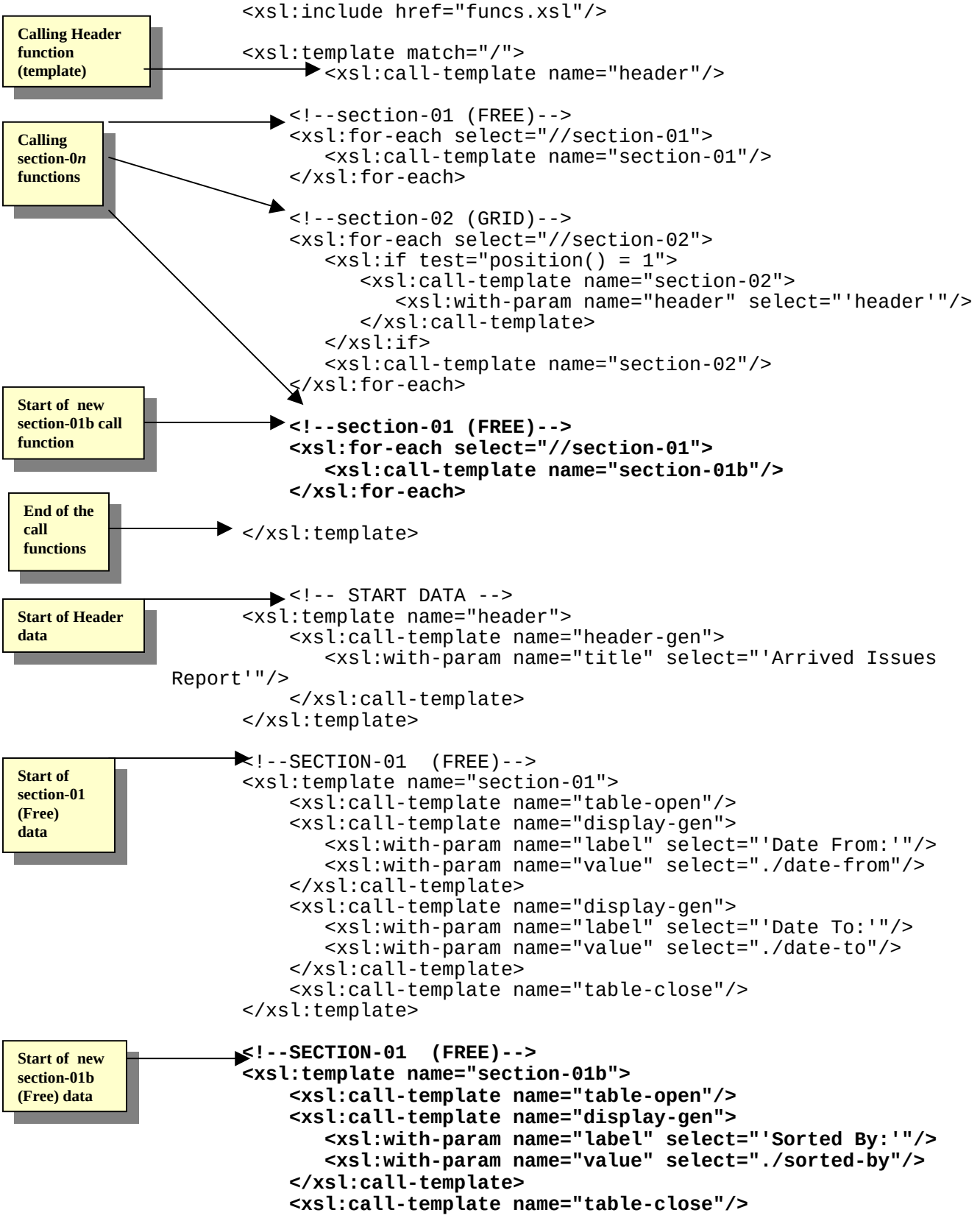
This function displays the **Sorted By** field, but does not control its location. To define the new location of the Sorted By field, paste the following after the `section-02 call-template`:

```
    <!--section-01b (FREE)-->
    <xsl:for-each select="//section-01">
       <xsl:call-template name="section-01b"/>
    </xsl:for-each>
```

To prevent the **Sort By** field printing in its original location; delete the following lines from template `section-01`:

```
    <xsl:call-template name="display-gen">
       <xsl:with-param name="label" select="'Sorted By:'"/>
       <xsl:with-param name="value" select="./sorted-by"/>
    </xsl:call-template>
```

You have finished your editing. Take a look at your new code (the new lines appear in bold):



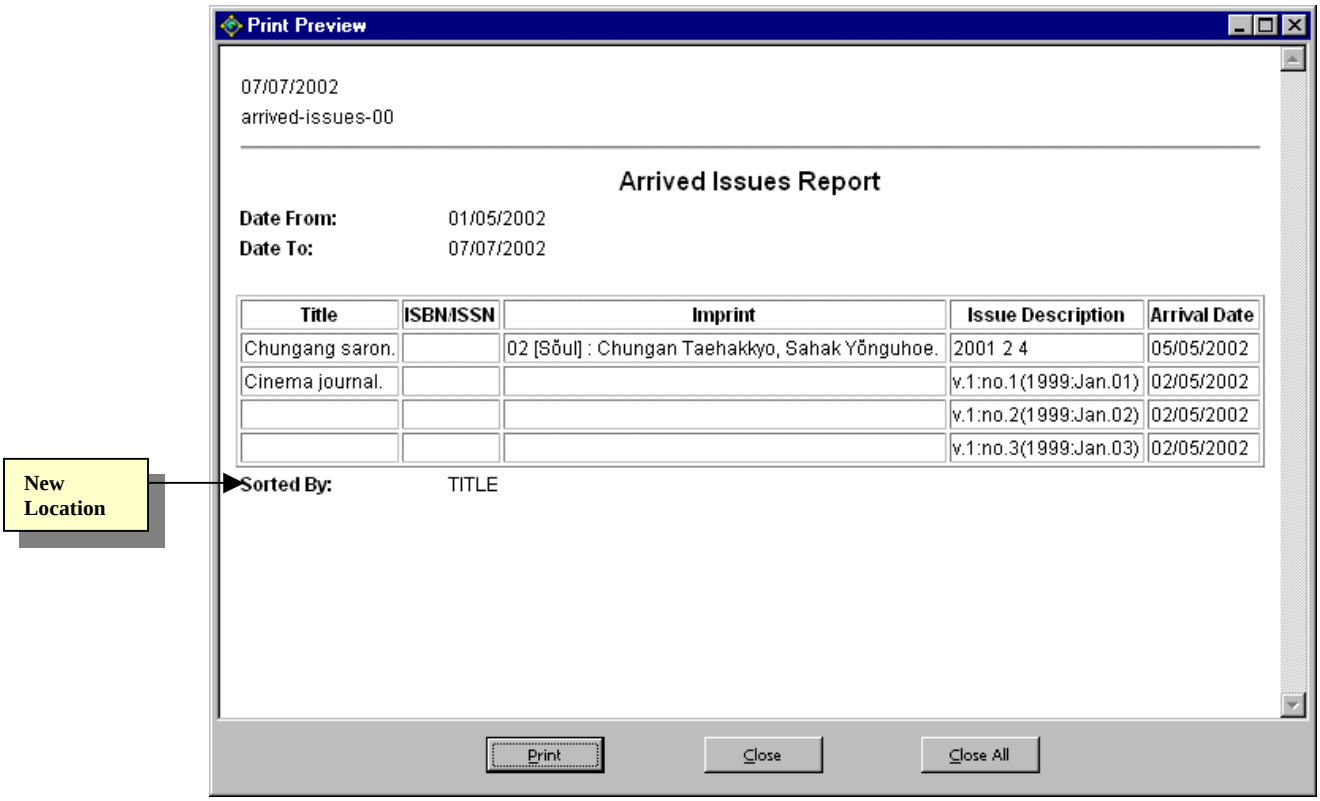

```
      <xsl:stylesheet
         xmlns:xsl="http://www.w3.org/1999/XSL/Transform"
version="1.0">
      <xsl:include href="funcs.xsl"/>

      <xsl:template match="/">
            <xsl:call-template name="header"/>

          <!--section-01 (FREE)-->
          <xsl:for-each select="//section-01">
             <xsl:call-template name="section-01"/>
          </xsl:for-each>

          <!--section-02 (GRID)-->
          <xsl:for-each select="//section-02">
             <xsl:if test="position() = 1">
                <xsl:call-template name="section-02">
                   <xsl:with-param name="header" select="'header'"/>
                </xsl:call-template>
             </xsl:if>
             <xsl:call-template name="section-02"/>
          </xsl:for-each>

          <!--section-01 (FREE)-->
          <xsl:for-each select="//section-01">
             <xsl:call-template name="section-01b"/>
          </xsl:for-each>

      </xsl:template>

          <!-- START DATA -->
      <xsl:template name="header">
          <xsl:call-template name="header-gen">
             <xsl:with-param name="title" select="'Arrived Issues
Report'"/>
          </xsl:call-template>
      </xsl:template>

          <!--SECTION-01  (FREE)-->
      <xsl:template name="section-01">
          <xsl:call-template name="table-open"/>
          <xsl:call-template name="display-gen">
             <xsl:with-param name="label" select="'Date From:'"/>
             <xsl:with-param name="value" select="./date-from"/>
          </xsl:call-template>
          <xsl:call-template name="display-gen">
             <xsl:with-param name="label" select="'Date To:'"/>
             <xsl:with-param name="value" select="./date-to"/>
          </xsl:call-template>
          <xsl:call-template name="table-close"/>
      </xsl:template>

          <!--SECTION-01  (FREE)-->
          <xsl:template name="section-01b">
          <xsl:call-template name="table-open"/>
          <xsl:call-template name="display-gen">
             <xsl:with-param name="label" select="'Sorted By:'"/>
             <xsl:with-param name="value" select="./sorted-by"/>
          </xsl:call-template>
          <xsl:call-template name="table-close"/>
```

```
        </xsl:template>

        <!--SECTION-02  (GRID)-->

        <xsl:template name="section-02">
          <xsl:param name="header"/>
          <xsl:if test="$header!=''">
           <xsl:call-template name="start-grid"/>
          </xsl:if>
           <xsl:call-template name="table-start-row"/>
               <xsl:call-template name="display-grid-gen">
                  <xsl:with-param name="label" select="'Title'"/>
                  <xsl:with-param name="value" select="./z13-title"/>
                  <xsl:with-param name="header" select="$header"/>
               </xsl:call-template>
               <xsl:call-template name="display-grid-gen">
                  <xsl:with-param name="label" select="'ISBN/ISSN'"/>
                  <xsl:with-param name="value" select="./z13-isbn-
issn"/>
                  <xsl:with-param name="header" select="$header"/>
               </xsl:call-template>
               <xsl:call-template name="display-grid-gen">
                  <xsl:with-param name="label" select="'Imprint'"/>
                  <xsl:with-param name="value" select="./z13-imprint"/>
                  <xsl:with-param name="header" select="$header"/>
               </xsl:call-template>
               <xsl:call-template name="display-grid-gen">
                  <xsl:with-param name="label" select="'Issue
Description'"/>
                  <xsl:with-param name="value" select="./z30-
description"/>
                  <xsl:with-param name="header" select="$header"/>
               </xsl:call-template>
               <xsl:call-template name="display-grid-gen">
                  <xsl:with-param name="label" select="'Arrival
Date'"/>
                  <xsl:with-param name="value" select="./z30-arrival-
date"/>
                  <xsl:with-param name="header" select="$header"/>
               </xsl:call-template>
            <xsl:call-template name="table-end-row"/>
        </xsl:template>
        </xsl:stylesheet>
```

Start of section-02 (Grid) data

End of XSL template

The new printout looks like this:



The **Sorted By** field now appears in the **Free** `section-01` below the **Grid** `section-02`.

4.5 Changing the Basic Layout

In general, this kind of change (from **Grid** to **Free** / **Split** or the other way around) is not recommended**.** The principles behind the ALEPH default setup are:

- **Grid** – Repeating section with less than 10 fields
- **Split** – Numerous fields (more than 15) and non-repeatable
- **Free** – Non-repeatable and not as many fields. Also, on rare occasions, repeatable but too many fields for an attractive **Grid**.

Although changing the basic layout is not recommended, it is possible. Here is how it is done:

4.5.1 Free ↔ Split

This is relatively simple as the change is effected on data arranged in one or two columns. The only difference between the two is the table functions that are called.

A **Free** layout is enclosed by:

```
<xsl:call-template name="table-open"/>
<xsl:call-template name="table-close"/>
```

To make it a **Split** layout, replace these lines by:

```
<xsl:call-template name="table-split-open"/>
<xsl:call-template name="table-split-right"/>(at the split point)
<xsl:call-template name="table-split-close"/>
```

And vice versa to change a **Split** layout to a **Free** layout.

4.6 Further Customization

You may want to change fonts, spacing, and so on. To do so, you do not have to change anything in the templates - only in the common functions in the funcs-*.xsl common files. Most printouts are affected by a small group of functions.

4.6.1 Recurring Blocks

You can change the fonts and position of `sublib-address`, `vendor-address`, `transfer-address`, `bib-info-hdr` by changing the `table` definitions in their respective `funcs*xsl` files, and the "`td`" definition of the rows.

For example, here is the XSL code for the `sublib-address` block from `funcs-address.xsl` which can be modified by editing the settings that appear:

```
<xsl:template name="sublib-address">
   <TABLE WIDTH="100%" STYLE="font-size: 9pt; font-family: Arial">
   <tr><td width="70%"></td><td><xsl:value-of select="//sub-library-
address-1-oc
c1"/></td></tr>
   <tr><td width="70%"></td><td><xsl:value-of select="//sub-library-
address-1-oc
c2"/></td></tr>
…/…
```

4.6.2 Free / Split

- The table layout (width, alignment) can be changed globally by editing `table-open` (in `funcs-table.xsl`), or by calling it with parameters from specific templates.
- Edit `table-open` to change the font.
- The spacing between label and value is defined in the following specific functions called by `display-gen`:

`display-not-empty`	Prints when value is present
`display-always`	Prints whether or not value is present
`display-not-empty-barcode`	Prints using barcode font when value is present
`display-always-barcode`	Prints using barcode font whether or not value is present
`display-not-empty-right`	Prints and right-justifies when value is present
`display-always-right`	Prints and right-justifies whether or not value is present

4.6.3 Grid

- Same as for **Free** but using the **Grid** functions accessed via `funcs-grid.xsl`: `grid-table` - `grid-open`
- Spacing – by editing the functions called by `display-grid-gen`:

`Grid-hdr`	Prints data in the **Grid** header
`Grid-data-right`	Prints and right-justifies data in the **Grid**
`Grid-data-barcode`	Prints data in the **Grid** in barcode font
`Grid-data-bib-info`	Prints data in the `bib-info` format

4.6.4 Plain XSLs

When a printout is sent by e-mail, the HTML file (the printout) is always sent as an attachment. The body of the e-mail message is a standard text located in the client's `\alephcom\tab\<lng>\MailHead.dat` file. For example:

```
Dear Sir/Madam,
The University of Ex Libris Library is sending you a mail message in the attached file.

Sincerely,
Library Administrator
```

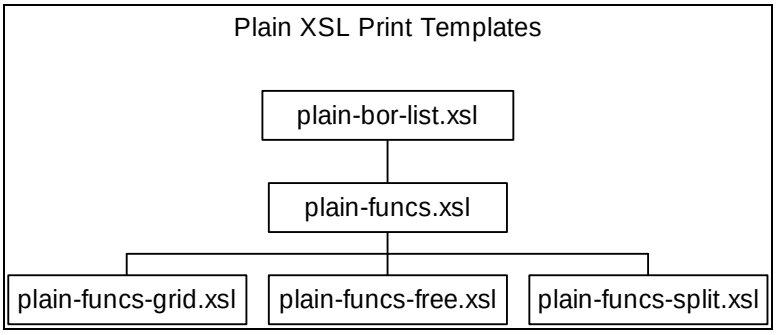
However, you can include the printout data, in plain format, in the body of the e-mail message, in addition to the attached HTML file. In this case, the standard text from `MailHead.dat` is not included. This will occur if there is a `plain-*.xsl` file for the specific printout.

For example, `plain-acq-s-order-slip.xsl` is the plain version of `acq-s-order-slip.xsl`.

The first rows of the XSL file are as follows:

```
<xsl:stylesheet
   xmlns:xsl="http://www.w3.org/1999/XSL/Transform" version="1.0">
<xsl:include href="plain-funcs.xsl"/>
```

`include href` points to `plain-funcs.xsl` instead of `funcs.xsl`. This is the only difference from the regular HTML-creating XSL files. All functions are implemented in the `plain-funcs` as well.



You can send any template in a plain format. The **Grid** or **Split** attributes are not affected when a template is sent in plain format via e-mail.

5 More Information about ALEPH Templates

5.1.1 Template Packaging

The packaging concept is used to ensure swift distribution of the templates to GUI users.

All templates reside in the `form_<lng>` directory of a library (for example, `./usm01/form_eng`). You can use the `path_convert` table (in the `./alephe/tab` directory) to re-direct the file location and maintain all templates in one directory per language.

UTIL I/6 packs all the XSL templates in the `form_<lng>` directory into one file. When a client is opened and connects to a library, they are downloaded to the client subject to a date check.

When a template has been changed, run UTIL I/6 to repack the XSL templates. Reconnect to the database in order to access the new templates package.

Note that UTIL I/6 must only be run manually and cannot be scheduled as an automatic job in the `job_list` table (in the `./alephe/tab` directory).

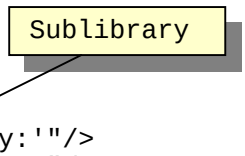
5.1.2 Mail XSLs

There are some XSL stylesheets which have a separate version for printing and for attaching files to outgoing e-mail messages. You can configure different XSL templates for mail by attaching the `mail-` prefix to the template name, (for example, `mail-acq-s-order-slip.xsl`).

5.1.3 Hard-coded Data in XSLs

Hard-coded data in XSL templates can appear in `labels`, `generic-lines`, `signatures`, and so on.

Example:




```
<xsl:call-template name="display-gen">
   <xsl:with-param name="label" select="'Sublibrary:'"/>
   <xsl:with-param name="value" select="./sub-library"/>
</xsl:call-template>
```

The first parameter sent to the `display-gen` function is the `label`. This contains the character string: `"Sublibrary"`. This string can include any legal ASCII character. However as defined in the XML-standard by W3C, there are five characters, which must be replaced by another string for correct XML parsing:

original data	replace with
<	<
>	>
"	"
&	&

The fifth character is ', which should be replaced by & in a normal XML file. However, in the XSL standard, you cannot use an ampersand (&) as a part of a hard-coded string. We recommend using ` instead of '.

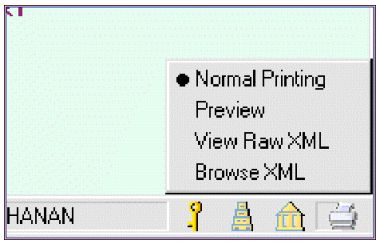
5.2 Viewing Your Changes

Generally you edit XML and XSL files using a simple file editor such as **vi** on **Unix** or **Notepad** on **Windows.** In these editing environments, you cannot see how text and graphics are positioned for printing.

5.2.1 Viewing Changes using the GUI Print Configurations

To review your work, open the appropriate ALEPH GUI (for example, **Acquisitions** for **acq-s-order-slip.xsl).** Every ALEPH GUI module contains a **printer** icon at the extreme right of the status bar at the bottom of the screen.

When you right-click the **printer** icon, a list of available print options appears:



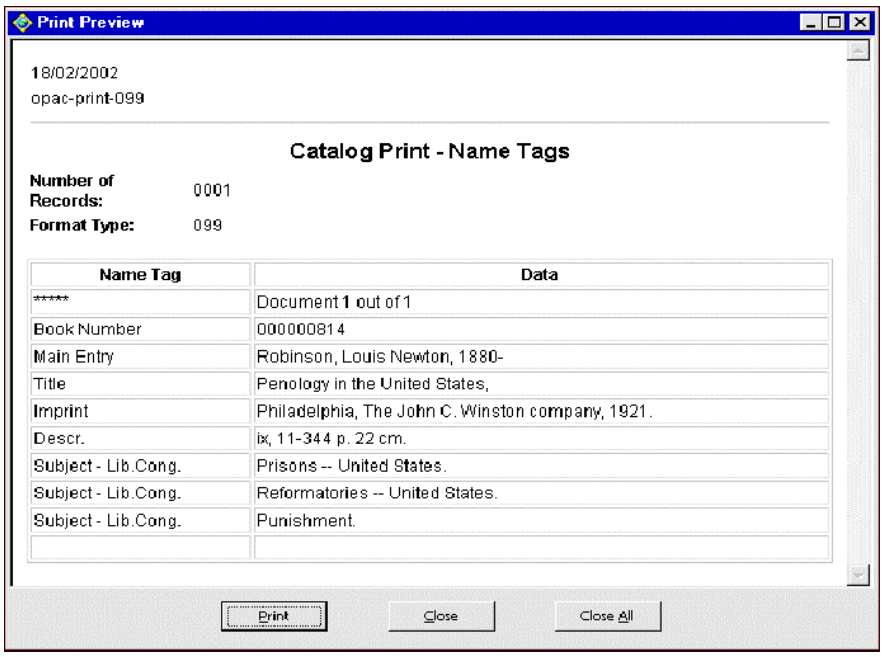
These options are explained below:

Normal Printing
Selecting **Normal Printing** facilitates direct printing, although the actual procedure required to send a print command to the printer varies from template to template. For example, **hold-request-letter.xsl** can be printed by pressing the Letter button on the Hold Requests window.

Print settings, which control the sequence of events when a print command is initiated, are defined for each template in the `print.ini` file. For example, sending a print command might cause the printout to be sent directly to the printer, or it might cause the Print setup window to appear, depending on the corresponding settings in `print.ini`.

Preview

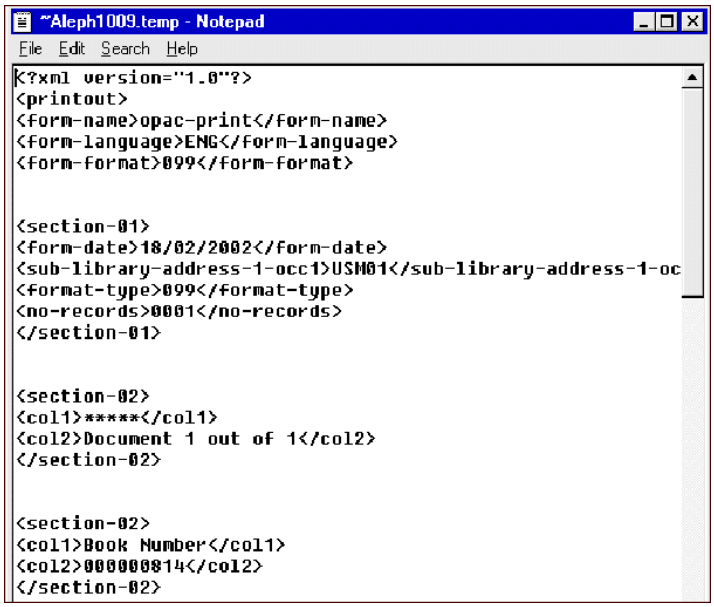
When **Preview** is selected, clicking the **Print** command lets you preview the printout:



You can then click **Print** to print the file.

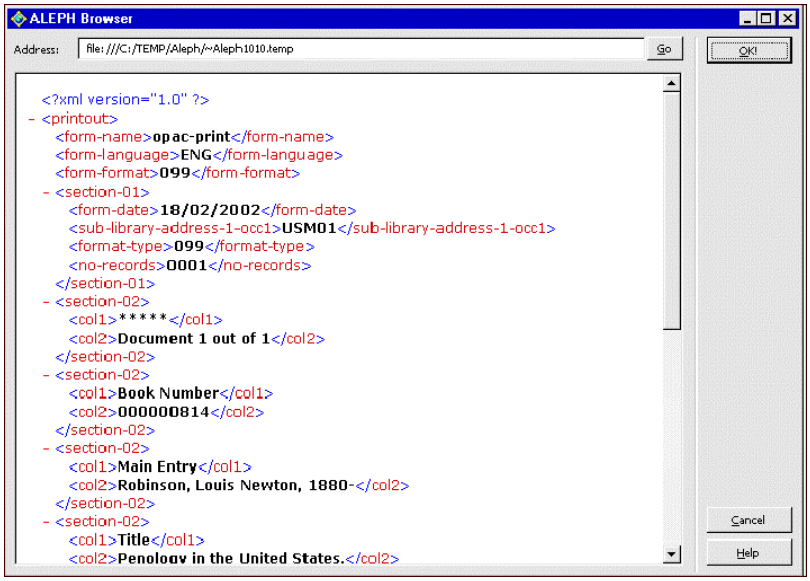
View Raw XML

When this option is selected, clicking the **Print** command lets you view the file in raw XML format in an editor (such as **NotePad**) window:



Browse XML

When this option is selected, clicking the **Print** command lets you view the file in raw XML format in a Browser window:



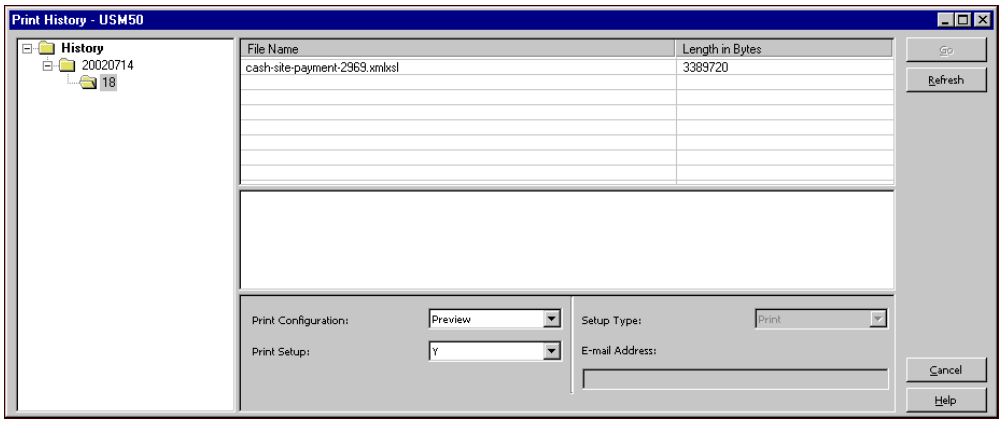
This mode can be very useful for debugging.

5.2.2 Print History

All files that are printed from an **ALEPH** GUI are saved in a "history" section under the operator's profile. The **Print History** function is used to view and/or re-print all files that were printed from the GUI.

Each module has its own "history". For example, if an online **Acquisitions** claim was printed, it will appear in the **Acquisitions** module's print history. However, if an **Acquisitions** report was produced in an **Acquisitions** service, and therefore was printed through the **Task Manager**, it will appear in the **Task Manager** module's print history.

You can access a module's **Print History** by selecting the **File** menu and clicking **Print History**. The following window opens:



The left pane is a navigation tree that lists all the dates and rounded hours when files were printed. Each day is a separate node, and each rounded hour is a separate sub-node. Highlight the relevant node to list the names of all the files that were produced in that time period. The XML data is stored on the client, and can, therefore, be re-

printed, even after a print template has been changed. The data is stored for a time set in the client's `alephcom.ini` configuration, listed under the section `[print]`:

```
[print]
savehistorynumberofdays=1
```

This setting determines how many days the print history should be stored. The cleanup of old history files takes place when the GUI is started.

The upper right pane lists each of these files and their size. Highlight a file on this list to see the beginning of its contents in XML format in the lower right pane.

Print Configuration
These options are similar to the options available from the **printer** icon at the extreme right of the status bar at the bottom of the screen and which are explained in the preceding section. Select one of the following and then click the **Go** button:

- Normal Printing
- Preview
- View Raw XML
- Browse XML

Print Setup
Select **Y** to have the **Print Setup** window appear before printing. Otherwise select **N**.

Setup Type
This field is only enabled when **Normal Printing** is selected in the **Print Configuration** field. Select **P** to print the file, **M** to send it by e-mail, and **B** for both.

E-mail Address
Enter the e-mail address here if you are e-mailing the file. If the print file includes an e-mail address, it will be displayed here.

Refresh
Click the **Refresh** button to clear the bottom pane.

Using this interface, you can test a re-designed print template (`.xsl` file). After changing the `.xsl` file, run UTIL I/6 to repackage the `.xsl` files and then open the client. The new `.xsl` file will be copied to your client, and when you reprint the file in the history list, it will be printed using the new template. (Note that UTIL I/6 must only be run manually and cannot be scheduled as an automatic job in the `job_list` table (in the `./alephe/tab` directory)).

6 Reference

6.1 XSLT Elements in ALEPH

ALEPH templates use a very small set of XSLT elements. These are briefly described in this section. If you want to know more about them or about XSL/XSLT in general, it is strongly suggested you consult a book in the subject. There are many such books. The one on which this work is based is:

XSLT Programmer's Reference (2nd Edition) by Michael H. Kay. April 2001 Wrox Press Inc; ISBN: 1861005067

6.1.1 concat()

Concatenates strings
`concat`(“`aa`”, “`bb`”) returns “`aabb`”

6.1.2 position()

Current index in context of `for-each`.

6.1.3 substring-before ()

Substring before an internal substring:
substring-before(“`aaa##bbb`”, “`##`”) returns “`aaa`”

6.1.4 substring-after ()

Substring after an internal substring:
`substring-after`(“`aaa##bbb`”, “`##`”) returns “`bbb`”

6.1.5 xsl-attribute

See `xsl :element` below

6.1.6 xsl: call-template

The way to invoke functions:

```
<xsl:call-template name="section-01"/>
```

6.1.7 xsl:element

There are two ways to generate HTML elements and their attributes:

1. Writing the XSL code explicitly
2. Using the `xsl:element` element

Writing the XSL Code Explicitly

For instance to start a table, you need to write something like:

```
<table width="100%" style="font-family=arial; font-size=9pt">
```

And, of course, its closing tag: `</table>`

You could write these lines explicitly in every XSL template, but then if you wanted to change the table definition globally, you would have to do so in every template. One of the guiding principles in ALEPH templates is that all actual HTML displays should be contained in the common functions. For example:

```
<xsl:template name="table-open-example ">
       <table width="100%" style="font-family=arial; font-size=9pt">
</xsl:template>
```

The problem is that the XSLT processor accepts `<TABLE` as an XSL element and rejects it as it is not closed. One solution is to use the following:

```
&lt;table width="100%" style="font-family=arial; font-size=9pt"&gt;
```

As in HTML the special characters '<' '>' can be replaced by `<`, `>`. In addition, you must enclose it as follows:

```
<xsl:text disable-output-escaping="yes">
    &lt;table width="100%" style="font-family=arial; font-
size=9pt"&gt;
</xsl:text>
```

This instructs XSLT to write it as the required HTML element.

Using xsl:element

Another option is to use the `xsl:element / xsl:` attribute.

`<xsl:element name=”string”/>` produces the output: `<string>`.

To add attributes, enter the following:

```
<xsl:element name=”string”>
        <xsl:attribute name=”att1”>val1</ xsl:attribute>
</xsl:element>
```

The output:

```
   <string att1=”val1”>
```

To get back to the example:

```
<xsl:template name="table-open-example">
    <xsl:element name="table">
                 <xsl:attribute name="width">100%</xsl:attribute>
                <xsl:attribute name="style">
                        font-family=arial; font-size=9pt
                </xsl:attribute>
     </xsl:element>
</xsl:template>
```

6.1.8 xsl:for-each

This element is used for reaching all entries with the same name. In **ALEPH,** these are the `section-0`*n* sections such as `section-01`, `section-02`, and so on:

```
<xsl:for-each select="//section-01">
<xsl:call-template name="section-01"/>
</xsl:for-each>
```

Note: Each time `section-01` is called, it is in the context of the current XML `section-01`.

6.1.9 xsl:if

This element executes the contained elements only if the test expression returns true (or a filled node set):

```
<xsl:for-each select="//section-02">
   <xsl:if test="position() = 1">
      <xsl:call-template name="section-02-first"/>
   </xsl:if>
   <xsl:call-template name="section-02"/>
</xsl:for-each>
```

6.1.10 xsl:include

Used for including other XSL files within an XSL file.

```
<xsl:include href="funcs.xsl"/>
```

6.1.11 xsl:param

Defines parameters in functions (invoked using `with-param`):

```
<xsl:template name="display-gen">
    <xsl:with-param name="label"/>
    <xsl:with-param name="value"/>
    <xsl:with-param name="display"/>
    <xsl:with-param name="type"/>
```

6.1.12 xsl:template

Used to define functions.

```
<xsl:template name="signature">
(function body)
</xsl:template>
```

6.1.13 xsl:template match

Used in ALEPH only as the beginning of the XSL code. The value of the `match` attribute is a specific pattern. In the following example, the pattern `match="/">` is an instruction to match the root node:

```
<xsl:template match="/">
```

6.1.14 xsl-text

See `xsl :element` (section *6.1.7*)

6.1.15 xsl:variable

This element is used to declare a local or global variable in a stylesheet, and to give it a value.

```
<xsl:variable name="bib" select="./bib-info"/>
```

6.1.16 xsl: with-param

Defines a parameter on a `xsl:template` or `xsl:stylesheet`. Also specifies a default value. Each parameter require its own `with-param`:

```
<xsl:call-template name="header-gen">
<xsl:with-param name="title" select="'Acquisitions Cancel Slip'"/>
</xsl:call-template>
```

6.2 ALEPH XSL Functions

6.2.1 Header functions

header-gen

Function: Takes the general `form-data` from the opening part of the XML. It displays the date, the XML form name and form number, a horizontal line and it displays the "`title`" in centralized alignment.

Example:

```
    <!-- START DATA -->
<xsl:template name="header">
    <xsl:call-template name="header-gen">
       <xsl:with-param   name="title"   select="'Acquisition   Order
Slip'"/>
    </xsl:call-template>
</xsl:template>
```

This produces the following display:

15/07/2002

acq-s-order-slip-01

Acquisitions Order Slip

6.2.2 Address functions

patron-address

Function: This function displays the fields of the `patron-address` to the left side of the page.

Parameters: None

Example: `<xsl:call-template name="patron-address"/>`

sublib-address
Function This function displays the fields of the `sublib-address` to the right side of the page.
Parameters: None
Example:
```
<xsl:call-template name="sublib-address"/>
```

Acquisitions Unit 1
Manag. Building
Ex Libris University
777 Biblio Byway
Chicago, IL 60614
thechoice@exlibris-usa.com
Tel# 773.404.5327

---

transfer-address
Function: This function displays the fields of the `transfer-address` to the left side of the page.
Parameters: None
Example:
```
<xsl:call-template name="transfer-address"/>
```
Only in use on one form: `transfer-slip.xsl`

---

vendor-address
Function: This function displays the fields of the `vendor-address` to the left side of the screen.
Parameters: None
Example: `<xsl:call-template name="vendor-address"/>`

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45 BEACON STREET
BOSTON, MA 02108

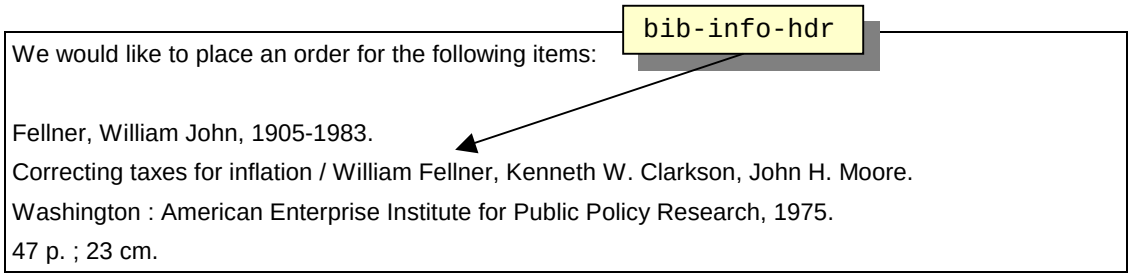
6.2.3 Free Functions

bib-info-free
Function: Displays bibliographic information in a **Free** layout section, but not in the header. `bib-info-free` is formatted according to the bibliographic library's `edit_paragraph` table; the format is set in the ADM library's `bib-format` table. `bib-info-free` is printed if the value is not empty.
Parameters: `<xsl:param name="value"/>`
Example:
```
<xsl:call-template name="bib-info-free">
    <xsl:with-param name="value" select="node()"/>
        </xsl:call-template>
```

---

bib-info-hdr
Function: Displays the bibliographic information in the header in non-**Grid** layouts.
Parameters: None
Example:

```
<xsl:call-template name="bib-info-hdr"/> Sublibrary
```



---

blank-line
Function: Draws one blank line in non-**Grid** layout.
Parameters: None.
Example:

```
<xsl:call-template name="blank-line">
```

---

blank-line-first
Function: Draws one blank line in non-**Grid** layout only if the position in the XML file is the first.
Parameters: None.
Example:

```
<xsl:call-template name="blank-line-first"/>
```

---

blank-line-in-free
Function: Draws the number of blank lines defined in `"lines"` in non-**Grid** layout. If the parameter is empty, the default is one blank line.
Parameters: `<xsl:param name="lines"/>`.
Example:

```
<xsl:call-template name="blank-line-in-free">
      <xsl:with-param name="lines" select="'3'"/>
</xsl:call-template>
```

---

checkbox
Function: Displays the text with the check box. The check box is always unmarked.
Parameters: `<xsl:param name="text"/>`
Example:

```
<xsl:call-template name="checkbox">
    <xsl:with-param name="text" select="'Please supply me with the
    item when available:'"/>
</xsl:call-template>
```

---

directly-to-patron

Function: If the `condition-field` is equal to the `condition-value` then it displays 'Send Directly to:' and then the patron-address.

Parameters:

```
<xsl:param name="condition-field"/>
<xsl:param name="condition-value"/>
```

Example:

```
<xsl:template name="directly-to-patron">
   <xsl:param name="condition-field"/>
   <xsl:param name="condition-value"/>
    <xsl:if test="$condition-field = $condition-value">
     <xsl:call-template name="table-open"/>
     <xsl:call-template name="display-gen">
       <xsl:with-param name="label" select="'Send Directly to:'"/>
       <xsl:with-param name="value" select="''"/>
       <xsl:with-param name="display" select="'always'"/>
     </xsl:call-template>
     <xsl:call-template name="patron-address"/>
     <xsl:call-template name="table-close"/>
    </xsl:if>
</xsl:template>
```

---

display-gen

Function: Displays the `label` and the value in a **Free** style.

- If value is empty, the `label` does not display.
- If `display` is '`always`', then the label displays even if the value is empty.
- You can specify the `width` parameter. If this is not specified, the default is 20%.
- If `type` is '`index`', then the position in XML is displayed.
- If `type` is '`right`' then the value is right-justified.
- If `type` is '`barcode`', then the character set becomes CarolinaBar-B39-2.5-22x158x720.
- If `type` is '`check`', a check box is displayed. If the `value` begins with "`y`" or "`Y`" then the check box is marked. You must NOT translate this `value` to other languages. If you do, the system will not identify the correct check box value (just leave it as **`Y/N`**).

Parameters:

```
<xsl:param name="label"/>
<xsl:param name="value"/>
<xsl:param name="display"/>
<xsl:param name="type"/>
<xsl:param name="style"/>
<xsl:param name="width"/>
```

Example

```
<xsl:call-template name="display-gen">
   <xsl:with-param name="label" select="'Note:'"/>
       <xsl:with-param name="value" select="./z38-note-1"/>
</xsl:call-template>
```

---

free-title

Function: Displays a bold, underlined title.

Parameters:

```
<xsl:param name="free-title"/>
```

Example:

```
<xsl:call-template name="free-title">
  <xsl:with-param name="free-title" select="'Material Requested:'"/>
   </xsl:call-template>
```

---

generic-line

Function: Displays the `line` in the specified `style`, with the specified `width`.

- `line` can be any string.
- If `##` is present in the line, it places a line break in the display.
- If `salutation_string` is found, it is replaced by "Dear Sir/Madam".
- If `width` is not specified, it will display in `full-width` (100%).
- Styles can be bold, underlined, italic (or all of them).

Parameters:

```
<xsl:param name="line"/>
<xsl:param name="style"/>
<xsl:param name="width"/>
```

Example:

```
<xsl:call-template name="generic-line">
    <xsl:with-param name="line" select='concat("salutation_string##We
    are sorry to inform you that the following photocopy, which you
    requested on   ", //z38-open-date  ,", cannot be filled at this
    time. Please inform us by return mail if you would like us to
    supply you with the item when available, or whether you would
    prefer to cancel the request.")'/>
   </xsl:call-template>
```

The output is:

Dear Sir/Madam,

We are sorry to inform you that the following photocopy, which you requested on 01/01/2002, cannot be filled at this time. Please inform us by return mail if you would like us to supply you with the item when available, or whether you would prefer to cancel the request.

---

horizontal-line

Function: Draws a horizontal line in non-**Grid** layout.

Parameters: None.

Example:

```
<xsl:call-template name=" horizontal-line ">
```

---

requested-by-proxy
Function: If the `condition-field` is not empty, then it displays "Requested By:' and then the `z37-requester-id` value.
Parameters:
```
<xsl:param name="condition-field"/>
```
Example:
```
<xsl:call-template name="requested-by-proxy">
 <xsl:with-param name="condition-field" select="./z37-requester-id"/>
</xsl:call-template>
```

---

table-open
Function: Starts a **Free** layout by opening a borderless table.
Parameters:
`width` (optional), default = 50%
`align` , possible values:
`left` (default)
`center`
`right`
Example:
```
<xsl:call-template name="table-open"/>
```
Note: Every `table-open` element opens a table which must be closed by a `table-close` element.

---

table-open-full
Function: Starts a **Free** layout by opening a borderless table with width=100%.
Parameters: None
Example
```
<xsl:call-template name="table-open-full"/>
```

---

table-close
Function: Ends any open table.
Parameters: None
Example:
```
<xsl:call-template name="table-close"/>
```

6.2.4 Grid functions

display-Grid-gen

Function: Displays the value in a **Grid** table.

- The header of the column is `label`.
- Styles can be bold; underline; italic.
- If the header has the value `header`, then it only puts `grid-label` in the very first row of the **Grid** only.
- The data is displayed in `grid-box`, so each time `##` appears in the data, it displays a line break within the box.
- If `type` is set to **`right`** the data are right-justified.
- If `type` is **`check`**, a check box is displayed. The check box is marked if the value begins with '`y/Y`' or if `check-value` equals value. Otherwise the box is unmarked.
- If `type` is **`barcode`**, then the value appears as a real barcode.
- If `type` is **`bib-info`**, then the value is displayed in `bib-info` style.
- If `type` is **`restart`**, then the **Grid** closes, and restarts again.

Parameters:

```
<xsl:param name="value"/>
<xsl:param name="type"/>
<xsl:param name="label"/>
<xsl:param name="style"/>
<xsl:param name="check-value"/>
```

Example:

```
<xsl:call-template name="display-grid-gen">
     <xsl:with-param name="label" select="'Budget Number:'"/>
       <xsl:with-param name="value" select="./z601-budget-number"/>
       </xsl:call-template>
```

Trans. Type:	**Budget Number:**	Open Date:	Currency:	Original Sum:	Local Sum:
Encumbrance	MAR-2002	15/07/2002	US Dollar	75.00	15.00

---

display-grid-currency

Function: Similar to `display-grid-gen`. For special **Grids**, when the number of columns is known only at runtime, such as the `currency-report` template. The regular **Grid** has a fixed number of columns, and when the data for a column are missing, a blank is displayed. The currency **Grid** displays only when there are some data to display.

Parameters:

```
<xsl:param name="label"/>
<xsl:param name="value"/>
<xsl:param name="type"/>
<xsl:param name="display"/>
```

Example:

```
<xsl:call-template name="display-grid-currency">
     <xsl:with-param name="label" select="./code-1"/>
        <xsl:with-param name="value" select="./data-1"/>
          <xsl:with-param name="display" select="./code-1"/>
       </xsl:call-template>
```

Trans. Type:	Budget Number:	Open Date:	**Currency:**	Original Sum:	Local Sum:
Encumbrance	MAR-2002	15/07/2002	US Dollar	75.00	15.00

grid-open

Function: Starts a **Grid** layout by opening a table with border. Width default = 100%

Parameters:

```
<xsl:param name="width"/>
<xsl:param name="align"/>
```

Example:

```
<xsl:call-template name="grid-open"/>
```

Note: **`grid-open / grid-close`** are always paired.

---

grid-close

Function: Ends a **Grid** layout by ending the table.

Parameters: None

Example:

```
<xsl:call-template name="grid-close"/>
```

Note: `grid-open / grid-close` are always paired.

---

grid-title

Function: Displays a title for the **Grid**.

Parameters:

```
<xsl:param name="grid-title"/>
```

Example:

```
<xsl:call-template name="grid-title">
 <xsl:with-param name="grid-title" select="'Total sum due to
 vendor:'"/>
 </xsl:call-template>
```

---

start-grid

Function: Calls `grid-title`, and then `grid-open`. `grid-title` is the title of the **Grid**. The `width` is the `width` of the **Grid** table. If `'nobold'` is defined, then the title does not appear in bold.

Parameters:

```
<xsl:param name="grid-title"/>
<xsl:param name="width"/>
<xsl:param name="nobold"/>
```

Example:

```
<xsl:template name="section-02">
  <xsl:param name="header"/>
  <xsl:if test="$header!=''">
   <xsl:call-template name="start-grid">
         <xsl:with-param name="grid-title" select="'Loans'"/>
   </xsl:call-template>
  </xsl:if>
```

Loans

Bib Info	Due Date	Description	Sublibrary	Item status	Call No. 1	Barcode	Proxy ID
Journal of sounds	17/07/2002	2000 1 1	Law Library	One Day Loan		* 7 5 9 2 - 3 0 *	

---

table-start-row
Function: Before `display-grid-gen` is called, a new row must be opened in `grid-table`. Each time you enter a `grid-section`, you must call this function.
Parameters: None
Example
```
<xsl:call-template name="table-start-row"/>
```
Note: `table-start-row` and `table-end-row` are always paired.

---

table-end-row
Function: After the call to the last `'display-grid-gen'`, you must close the row in the grid-table. Each time a `grid-section` is finished, this function must be called.
Parameters: None
Example
```
<xsl:call-template name="table-end-row"/>
```
Note: `table-start-row` and `table-end-row` are always paired.

6.2.5 Split functions

display-gen-split
Function: Displays data in the **Split** layout if the `value` is not empty. The `label` is bold, and then the `value` is displayed. `type`, `display` and `style` parameters are equivalent in the **Free**-layout to the `display-gen` function.
Parameters:
```
<xsl:param name="label"/>
<xsl:param name="value"/>
<xsl:param name="display"/>
<xsl:param name="type"/>
<xsl:param name="style"/>
```
Example:
```
<xsl:call-template name="display-gen-split">
<xsl:with-param name="label" select="'Vendor Ref. No:'"/>
<xsl:with-param name="value" select="./z68-vendor-reference-no"/>
</xsl:call-template>
```

---

table-split-open
Function: Starts a **Split** layout**.**
Parameters: None
Example:
```
<xsl:call-template name=" table-split-open "/>
```
Note: `table-split-open / table-split-right / table-split-close` come together.

---

table-split-right
Function: Starts the right hand side of a **Split** layout**.**
Parameters: None
Example
```
<xsl:call-template name=" table-split-right "/>
```

table-split-close
Function: Ends a **Split** layout.
Parameters: None
Example

```
<xsl:call-template name=" table-split-close "/>
```

6.3 Special Templates

There are a few templates (less than 10) that do not conform to the description above. Their header part has the same structure, but their data part is handled differently.

6.3.1 Currency-report

The basic difference between this template and the "regular" ones is that the number of tags depends on the query – one tag (=**Grid** column) per currency and an additional tag for the date. In other templates, a **Grid** has a fixed number of columns, and if there are no data for a column in a specific row, an empty cell is displayed. Here we want the number of columns to depend on the query. To solve this, a special function exists - **display-grid-currency** –, which is like `display-grid-gen`, with an additional parameter – display. It is invoked as follows:

```
<xsl:call-template name="display-grid-currency">
   <xsl:with-param name="value" select="./currency-ratio-1"/>
   <xsl:with-param name="display" select="./currency-1"/>
   <xsl:with-param name="type" select="'right'"/>
</xsl:call-template>
```

The column only displays if the tag `<currency-1>` exists.

The XSL file is built with what we assume is the maximum number of currencies that will be queried (15). Each query displays just the requested currencies. If you think you need more than 15 queries, just add more lines.

6.3.2 Order-info

Same problem and solution as in `currency-report`.

6.3.3 Catalog-records-columnar

Same problem and solution as in `currency-report`. The maximum number of tags required is six.

6.3.4 Loan receipt

In this XSL file, a **Grid** is displayed. A note is attached to each row (./z36-note-1) which is displayed beneath the `grid-row`. This is why the **Grid** must be restarted for each record. Each record actually displays the labels, the data and the `note-1` (in the third row). The call to this section is :

```
<!--section-02 (GRID)-->
<xsl:for-each select="//section-02">
   <xsl:call-template name="section-02">
       <xsl:with-param name="header" select="'header'"/>
   </xsl:call-template>
   <xsl:call-template name="section-02"/>
</xsl:for-each>
```