10 March 2016
Author: JC Dauphin
jc.dauphin@gmail.com

J-ISIS 10 March 2016 Data Entry

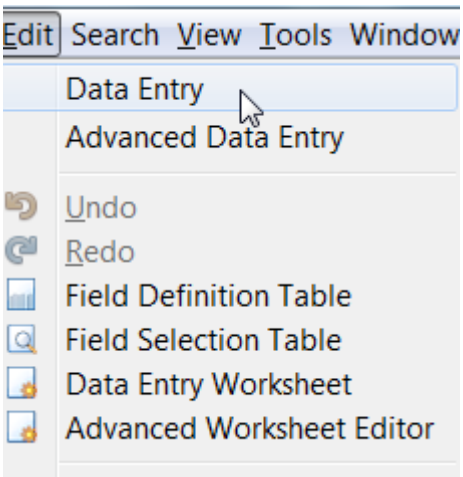
18. Data Entry

Data is entered manually through a data entry interface specified by the user through a worksheet definition. Data Entry is driven by a worksheet definition that defines the data entry field properties. The worksheet definition can be enriched with subfield properties through the "Advanced Worksheet Editor".

Subfields and repeatable fields are permitted. Existing records can be modified or deleted through the same interface. Records are stored in a Berkeley DB. There is only one Berkeley DB for a database. A Lucene index and a field selection table (FST) are associated to a database. The field selection table defines the extraction format to be applied to a record for extracting the terms to index.
The basic data entry facilities called CRUD (Create, Retrieve, Update and Delete using a user worksheet) are implemented, and the index is updated each time a record is saved or deleted.
The "Dictionary Browser", "DB Browser" and "Data Viewer" are synchronized with the "Data Entry" when they are opened simultaneously in the application.

18.1 The Data Entry Modules

J-ISIS offers two module interfaces for data entry:



The "Data Entry" module display initially Field Data Entry boxes defined by a particular worksheet. The user interface allows to create, update or delete a particular record. In the initial Field Data Entry boxes, appropriate subfield delimiters must be entered explicitely by the user to separate them. However, since the March 2016 release, you can display a tree layout of the current selected field (where the cursor is positioned) by pressing "F10" key. Pressing "F10" pops up a dialog with a hierarchical layout of the field and subfields as defined in the Advanced Worksheet Editor. The Field is displayed as in the "Advanced Data Entry" module, it uses a Tree-Table layout based on the new "Advanced Worksheet Editor " that goes at the subfield level, allows repetitive subfields and that may contain Marc field

indicators and implicit subfields. It provides also interactivity for the basic functionality of entering, editing, viewing, or deleting records, that is, CRUD (Create Read Update Delete), Pick Lists, Field validation rules.

Images can be placed in BLOB fields through Windows usual cut and paste commands. A field with type "BLOB" should be defined in the FDT as well as worksheet(s) that include this field.

The "Data Entry" module also allows to process electronic documents whatever the file format there are stored. A field with type "DOC" should be defined in the FDT as well as worksheet(s) that include this field. Data Entry will then display a new button for "DOC" fields that allows to select documents. A selected document will be first converted in plain text whatever its original format and stored in the "DOC" data entry field. Then, when saving the record, the field content will be indexed and the original document will be copied in the server database **`\idoc`** folder. And an hyperlink to this document will be created in the 2nd occurrence of the "DOC" field.

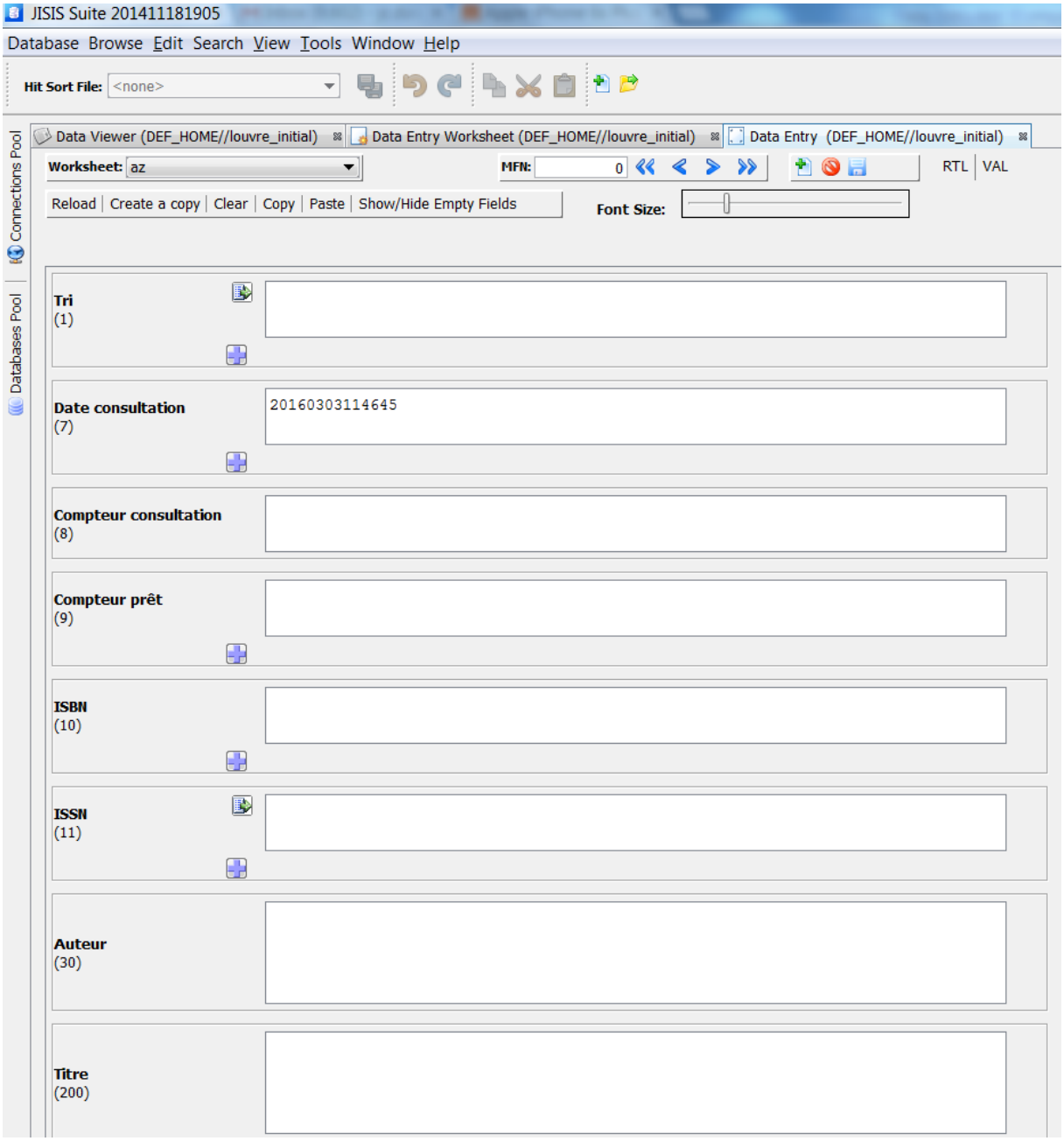
The "Advanced Data Entry" module uses a Tree-Table layout based on the new "Advanced Worksheet Editor " that goes at the subfield level, allows repetitive subfields and that may contain Marc field indicators and implicit subfields. It provides also interactivity for the basic functionality of entering, editing, viewing, or deleting records, that is, CRUD (Create Read Update Delete), Pick Lists, Field validation rules. The Tree-Table layout displays all fields and subfields defined in a worksheet as well as the indicators and 1st implicit subfield if the field check boxes are checked in the FDT.

.

18.2 "Data Entry" Module

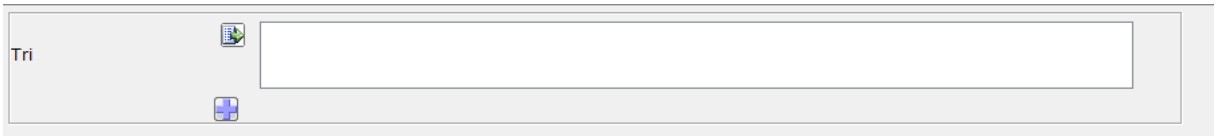
Select **Edit ⇒ Data Entry** and the data entry window will appear as in the screenshot that follows.

The window is structured in two panels: the control panel and the data entry panel. Initially, an empty record (MFN = 0) is displayed with the fields defined in the worksheet named "az", the worksheet can be changed through the worksheet combo box in the control panel. All fields are initially empty, except the ones with default values.



18.2.1 Data Entry Field Layout

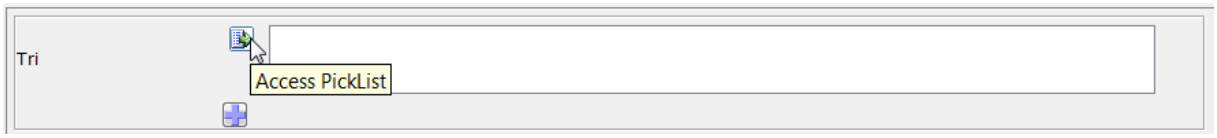
An empty data entry field looks as follow:

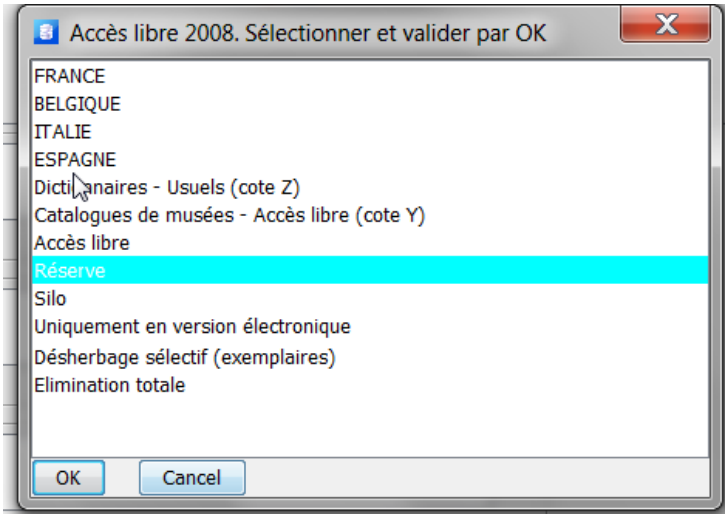


We can see the field worksheet label "Tri" which is defined in the Worksheet and two buttons.

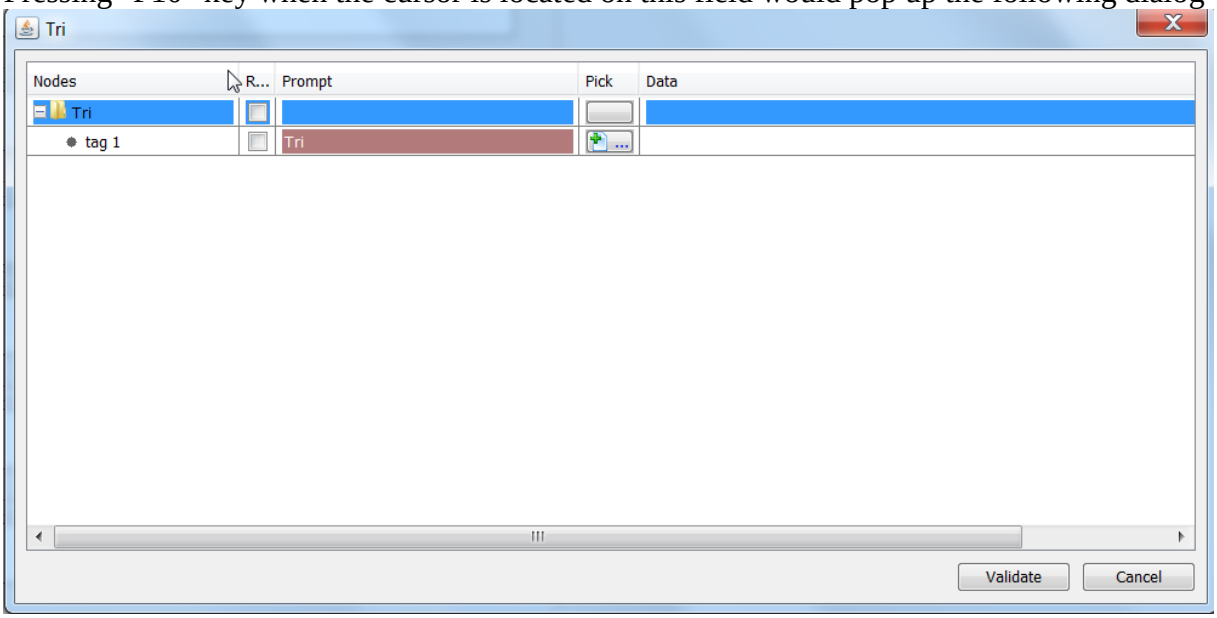
The  button appears only for fields which are defined as repetitive in the Field Definition Table and allows to create new occurrences for this field.

The  button indicates that a pick-list is associated with this field, thus clicking on it will pop up a selection dialog.





Pressing "F10" key when the cursor is located on this field would pop up the following dialog



You can see the pick list button that allows to select from a list of items.

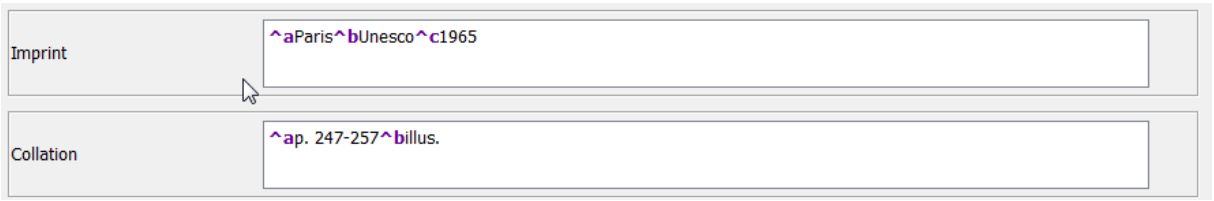
18.3 Editing Sub Fielded Fields

When you enter a field containing subfields you must key in the required subfield delimiters in front of each subfield. A subfield delimiter is a 2-character code preceding and identifying a variable length subfield within a field. It consists of the character ^ followed by an alphabetic or numeric character, e.g.

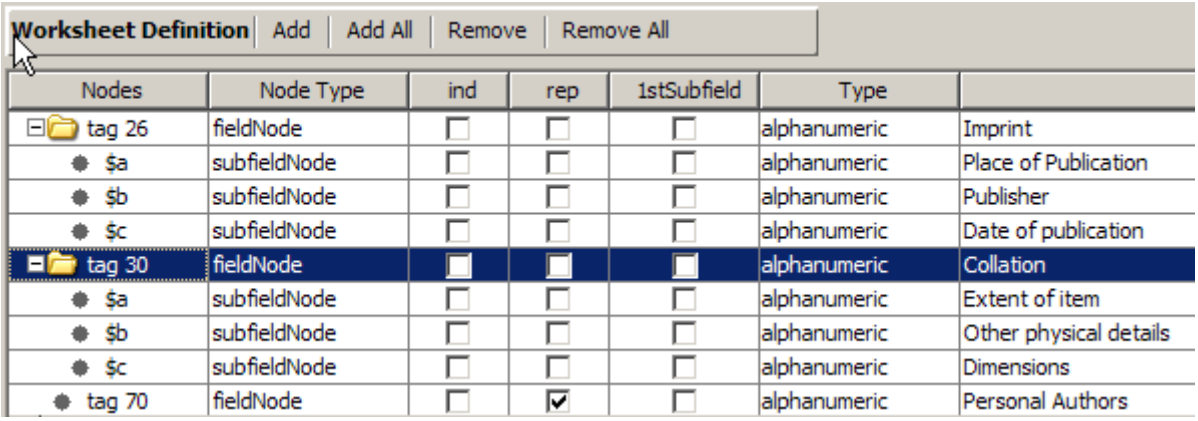
^a

If the subfield code is alphabetic, you may enter it in either upper or lower case: J-ISIS makes no difference between ^**a** and ^**A**. You may therefore use the most convenient form.

Do not insert spaces or punctuation marks either before or after the subfield delimiter, unless you have been specifically instructed to do so. Entering spaces or punctuation may adversely affect the printing of the field later on.
Here is an example of a field with three subfields:
^aParis^bUnesco^c1965

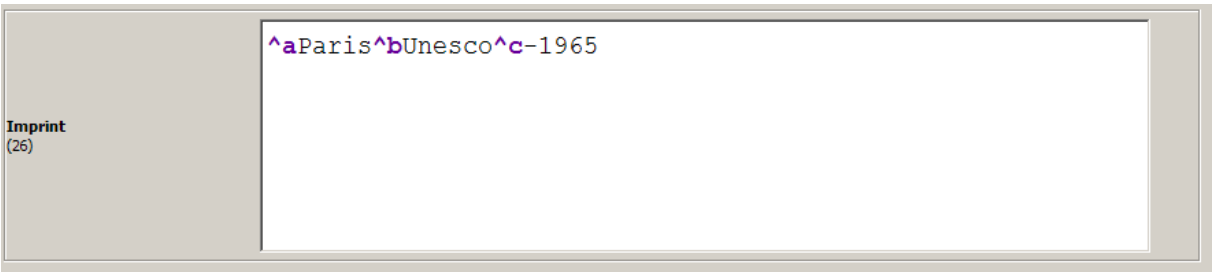


If the above worksheet fields are extended with subfields in the Advanced Worksheet Editor as below:

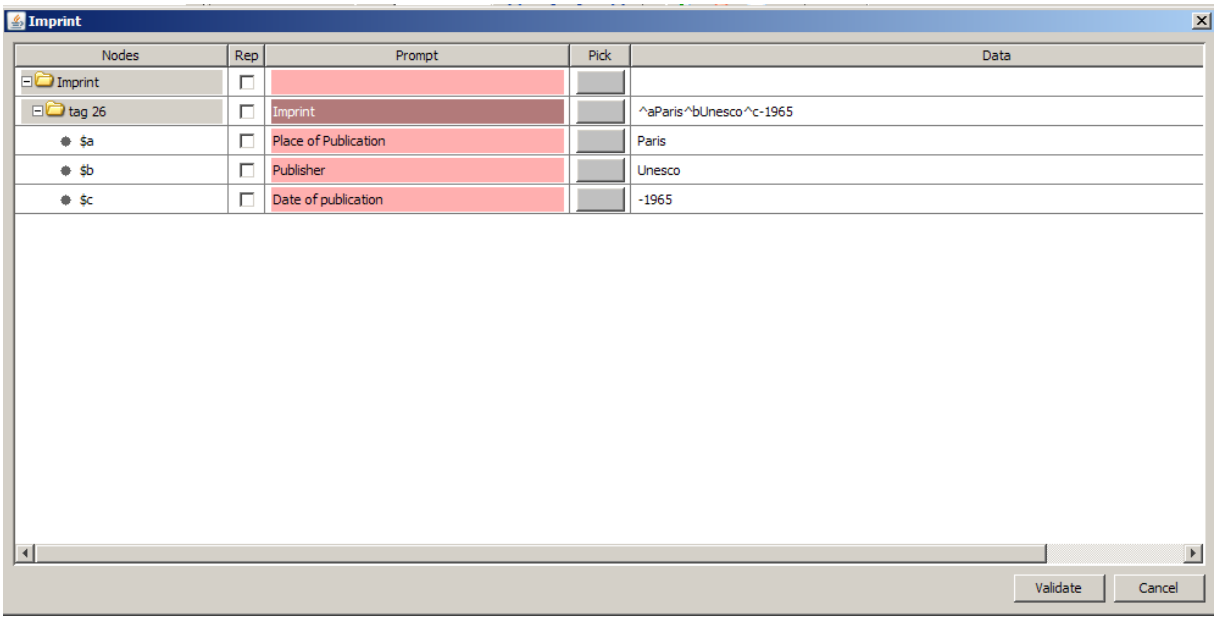


Nodes	Node Type	ind	rep	1stSubfield	Type	
tag 26	fieldNode	☐	☐	☐	alphanumeric	Imprint
$a	subfieldNode	☐	☐	☐	alphanumeric	Place of Publication
$b	subfieldNode	☐	☐	☐	alphanumeric	Publisher
$c	subfieldNode	☐	☐	☐	alphanumeric	Date of publication
tag 30	fieldNode	☐	☐	☐	alphanumeric	Collation
$a	subfieldNode	☐	☐	☐	alphanumeric	Extent of item
$b	subfieldNode	☐	☐	☐	alphanumeric	Other physical details
$c	subfieldNode	☐	☐	☐	alphanumeric	Dimensions
tag 70	fieldNode	☐	☑	☐	alphanumeric	Personal Authors

Pressing F10 key when the cursor is inside the Imprint data input text box

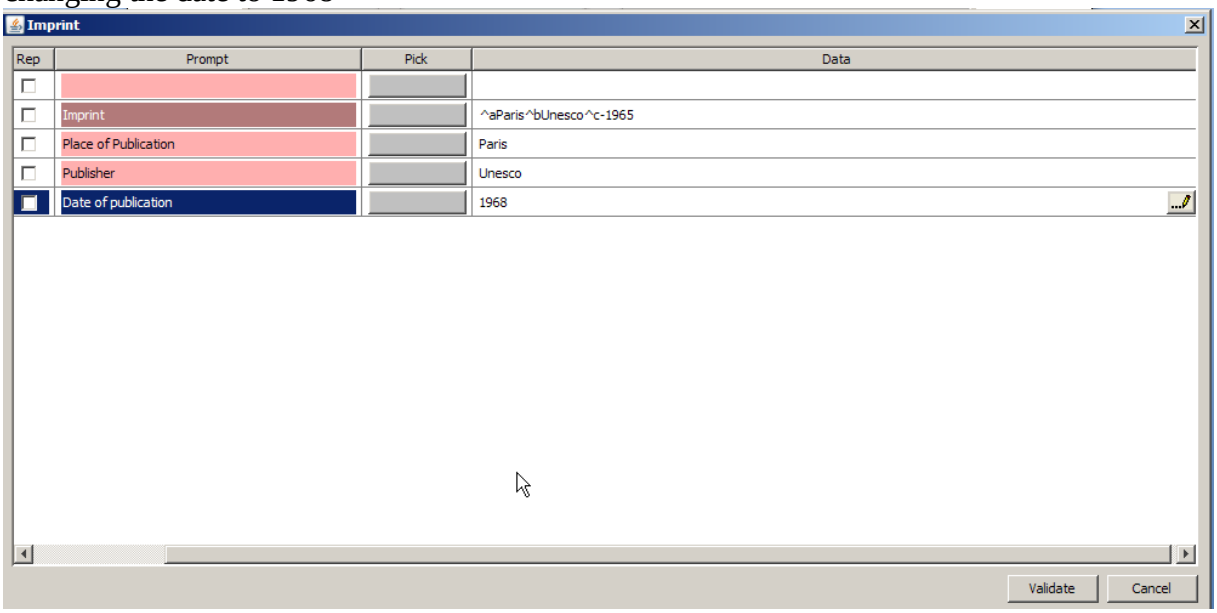


would pop up the following dialog:

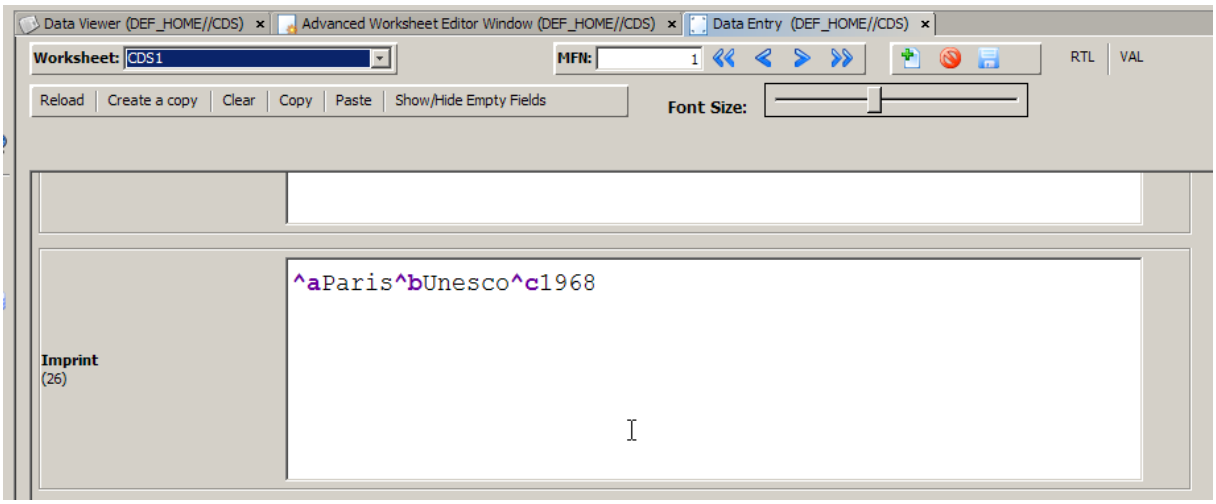


Subfield data can be edited in the data cells and it is not necessary to enter the subfield delimiters. It will be added by the system and the field row displays the full field data including the subfield delimiters.

We can change the date of publication by clicking on the “Date of publication” data cell and changing the date to 1968



Then clicking on the Validate button will bring back the dialog data to the initial Field data box

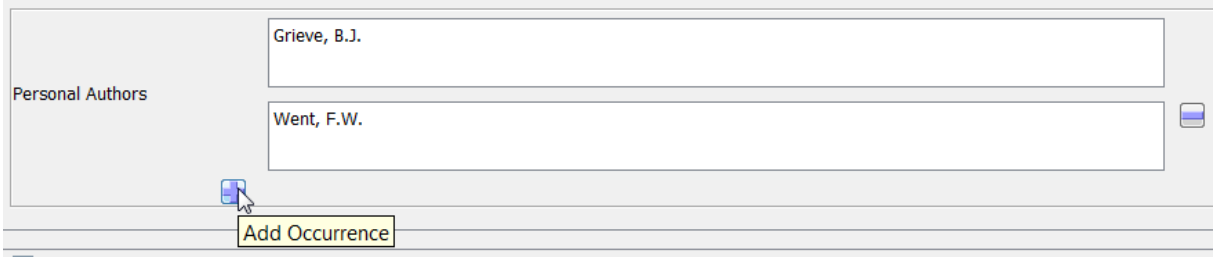


18.4 J-ISIS Worksheet Editors

J-ISIS **Edit** menu provides a ***Data Entry*** module and an ***Advanced Data Entry*** module. The Data Entry module allows entering data at the field level specifying explicitly the subfield delimiters, while the Advanced Data Entry module displays a hierarchical view of the worksheet fields and subfields that allows entering data at the subfield and field level.
Data is entered manually through a data entry interface specified by the user through a worksheet definition. **Data entry worksheet(s)** or **Advanced Data Entry worksheet(s)** are used to create and/or update the master records of the data base. J-ISIS **Edit** menu provides two specially designed editor to create these worksheets, Data ***Entry Worksheet*** module and ***Advanced Worksheet Editor***. The worksheet file xml format is compatible for both editor, and the ***Advanced Worksheet Editor*** allows entering further detailed information for data entry at the subfield level.

18.5 Editing Repeatable fields

If the field you are entering is repeatable and you need to enter more than one occurrence, enter each occurrence separately, and click on the repeatable field button  for each new occurrence to be added.

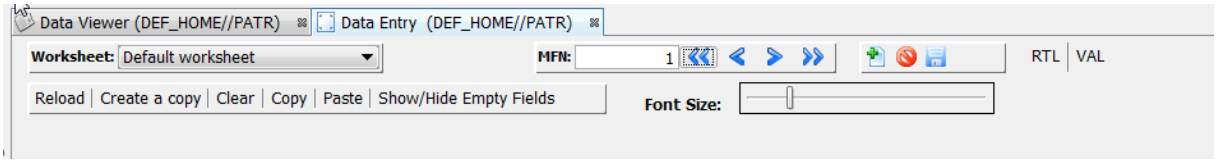


The  button is displayed on the right of an occurrence when a repeatable field has more than one occurrence. Clicking on this button will delete the associated occurrence.

You may cut and paste data in the usual Windows way. You can highlight a section by dragging the mouse from the start to end of the section with the left mouse button pressed.

{Ctrl x} will cut that section and copy it to the clipboard, {Ctrl c} will copy it to the clipboard. {Ctrl v} will insert the text at the point where the cursor is. You may also undo and redo editing actions, {Ctrl z} will undo the last edit action and {Ctrl y} will redo the last undo action.

The Data Entry Control Panel



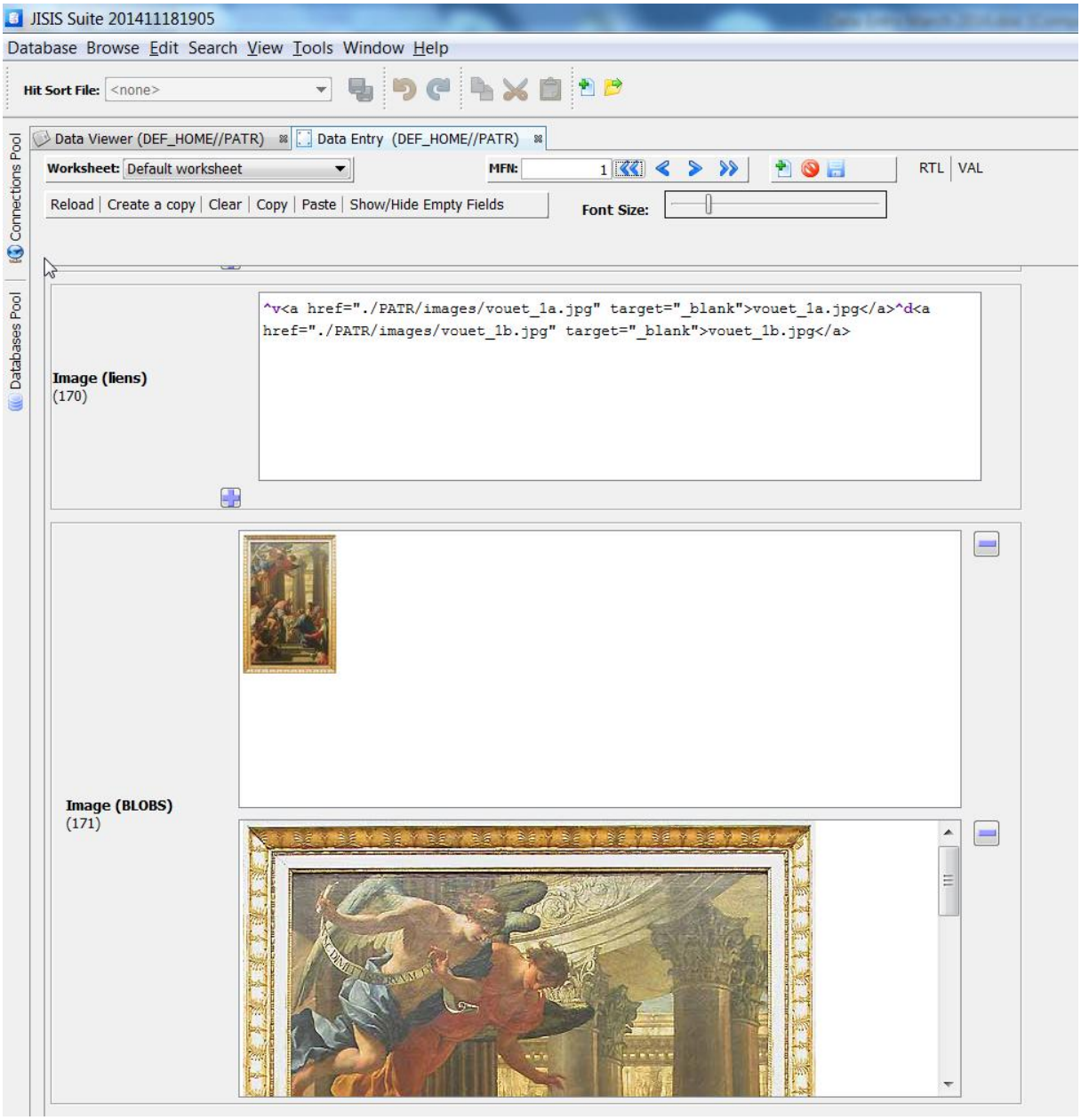
The data entry control panel contains the following items:

Worksheet: Default worksheet	This field shows which worksheet is currently in use. You can change the worksheet by first clicking on the field, which will pull down the list of worksheets available, and then selecting a new worksheet. (The list of worksheets is read from the database **/iwks** folder)
MFN: 4	This field contains the current MFN number. Clicking on this field allows you to edit a particular record by typing the desired MFN number and then pressing the Enter key.
	Displays the first record.
	Displays the previous record.
	Displays the next record
	Displays the last record.
	Creates a new record. The current worksheet is displayed with all its fields empty.
	Delete the current record from the database.
	Saves the current record in the database.
RTL	Displays text from Right To Left, useful for Arabic text.
VAL	Apply validation rules to current record

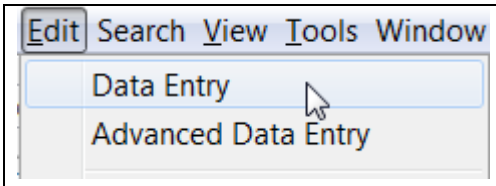
Reload	Cancels all the changes made and restores the record to its initial status.
Create a copy	Creates a new record with the same contents of the current one. The created record is assigned the next available MFN.
Clear	Clears the contents of all the fields in the worksheet. You may use this option to replace an existing record with a new one having the same MFN. Note, however, that all fields present in the record are cleared.
Copy	Copy the current record in the stack
Paste	Paste a record from the stack into an empty new record.
Show/Hide Empty Fields	This toggle switch allows you to show (or remove) empty fields from the screen (normally when a record is initially displayed, empty fields are not automatically shown.
Font Size:	Slider to increase/decrease text font size in the field data boxes

18.6 BLOB Field Type and Images

It's possible to define the field type of a particular field as BLOB in the FDT. A BLOB field allows copying (Ctrl/C) and pasting (Ctrl/V) a mixture of text and images, or a single image as below:

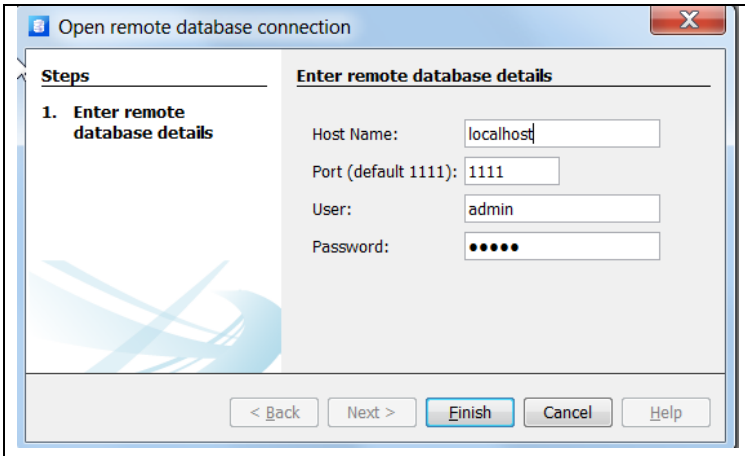


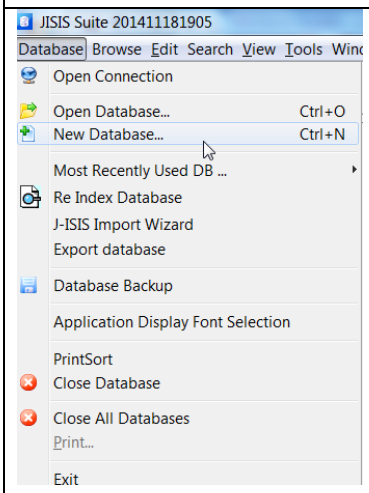
18.2 “Data Entry” Module for Digital Library



The "Data Entry" Module allows also to process and store electronic documents whatever the file format there are stored. A field with type "DOC" should be defined in the FDT as well as worksheet(s) that include this field. Data Entry will then display a new button for "DOC" fields that allows to select documents. A selected document will be first converted in plain text whatever its original format and stored in the "DOC" data entry field. Then, when saving the record, the field content will be indexed and the original document will be copied in the server database **`\idoc`** folder. And an hyperlink to this document will be created in the 2nd occurrence of the "DOC" field.

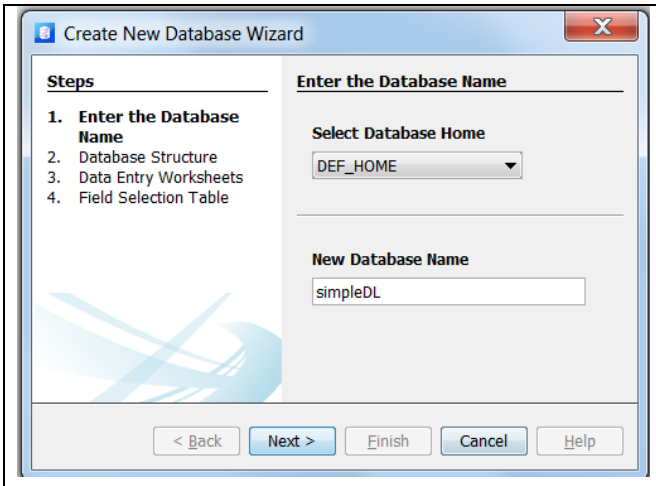
A small digital library example



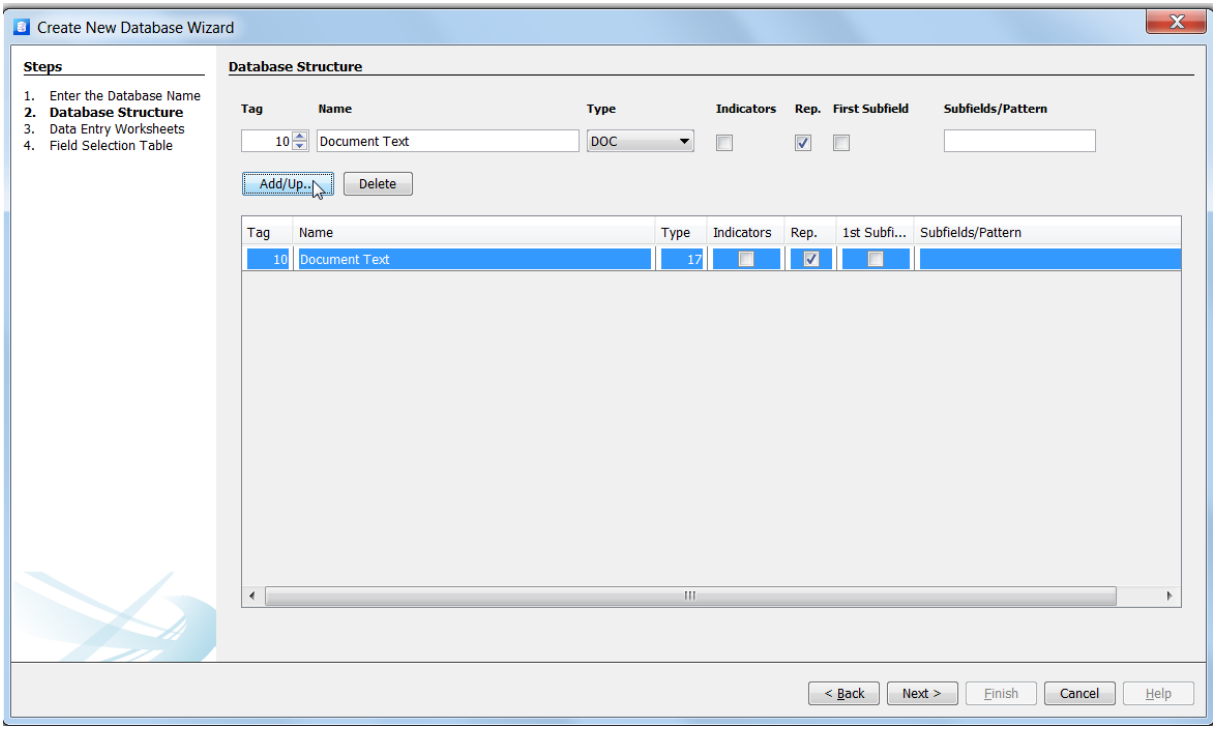


Let’s create a simple database by selecting “New Database” in the “Database” menu bar.

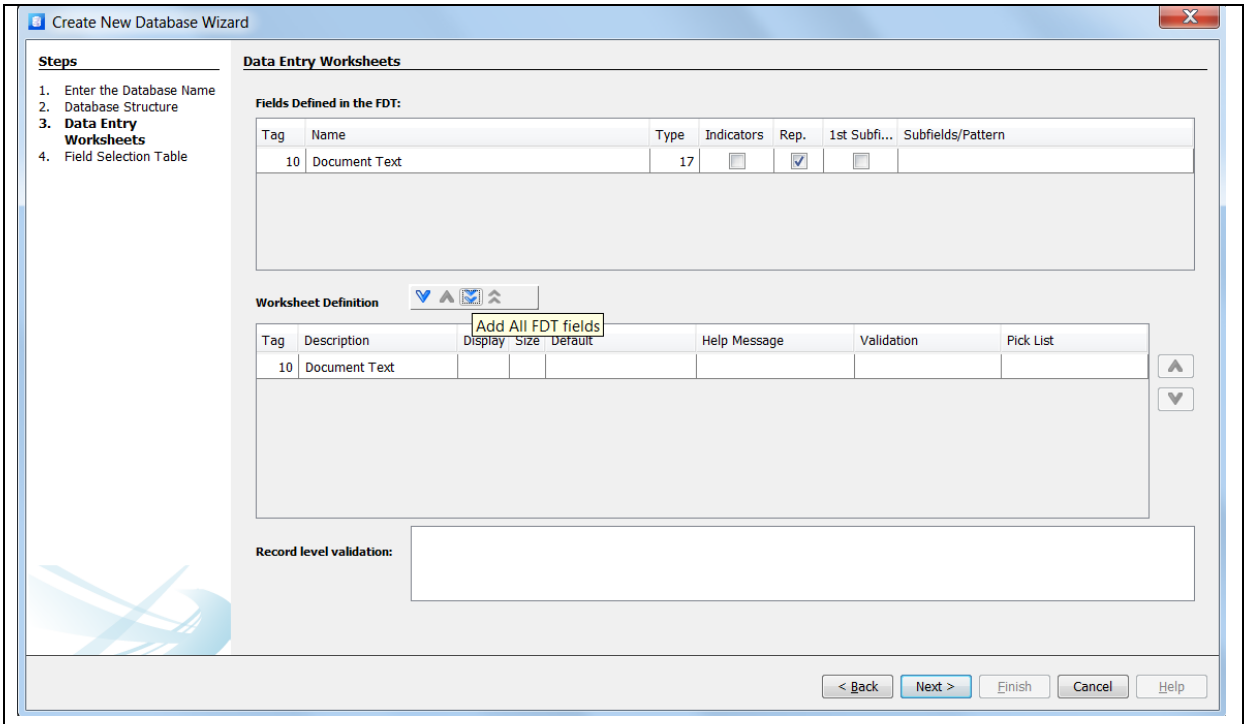
The database will be named “SimpleDL”



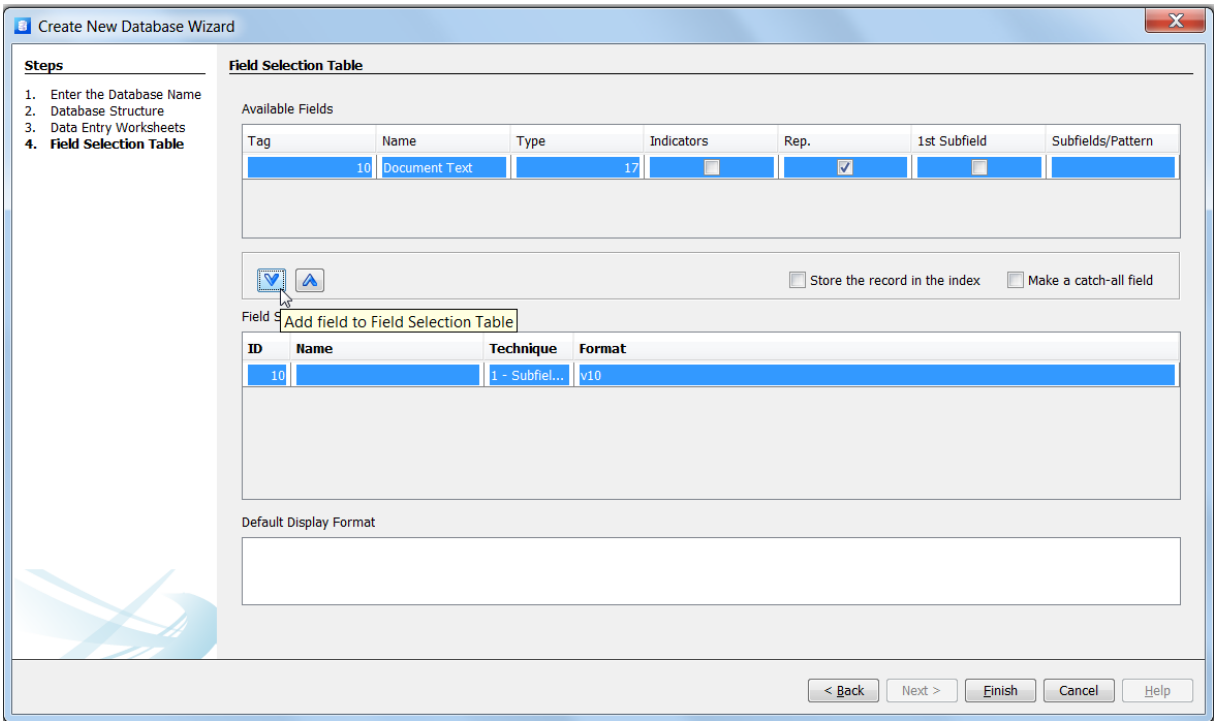
We create a single repetitive field called “Document Text” with tag “10”, type **DOC** and no subfields



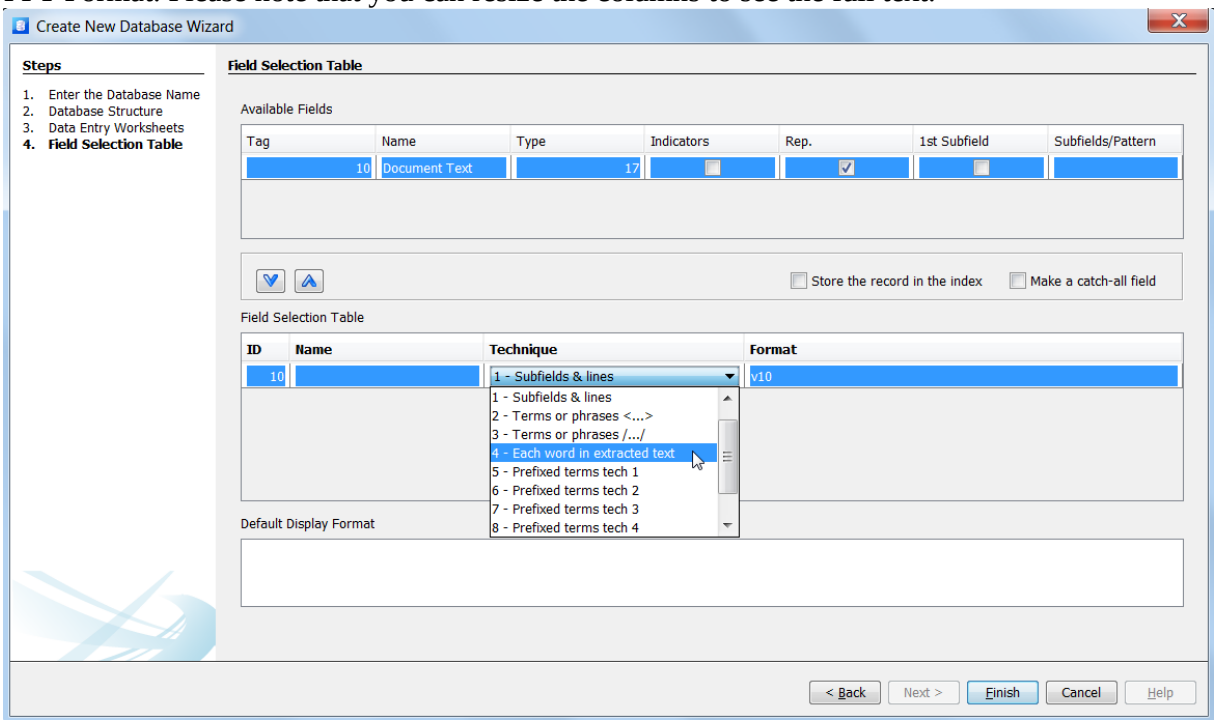
We create a default worksheet



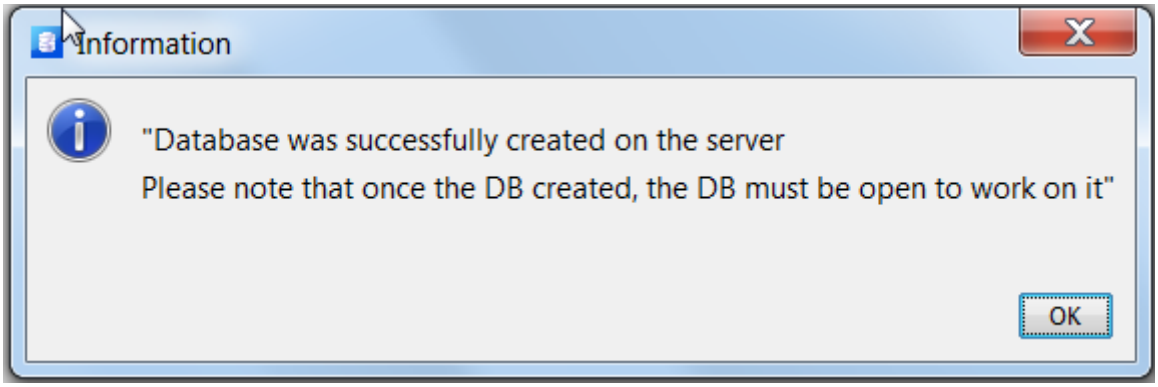
A Field Select Table with an entry corresponding to the only field. Select the field in the top panel and click on the down arrow.



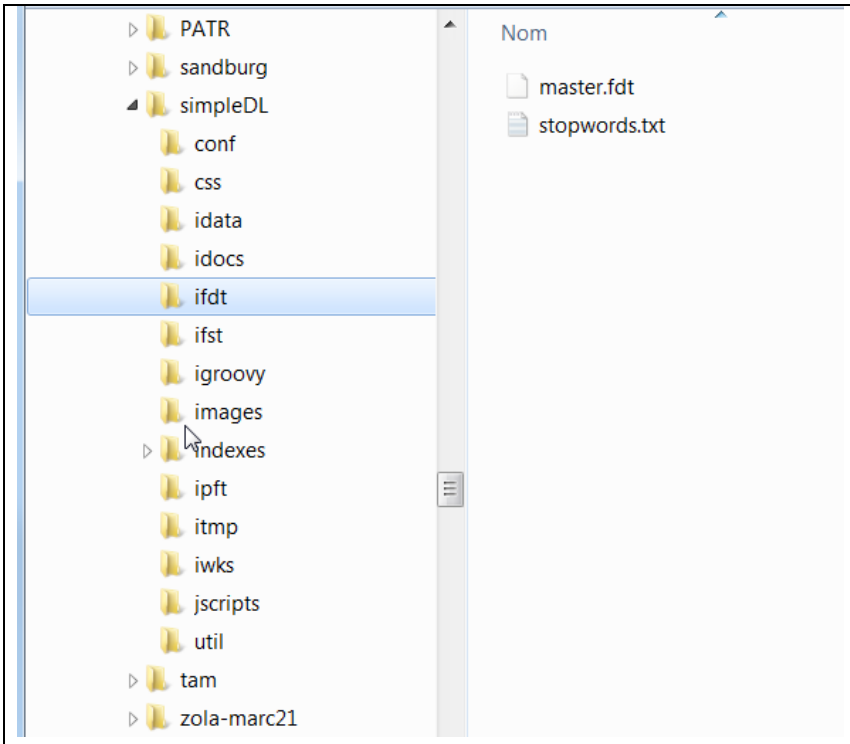
We change the indexing method to 4 which means to index each word in extracted text by the PFT Format. Please note that you can resize the columns to see the full text.



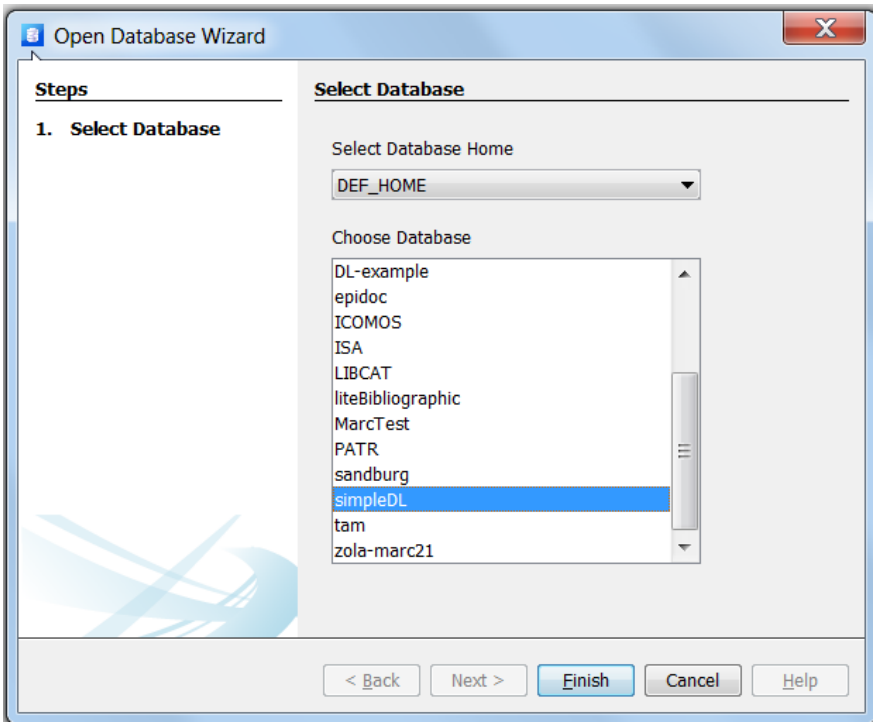
Clicking on Finish button will create the database



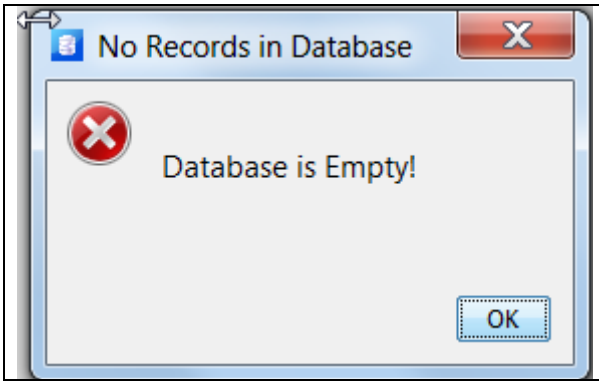
We copy the English stopwords file from the **`\jisis_suite\stopwords`** into the **`/SimpleDL/ifdt`** folder:



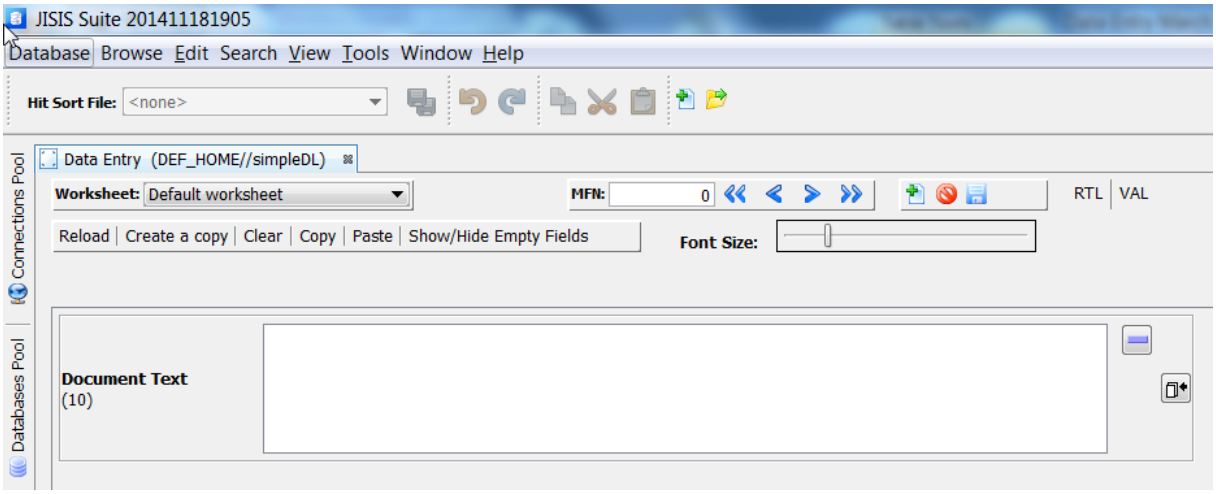
Next we open the new created database



After double clicking on simpleDL or clicking on the Finish button, you will see the information dialog message below telling that the database is empty and therefore that the "Data Viewer" module cannot be launched to view the records.

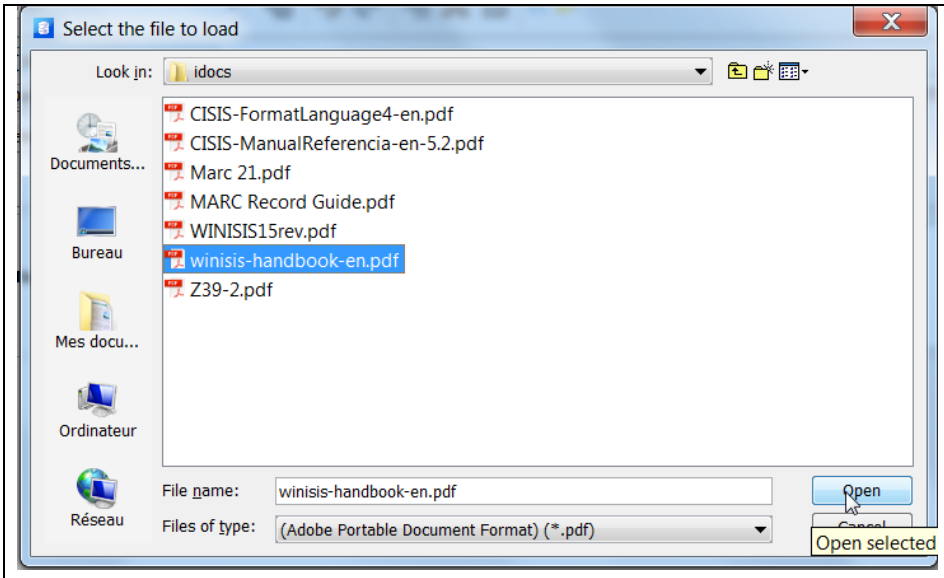


But we can start to enter documents (or records) by opening the Data Entry Module (**Edit->Data Entry)**

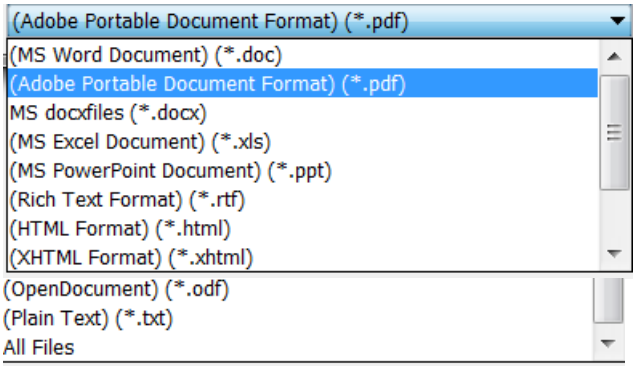


Please note that this module provides a button  for field 10 (Document Text) because it has been defined as a DOC field type in the FDT. Clicking on this button allows to select an external document.

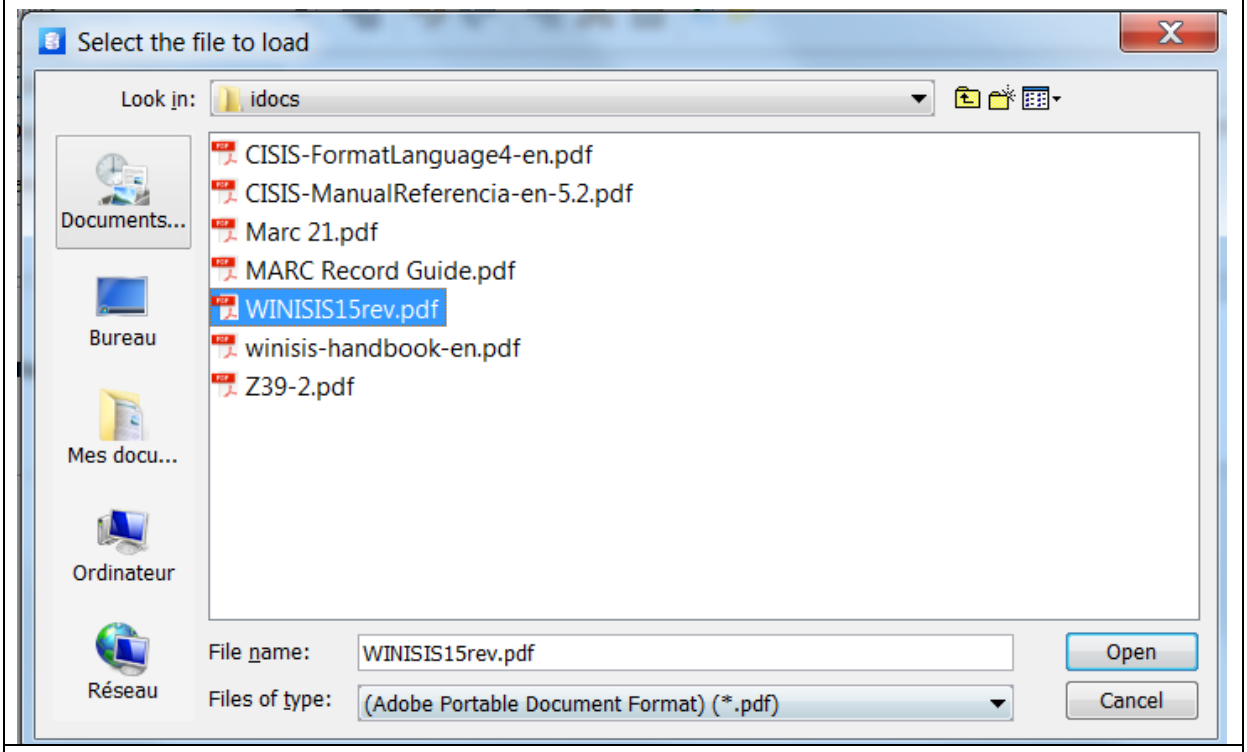
Clicking on this button pops up a File Selection Dialog. We can go into the **`/idocs`** folder of the DL-example database (**`jisis_suite\home_example_db\DL-example\idocs`**)



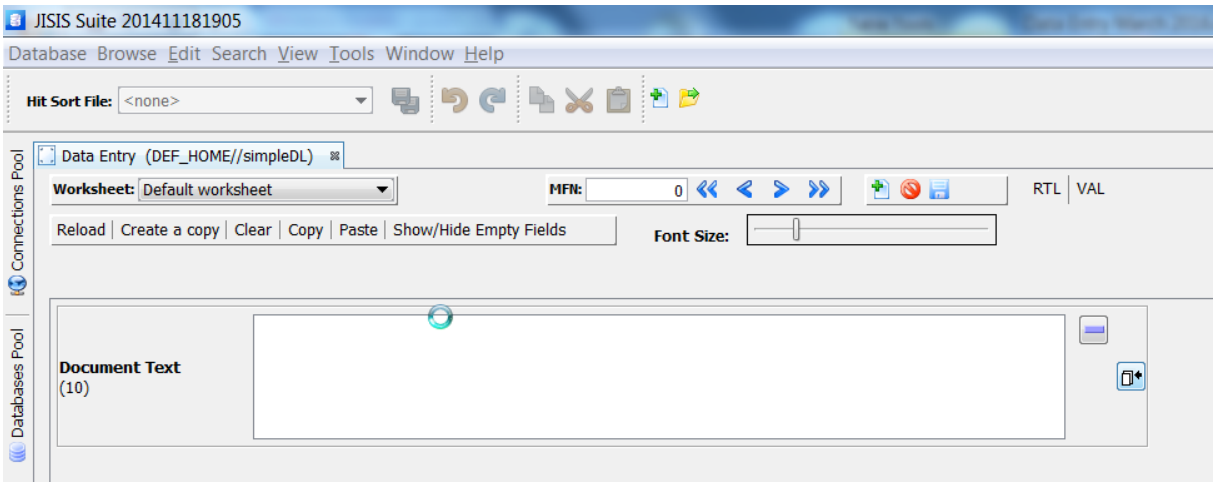
A vast array of content that has sprung up as a result of the information age. PDF files, Microsoft Office files (including Word, Excel, PowerPoint, and so on), images, text, binary formats, and more are a part of today's digital lingua franca, as are the applications tasked to handle such formats. J-ISIS can handle the following formats.



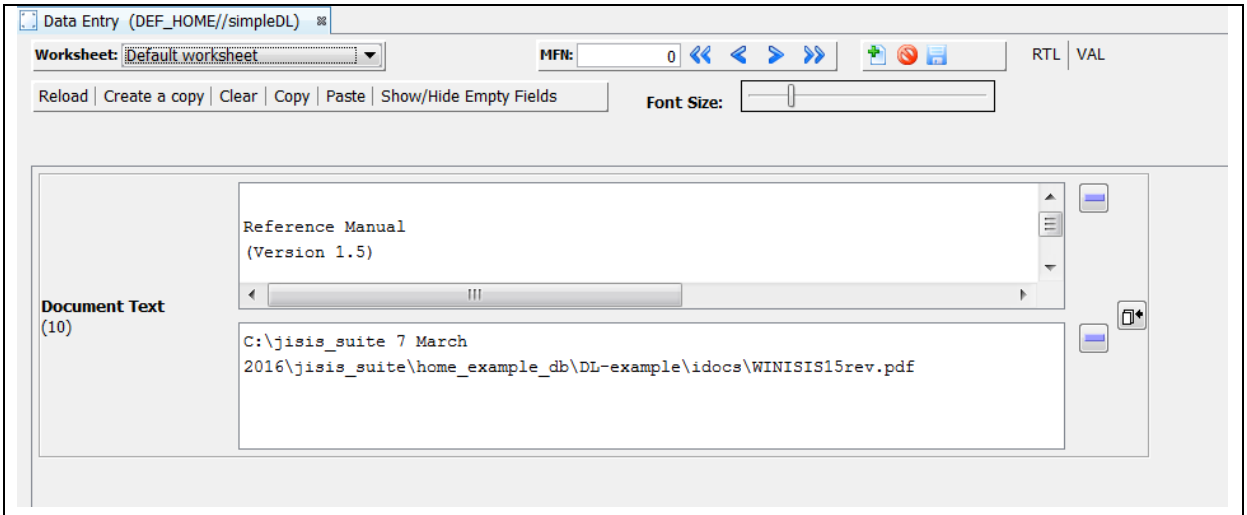
Let's select the WINISIS15rev.pdf file:

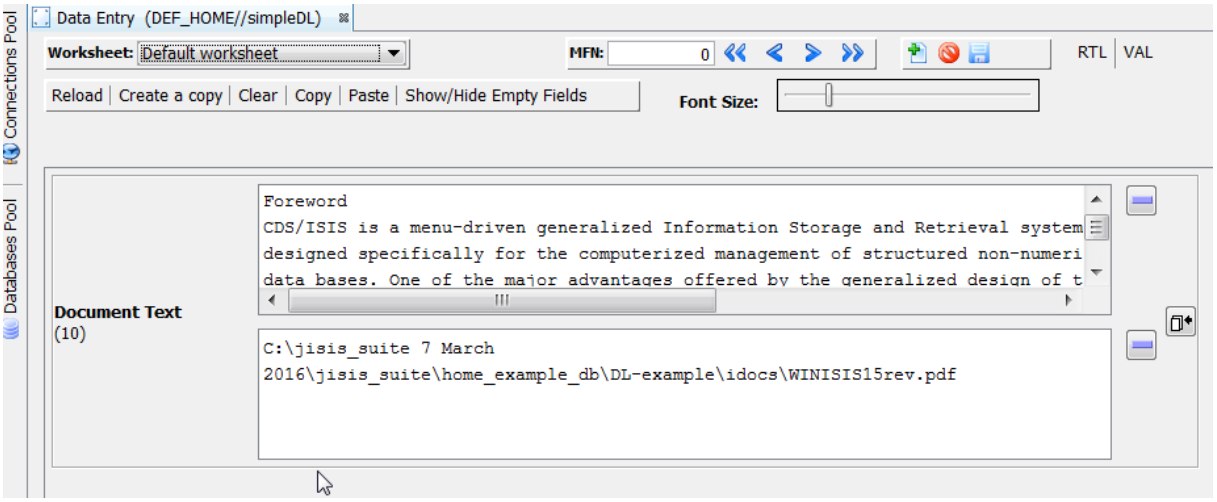


After clicking on **Open,** you will see a wait cursor and J-ISIS is temporarily disable



When reading and conversion in plain text is done, the plain text is displayed in the 1st field occurrence and the original document url is displayed in the 2nd occurrence as follow:

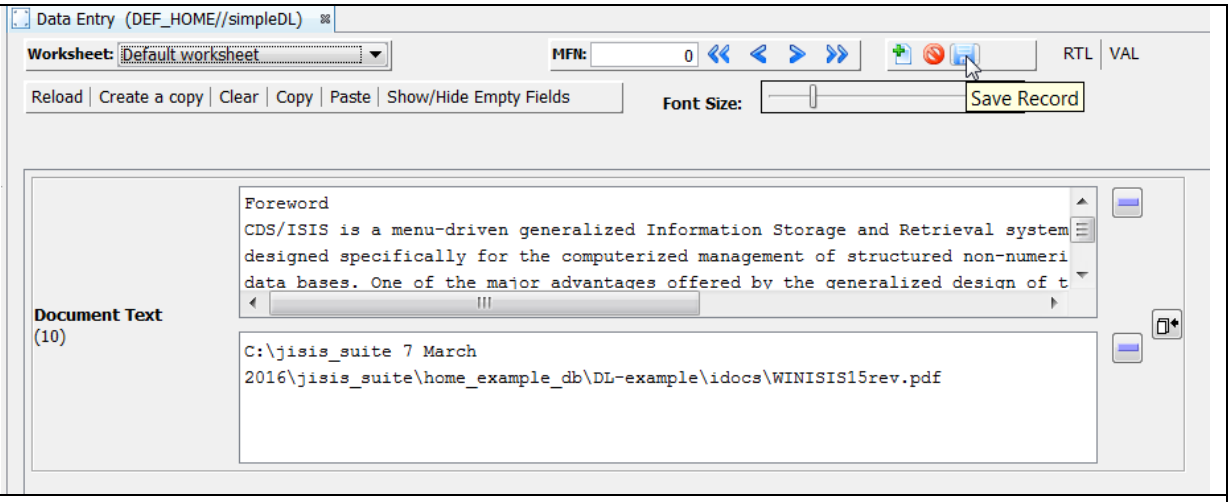




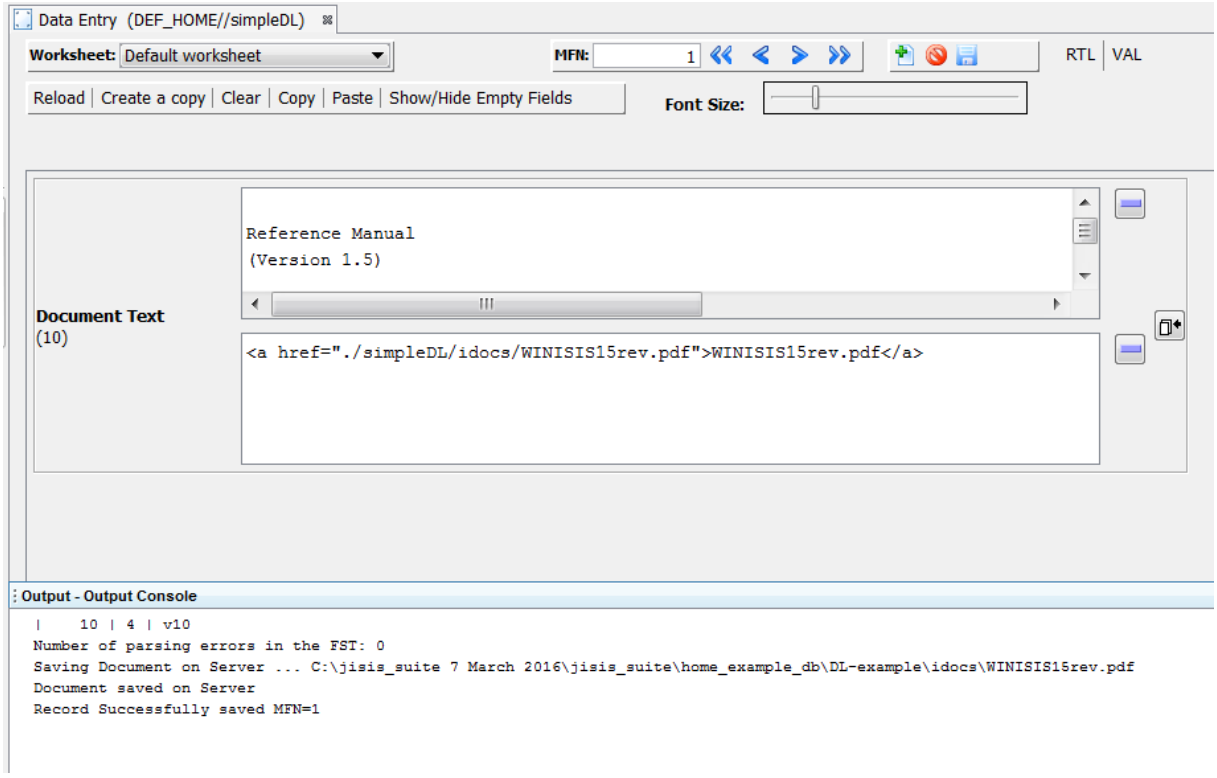
The size of the field in number of lines can be changed into the worksheet editor.

Saving the record will store the Document text field in the database, copy the original document on the server side in the **SimpleDL/idocs** folder, changing the original url by a http link:

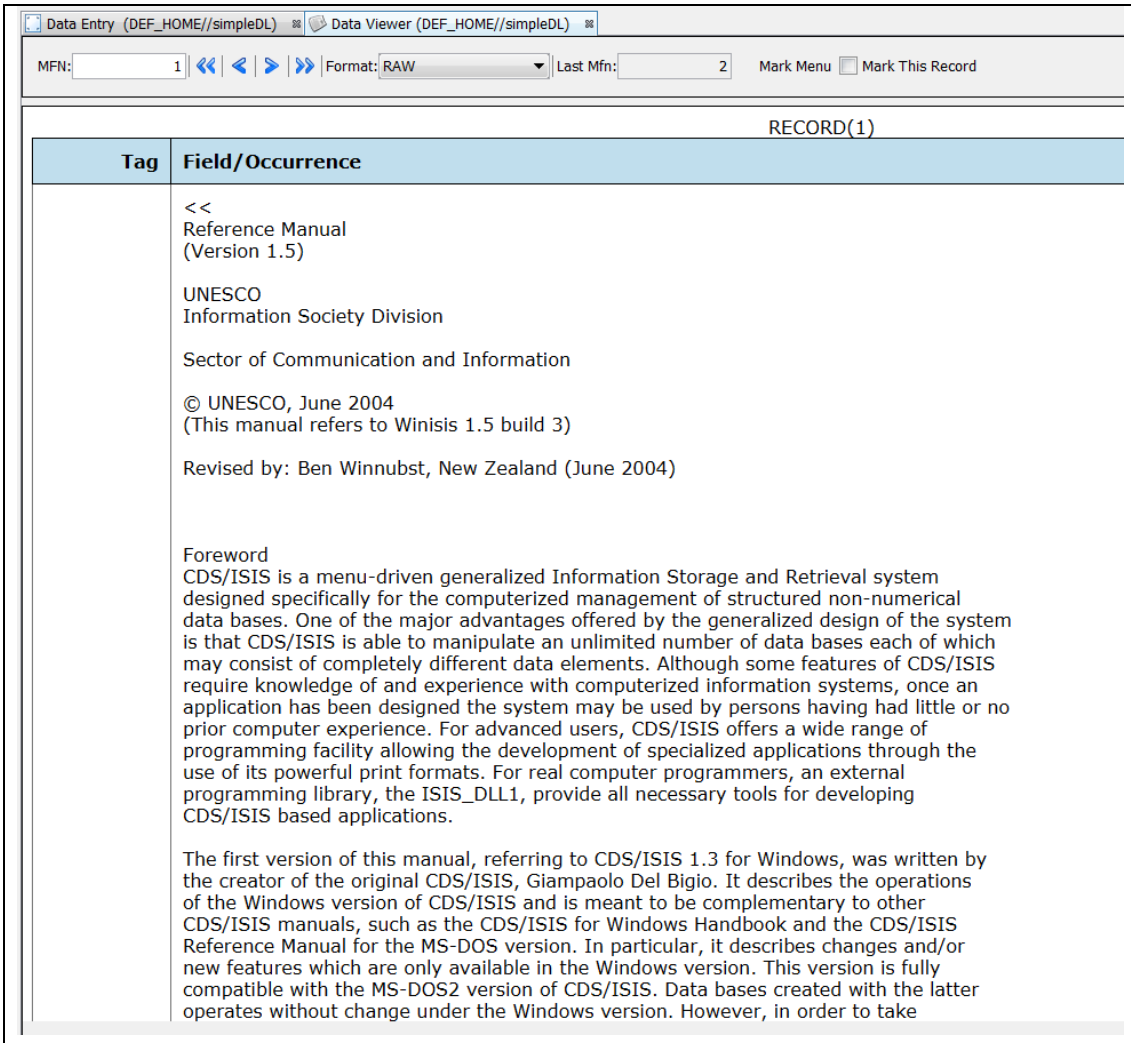
Before saving:



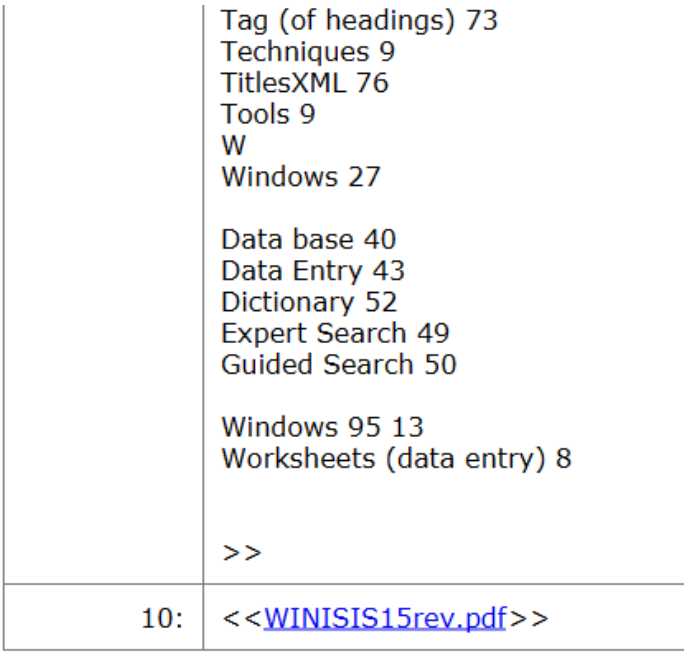
After saving:



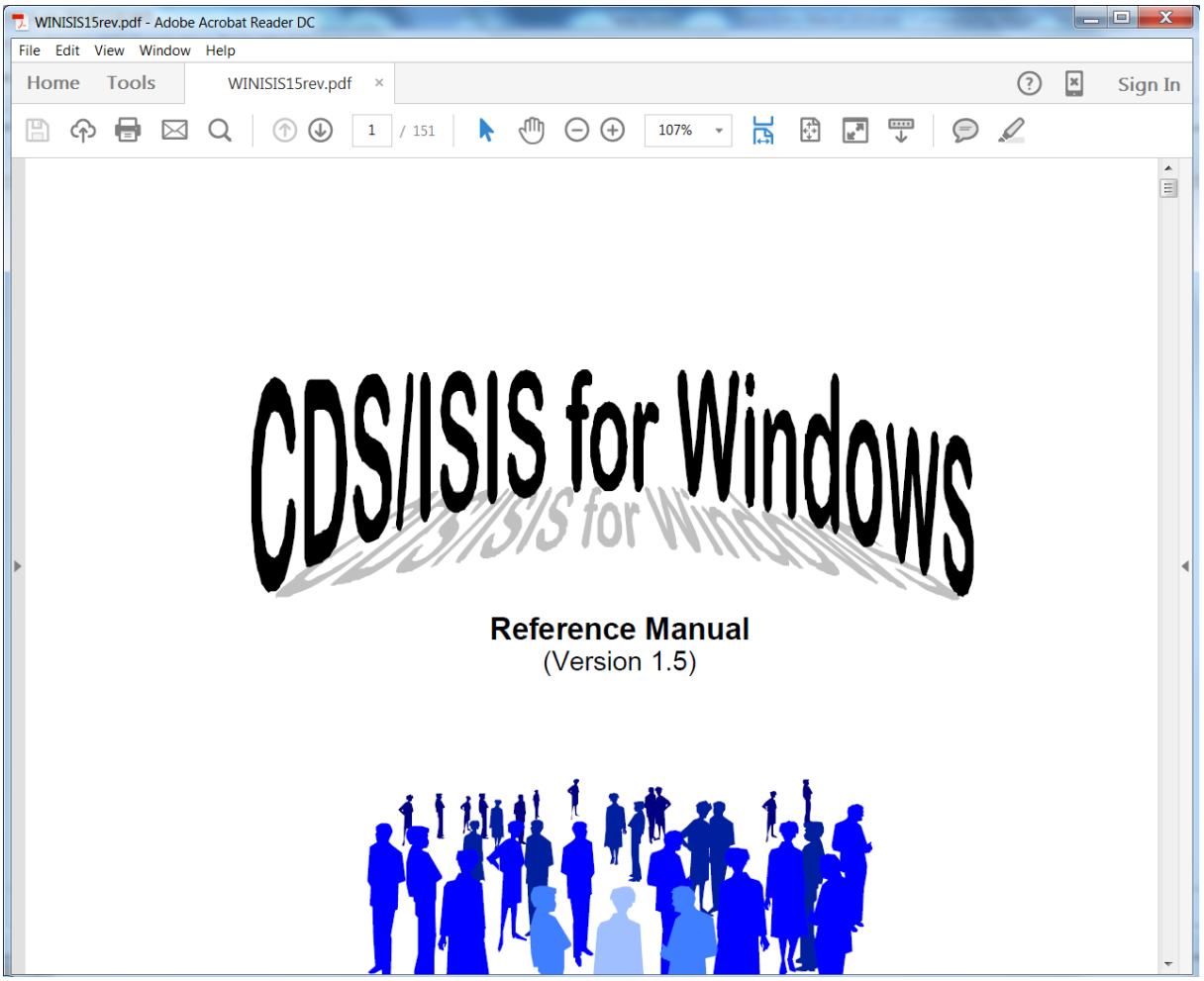
Now, if we look at the record using the Data Viewer:



And looking at the bottom, we can see the 2nd occurrence with the http link:



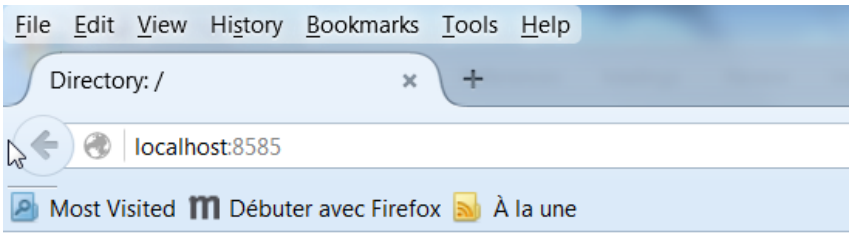
Clicking on this link will load the original document that has been copied on the server side:



J-ISIS has now an embedded http server on port 8585, thus whenever J-ISIS is running on a machine, you have the J-ISIS database server listening on port 1111 and also a Web Server available on port 8585. The http link is defined as:
WINISIS15rev.pdf

192.168.0.25 is the IP address of the server machine, port 8585 is the http server which has the path defined by DEF_HOME as document root

Thus entering localhost:8585 in a browser when J-ISIS is running will provide a directory listing of databases



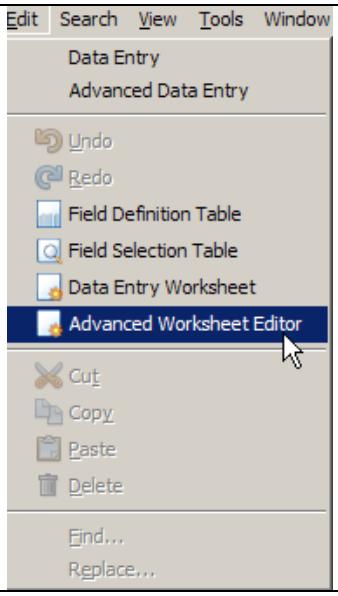
Directory: /

AMJ_BOOKS/	4096 bytes	May 5, 2014 4:42:30 PM
AMJ_LOAN/	4096 bytes	May 5, 2014 4:42:30 PM
AMJ_Member/	4096 bytes	May 5, 2014 4:42:30 PM
ASFAEX/	4096 bytes	May 16, 2012 7:09:36 PM
CDS/	4096 bytes	Mar 1, 2016 5:26:14 PM
DL-example/	4096 bytes	Nov 24, 2012 7:13:20 PM
ICOMOS/	4096 bytes	Dec 27, 2010 11:30:04 AM
ISA/	4096 bytes	Dec 27, 2010 11:30:02 AM
LIBCAT/	4096 bytes	Dec 27, 2010 11:30:02 AM
MarcTest/	4096 bytes	Mar 10, 2015 5:52:20 PM
PATR/	4096 bytes	Mar 2, 2016 6:49:14 PM
authority/	4096 bytes	Mar 4, 2015 4:29:24 PM
epidoc/	4096 bytes	Dec 27, 2010 11:30:06 AM
liteBibliographic/	4096 bytes	Mar 4, 2015 4:29:22 PM
sandburg/	4096 bytes	Mar 16, 2015 5:52:10 PM
simpleDL/	4096 bytes	Mar 7, 2016 5:14:37 PM
tam/	4096 bytes	Feb 3, 2016 3:54:32 PM
zola-marc21/	4096 bytes	Mar 4, 2015 4:32:34 PM

18.3 Data Entry at Subfield Level

Step 1- Defining Subfield Data Entry Boxes with the "Advanced Worksheet Editor" Module"

The advanced worksheet editor uses a Tree-Table layout and allows defining a worksheet that goes at the subfield level, define repetitive subfields and that may contain field indicators and implicit subfields.



THE ADVANCED WORKSHEET EDITOR ALLOWS DEFINING DATA ENTRY BOXES FOR SUBFIELDS INCLUDING PICK LISTS.

THESE DATA ENTRY BOXES WILL BE AVAILABLE IN BOTH DATA ENTRY MODULES.

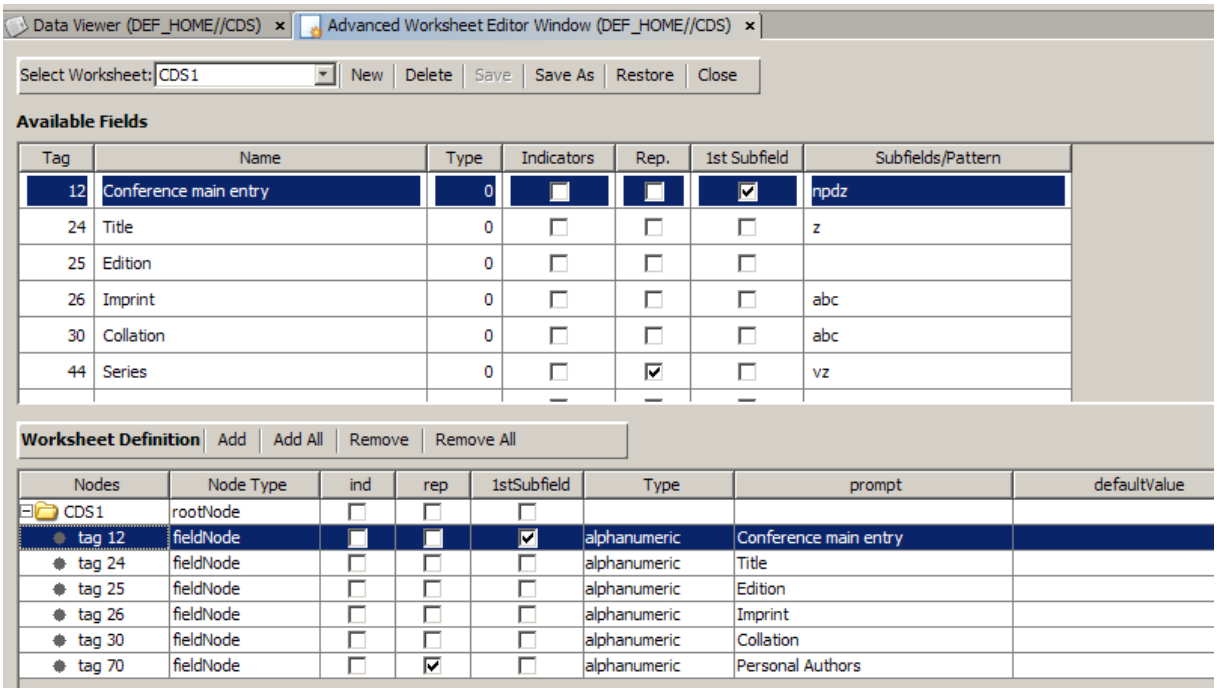
- SUBFIELDS OF A PARTICULAR FIELD CAN BE ACCESSED BY PRESSING F10 KEY IN THE "Data Entry" MODULE
- AND THEY ARE PART OF THE TREE-TABLE DISPLAYED BY THE "Advanced Data Entry" MODULE.

There are two use cases:

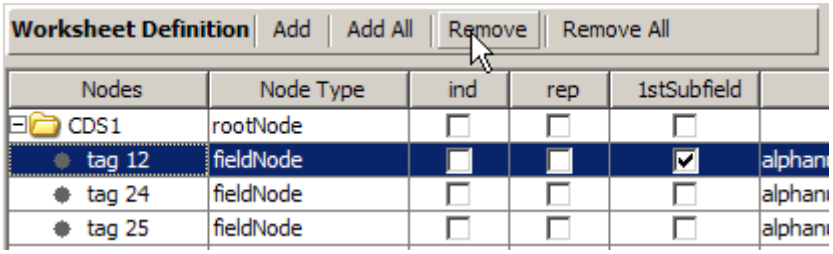
1) Enrich a worksheet created with the ***Worksheet Editor*** to get subfield data entry.
2) Create or modify an advanced worksheet

1) Enrich a worksheet created with the Worksheet Editor to get subfield data entry.

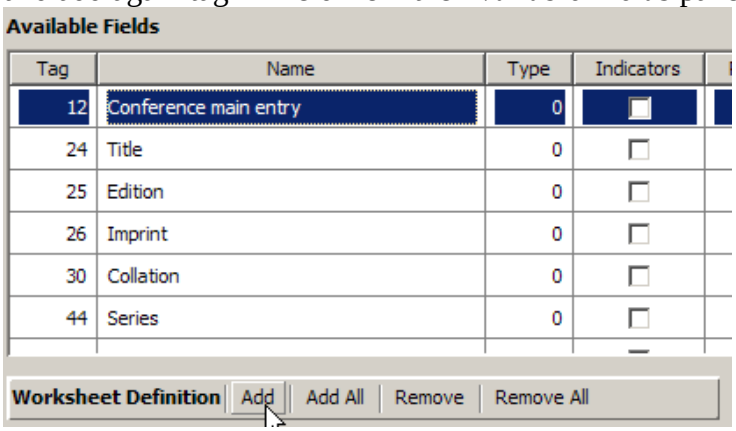
The default worksheet definition created at database creation is defined with the standard worksheet editor. This worksheet or any worksheet created with the *Data Entry Worksheet Editor* defines data entry fields at the field level. It doesn't include the subfields. The ***Advanced Worksheet Editor*** *allows* defining data entry fields at the subfield level.
If we load a standard worksheet, the subfields are not defined. For example, the CDS1 worksheet would look as follow:



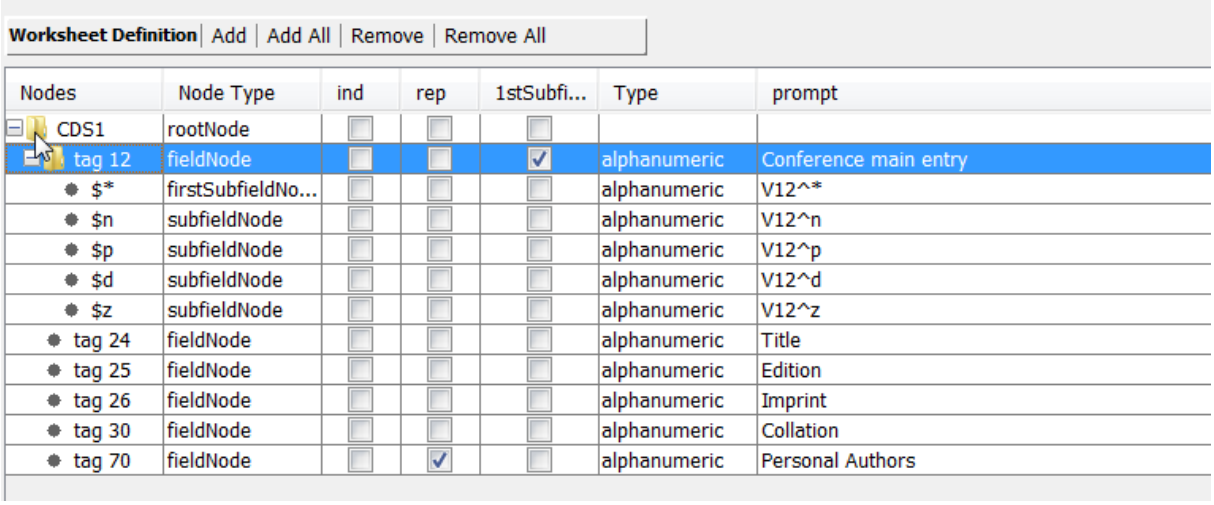
Field with tag 12 has subfields and a first implicit subfield (Please note that 1st Implicit Subfield should be defined in the FDT). To make them available, we remove the tag 12 field from the Worksheet Definition Panel



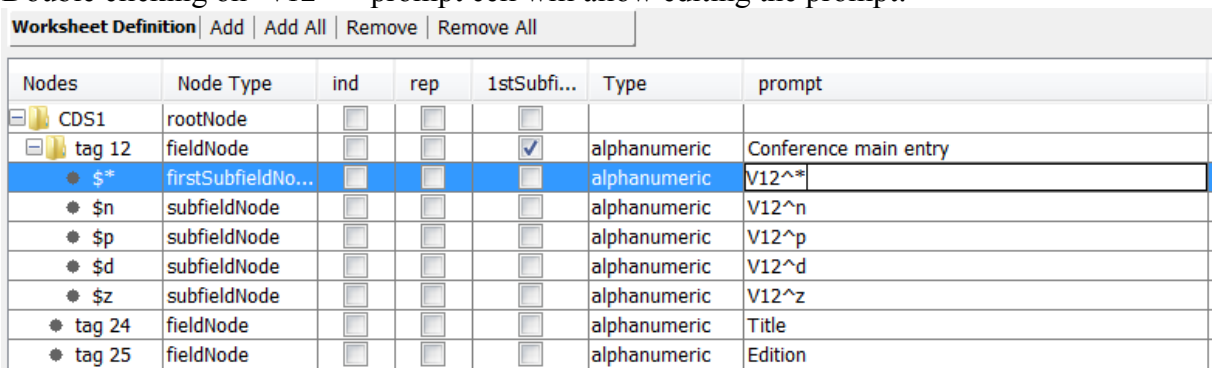
and add again tag 12 field from the *Available Fields* panel



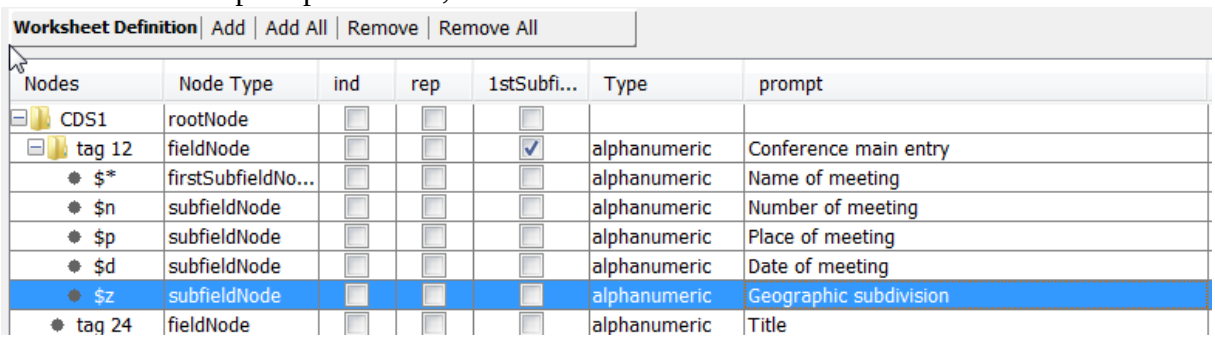
Then, we have now the new field 12 with a "+" node that can be expanded to see the subfields by clicking on it:



We have now worksheet entries for the subfields and we can change the default prompt and indicates if the subfield is repetitive (the type can also be changed).
Double clicking on "v12^*" prompt cell will allow editing the prompt:



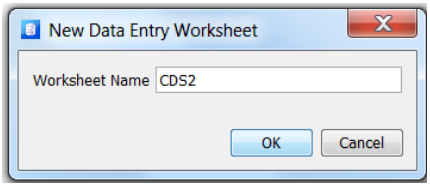
Once the subfield prompts entered, it will look like this:



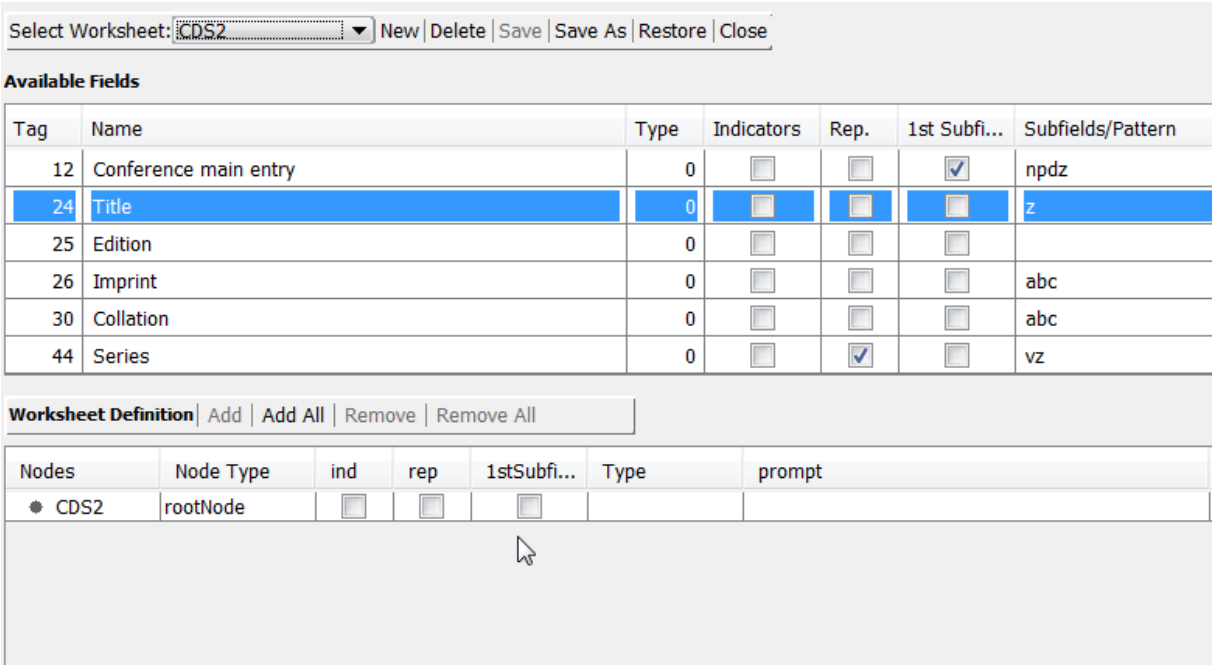
This process could be done for each field that contains subfields. Please note that it is important to correctly define the subfield definition in the FDT so that they are reflected in the worksheet definition.

2) Create or Modify an advanced worksheet

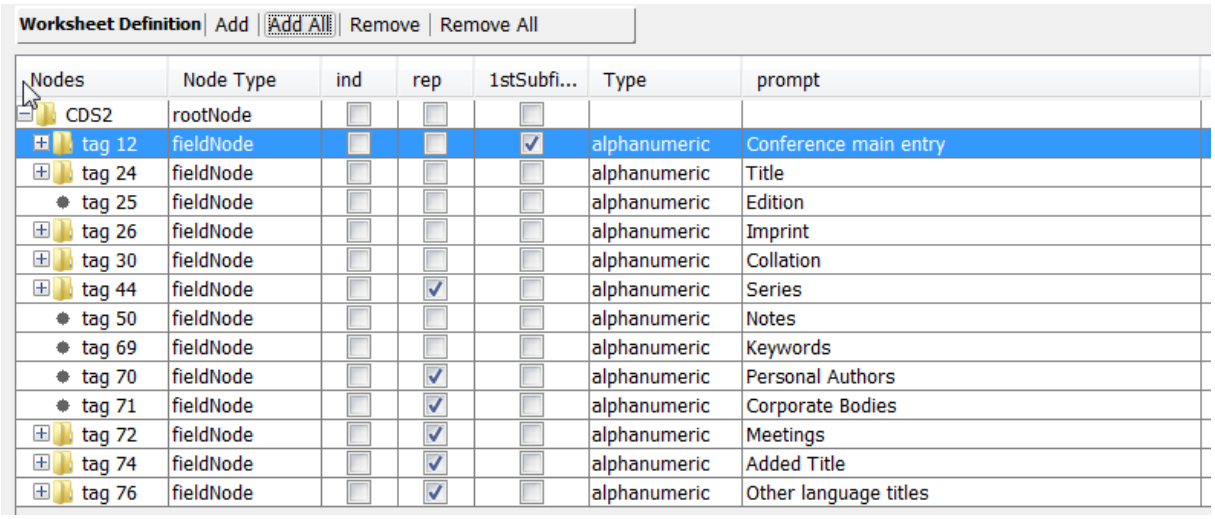
The following dialog pops up when clicking on ***New*** button and you must enter a worksheet name.



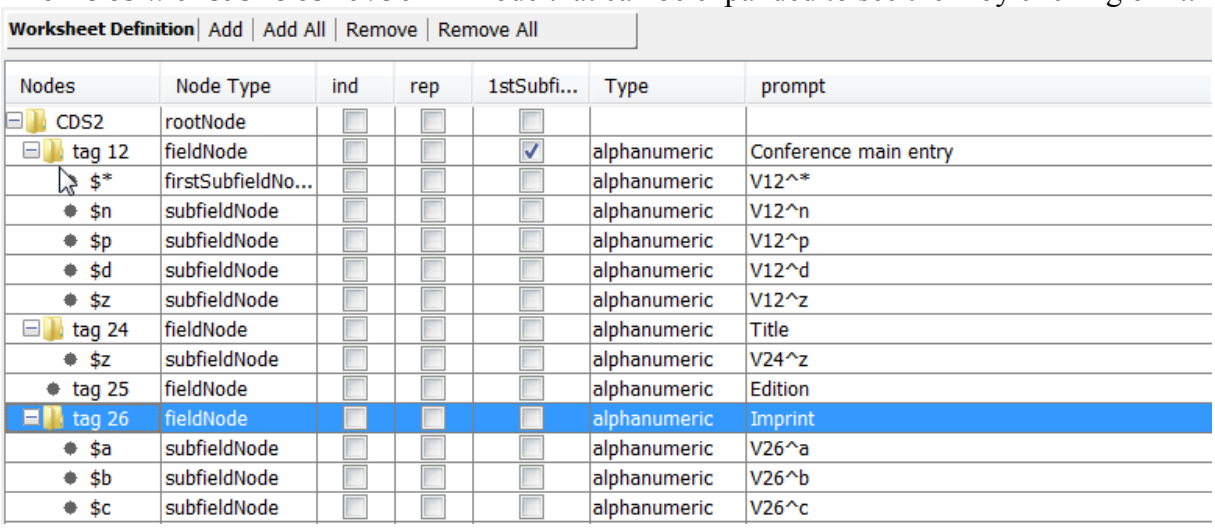
And an empty worksheet definition is displayed.



Clicking on the "**Add All**" button will add all the fields to the worksheet definition.



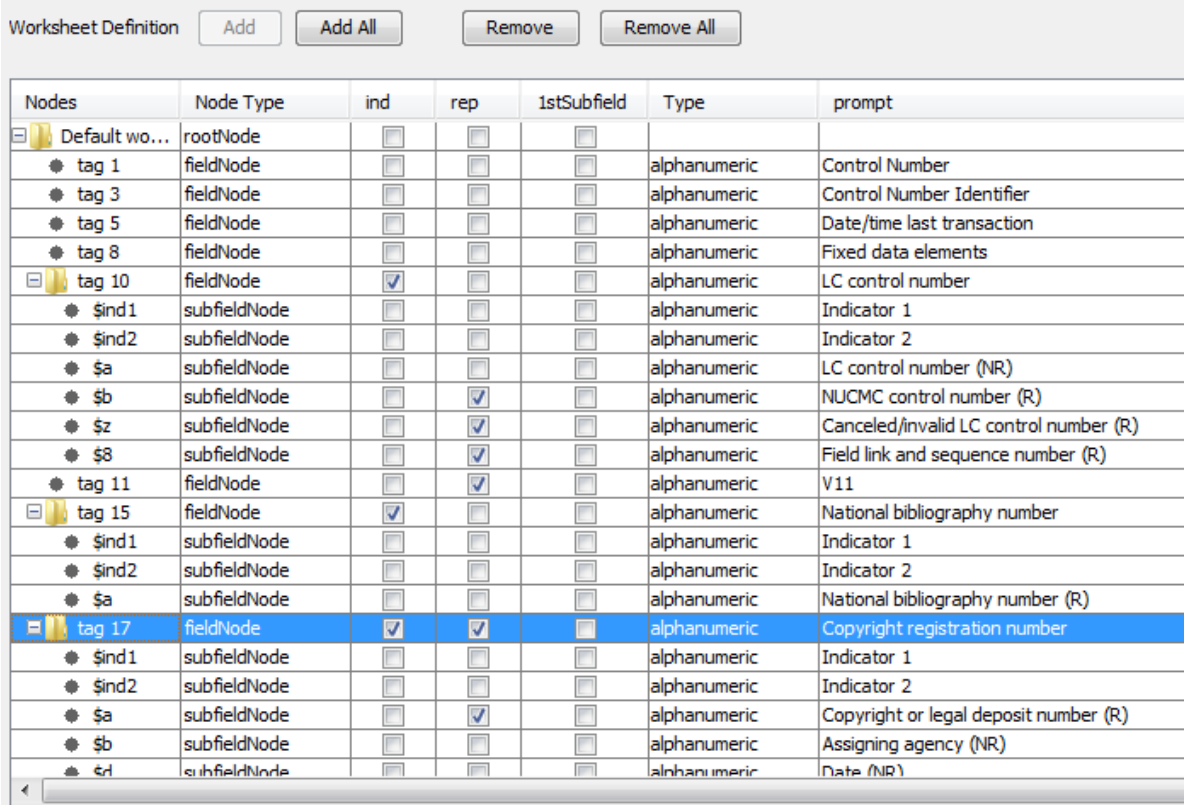
And fields with subfields have a "+" node that can be expanded to see them by clicking on it:



The subfield prompts can now be edited to replace the Vxx^x by a meaningful text.

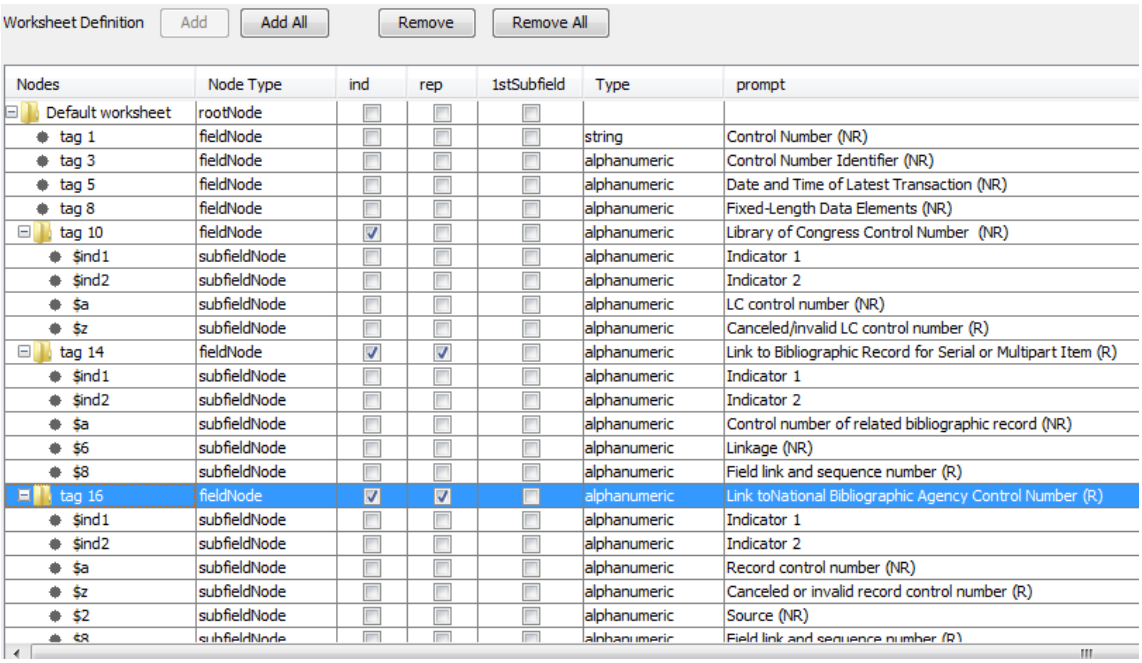
A worksheet definition is formatted in XML using Unicode utf-8 encoding and is stored in a file called *worksheetName.xml* into the **`/iwks`** folder of the database.

We have used the "**Add All**" button to move all fields, but fields can be selected individually and inserted at any place in the bottom Tree-Table, you just have to select the node (or tree root) after which you want to insert the field, and the sub-nodes will be created automatically.
It's quite easy to define template worksheets for Marc21 bibliographic records or Authority records and Unimarc bibliographic records.
Example of a Marc21 bibliographic worksheet:



Nodes	Node Type	ind	rep	1stSubfield	Type	prompt
Default wo...	rootNode	☐	☐	☐		
tag 1	fieldNode	☐	☐	☐	alphanumeric	Control Number
tag 3	fieldNode	☐	☐	☐	alphanumeric	Control Number Identifier
tag 5	fieldNode	☐	☐	☐	alphanumeric	Date/time last transaction
tag 8	fieldNode	☐	☐	☐	alphanumeric	Fixed data elements
tag 10	fieldNode	☑	☐	☐	alphanumeric	LC control number
$ind1	subfieldNode	☐	☐	☐	alphanumeric	Indicator 1
$ind2	subfieldNode	☐	☐	☐	alphanumeric	Indicator 2
$a	subfieldNode	☐	☐	☐	alphanumeric	LC control number (NR)
$b	subfieldNode	☐	☑	☐	alphanumeric	NUCMC control number (R)
$z	subfieldNode	☐	☑	☐	alphanumeric	Canceled/invalid LC control number (R)
$8	subfieldNode	☐	☑	☐	alphanumeric	Field link and sequence number (R)
tag 11	fieldNode	☐	☑	☐	alphanumeric	V11
tag 15	fieldNode	☑	☐	☐	alphanumeric	National bibliography number
$ind1	subfieldNode	☐	☐	☐	alphanumeric	Indicator 1
$ind2	subfieldNode	☐	☐	☐	alphanumeric	Indicator 2
$a	subfieldNode	☐	☐	☐	alphanumeric	National bibliography number (R)
tag 17	fieldNode	☑	☑	☐	alphanumeric	Copyright registration number
$ind1	subfieldNode	☐	☐	☐	alphanumeric	Indicator 1
$ind2	subfieldNode	☐	☐	☐	alphanumeric	Indicator 2
$a	subfieldNode	☐	☑	☐	alphanumeric	Copyright or legal deposit number (R)
$b	subfieldNode	☐	☐	☐	alphanumeric	Assigning agency (NR)
$d	subfieldNode	☐	☐	☐	alphanumeric	Date (NR)

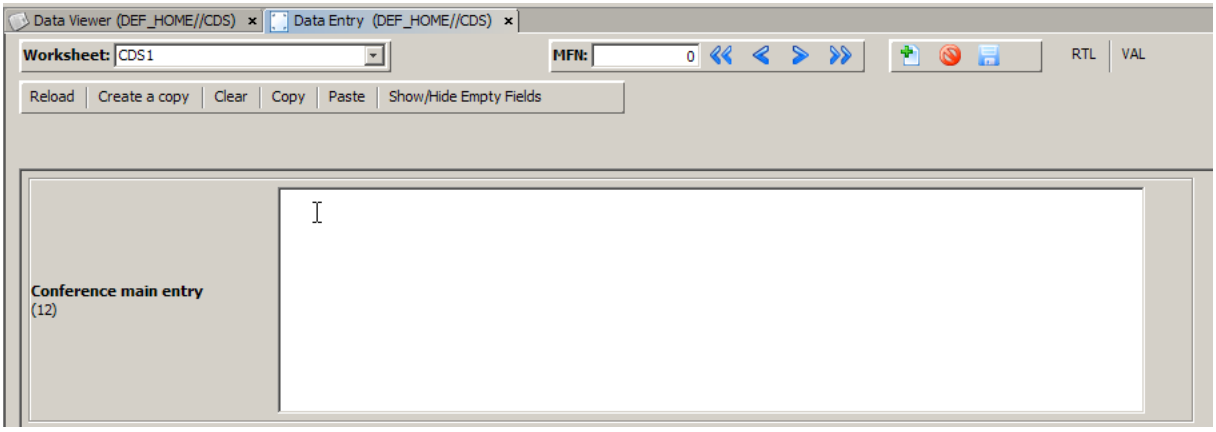
Example of a Marc21 authority control worksheet:



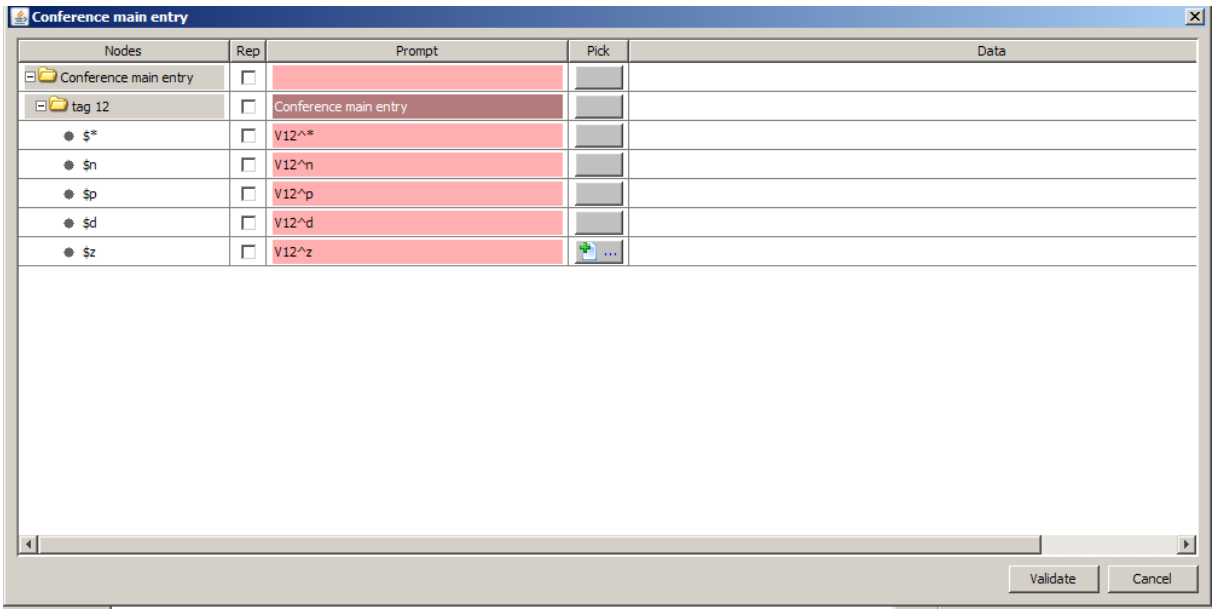
Nodes	Node Type	ind	rep	1stSubfield	Type	prompt
Default worksheet	rootNode	☐	☐	☐		
tag 1	fieldNode	☐	☐	☐	string	Control Number (NR)
tag 3	fieldNode	☐	☐	☐	alphanumeric	Control Number Identifier (NR)
tag 5	fieldNode	☐	☐	☐	alphanumeric	Date and Time of Latest Transaction (NR)
tag 8	fieldNode	☐	☐	☐	alphanumeric	Fixed-Length Data Elements (NR)
tag 10	fieldNode	☑	☐	☐	alphanumeric	Library of Congress Control Number (NR)
$ind1	subfieldNode	☐	☐	☐	alphanumeric	Indicator 1
$ind2	subfieldNode	☐	☐	☐	alphanumeric	Indicator 2
$a	subfieldNode	☐	☐	☐	alphanumeric	LC control number (NR)
$z	subfieldNode	☐	☐	☐	alphanumeric	Canceled/invalid LC control number (R)
tag 14	fieldNode	☑	☑	☐	alphanumeric	Link to Bibliographic Record for Serial or Multipart Item (R)
$ind1	subfieldNode	☐	☐	☐	alphanumeric	Indicator 1
$ind2	subfieldNode	☐	☐	☐	alphanumeric	Indicator 2
$a	subfieldNode	☐	☐	☐	alphanumeric	Control number of related bibliographic record (NR)
$6	subfieldNode	☐	☐	☐	alphanumeric	Linkage (NR)
$8	subfieldNode	☐	☐	☐	alphanumeric	Field link and sequence number (R)
tag 16	fieldNode	☑	☑	☐	alphanumeric	Link toNational Bibliographic Agency Control Number (R)
$ind1	subfieldNode	☐	☐	☐	alphanumeric	Indicator 1
$ind2	subfieldNode	☐	☐	☐	alphanumeric	Indicator 2
$a	subfieldNode	☐	☐	☐	alphanumeric	Record control number (NR)
$z	subfieldNode	☐	☐	☐	alphanumeric	Canceled or invalid record control number (R)
$2	subfieldNode	☐	☐	☐	alphanumeric	Source (NR)
$8	subfieldNode	☐	☐	☐	alphanumeric	Field link and sequence number (R)

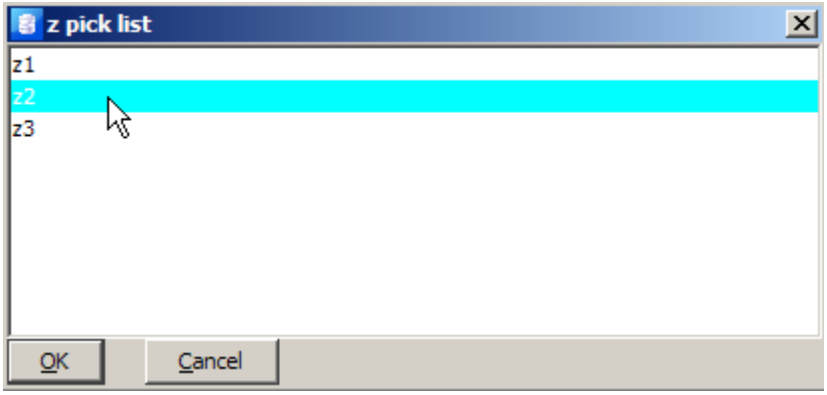
Accessing Subfields into the "Data Entry" module

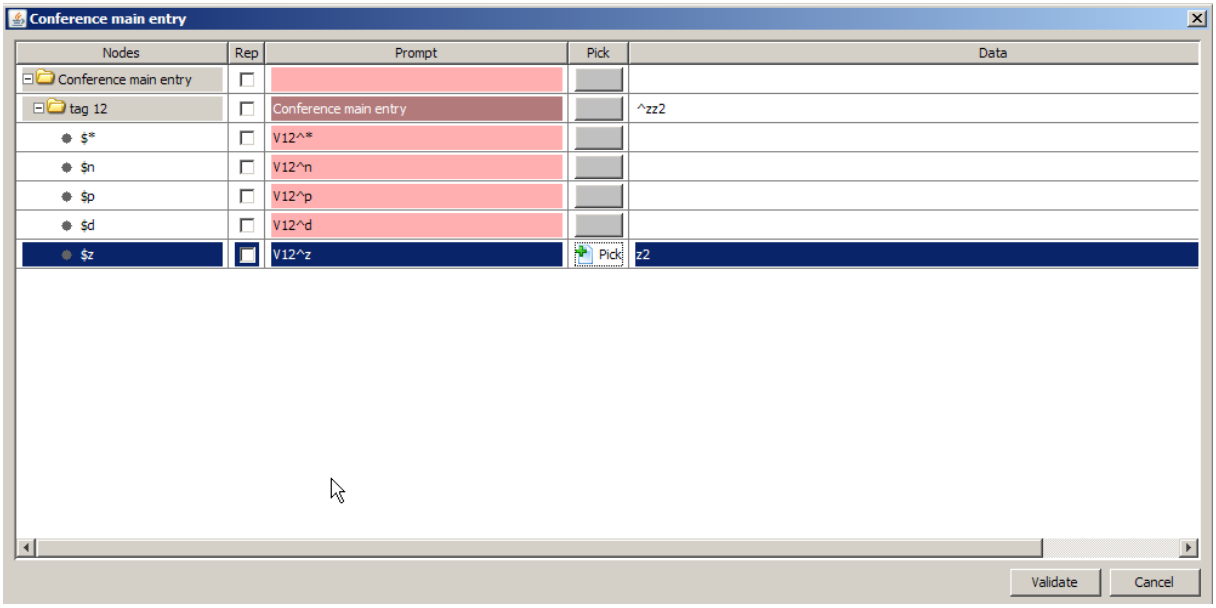
This is a new feature available since the 1st 2016 release. You can display a tree layout of the current selected field (where the cursor is positioned) by pressing "F10" key.



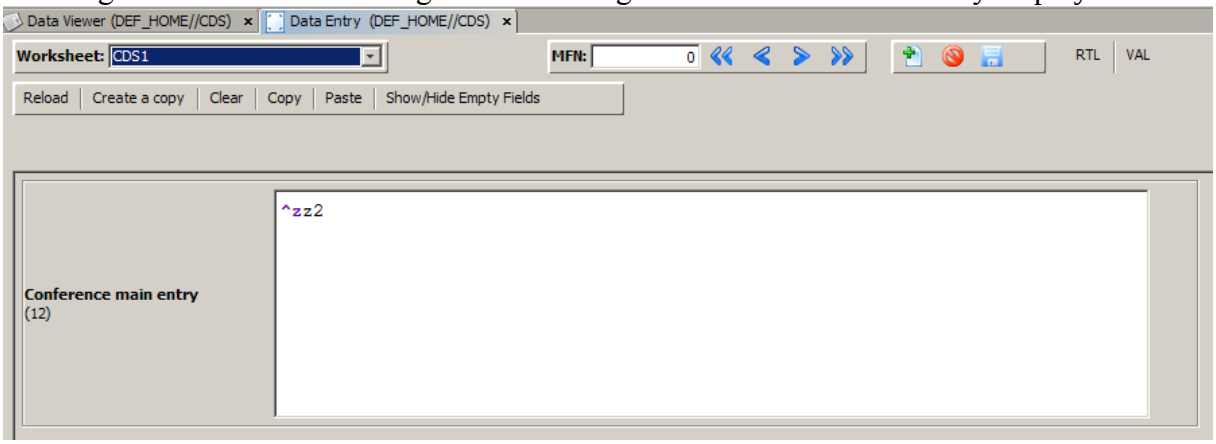
Pressing "F10" pops up a dialog with a hierarchical layout of the field as defined in the Advanced Worksheet Editor. A Pick List button is shown for subfield with code "z"



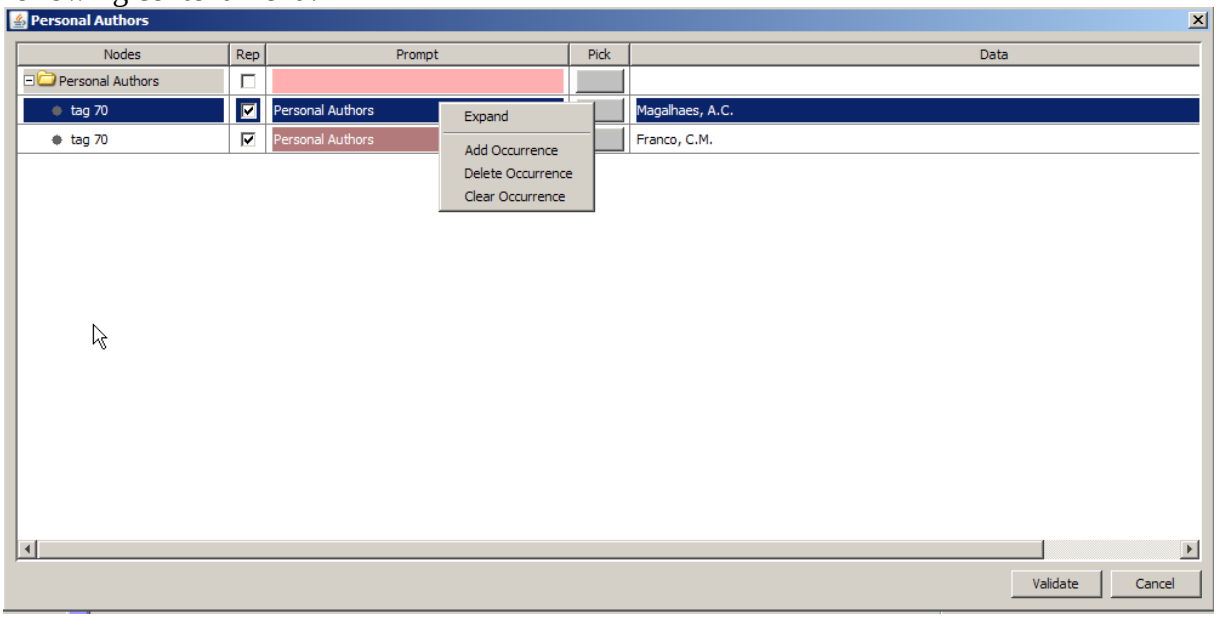




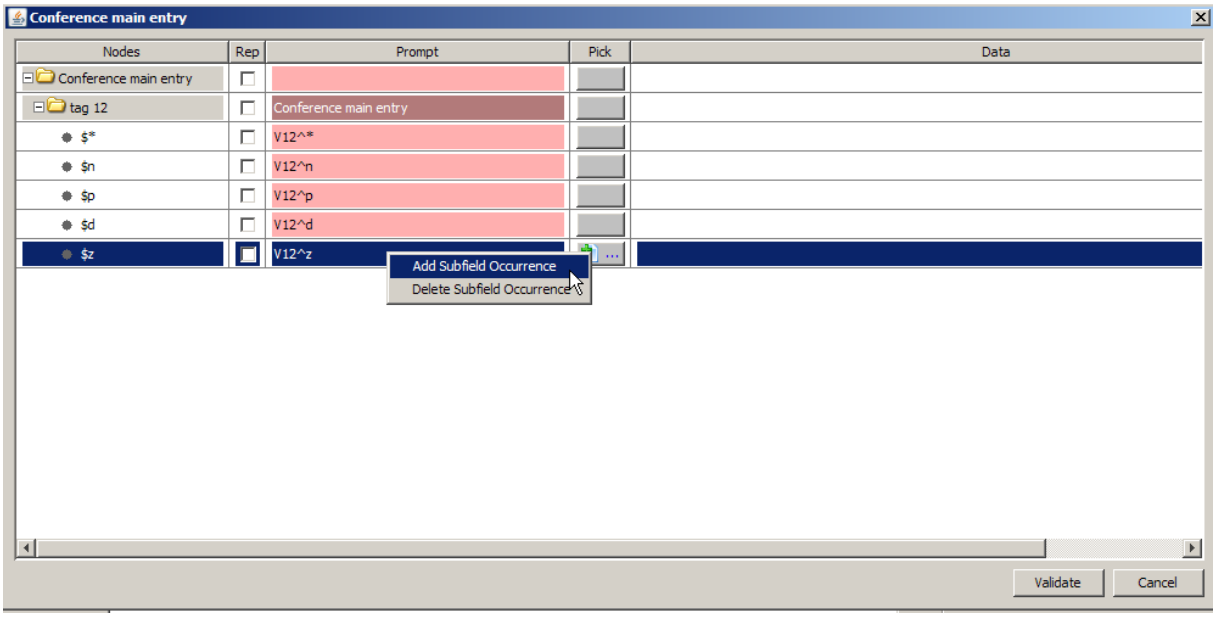
Clicking on “Validate” will bring back the changes made into the Data Entry display



In case the field is repetitive, all occurrences will be displayed in the dialog tree layout. And clicking on the right mouse button when the cursor is on a field occurrence gives access to the following context menu:

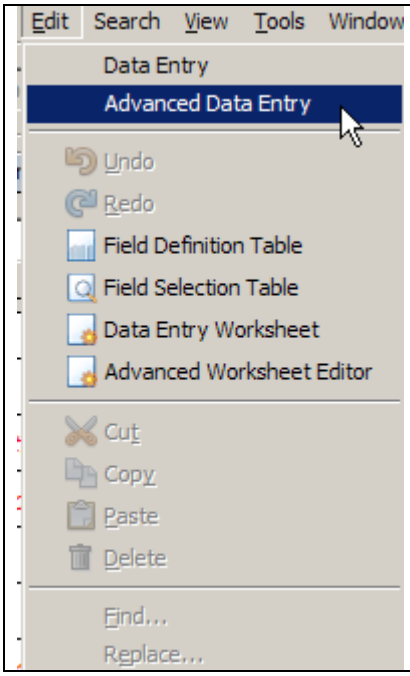


clicking on the right mouse button when the cursor is on a subfield occurrence gives access to the following context menu:



Advanced Data Entry

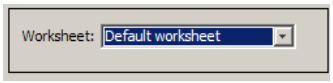
The ***Advanced Data Entry Editor*** uses a Tree-Table layout and worksheets defined with the advanced worksheet editor. Editing is done at the subfield level if a field has subfields or at the field level for fields without subfields.



It provides also interactivity for the basic functionality of entering, editing, viewing, or deleting records, that is, CRUD (Create Read Update Delete).

A) Advanced Data Entry Control Panel

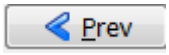
The data entry window control panel contains the following items:



Allows you to select a different worksheet. By clicking on this field the list of available worksheets (as defined in the /iwks folder) is displayed.

This field contains the current MFN number. Clicking on this field allows you to edit a particular record by typing the desired MFN number and then pressing the Enter key.

Displays the first record. If you are editing a search result the first record matching the search expression is displayed. If you are editing the data base sequentially, the first data base record is displayed.



Displays the previous record. If you are editing a search result the previous record (if any) matching the search expression is displayed.

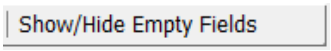
Displays the next record. If you are editing a search result the next record (if any) matching the search expression is displayed.

Displays the last record. If you are editing a search result the last record matching the search expression is displayed. If you are editing the data base sequentially, the last data base record is displayed.

Creates a new record. The current worksheet is displayed with all its fields empty.

Saves the current record in the Master file, updating the index.

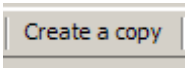
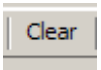
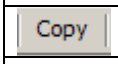
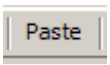
Deletes the current record in the Master file, updating the index.



This toggle switch allows you to show (or remove) empty fields from the screen

This toggle switch allows you to enable Right To Left data entry and display

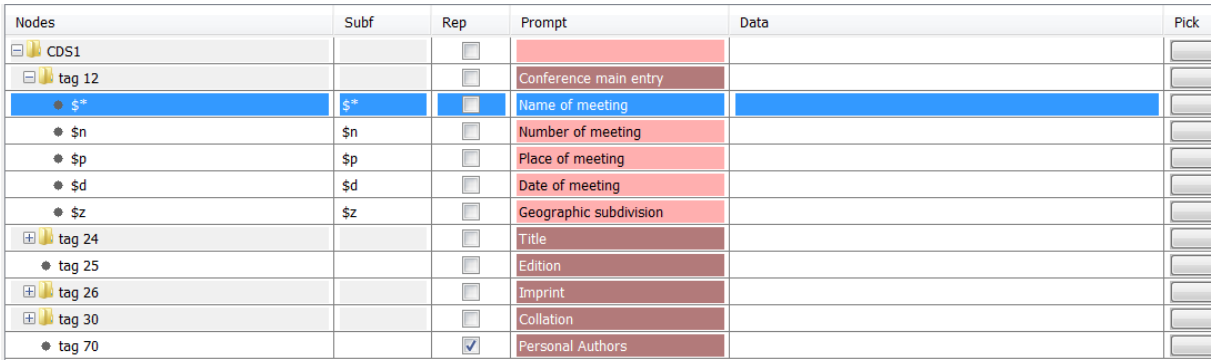
Applies the validation rules if any.

	Cancels all the changes made and restores the record to its initial status
	Creates a new record with the same content than the current one. The created record is assigned the next available MFN.
	Clears the contents of all the fields in the worksheet.
	Copy the current record in the stack
	Paste a record from the stack

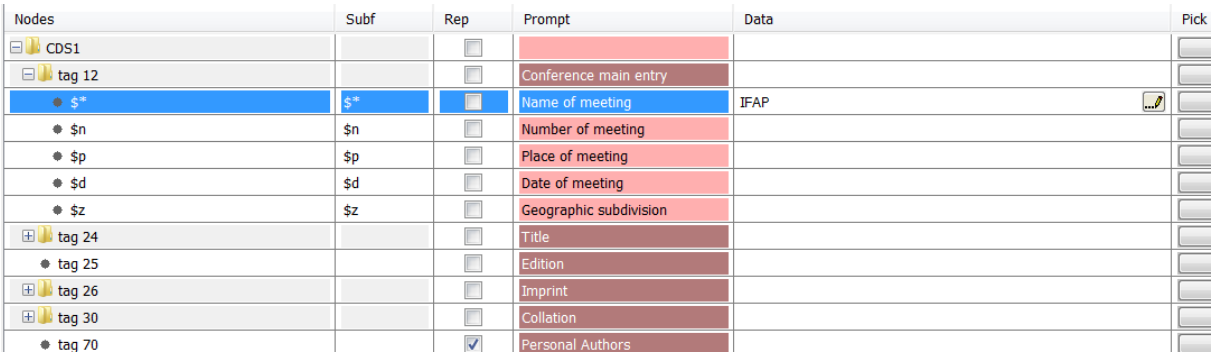
A) Advanced Data Entry Window

When selecting "Advanced Data Entry" from the "Edit" menu, we get a data entry display form driven by the first worksheet name in alphabetical order (CDS1 for CDS data base). A different worksheet can be selected if needed. The data field and subfield areas are empty and MFN equals 0. This is the data entry ***New*** state.

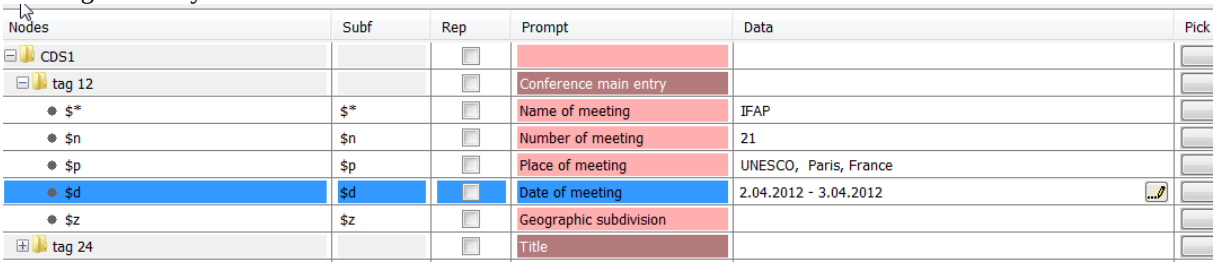
Please note that fields with subfields have a "+" node that is not initially expanded. They can be expanded to see subfields by clicking on "+":



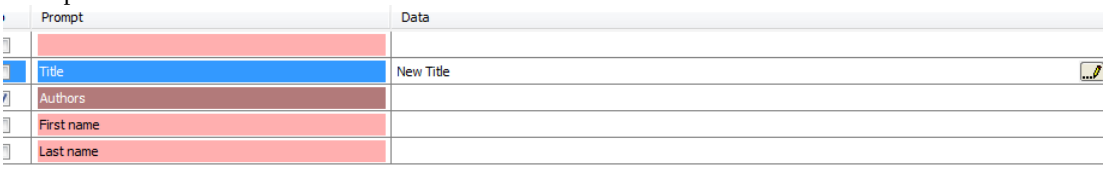
Data entry can be started by double clicking on a subfield or field (without subfields) prompt cell



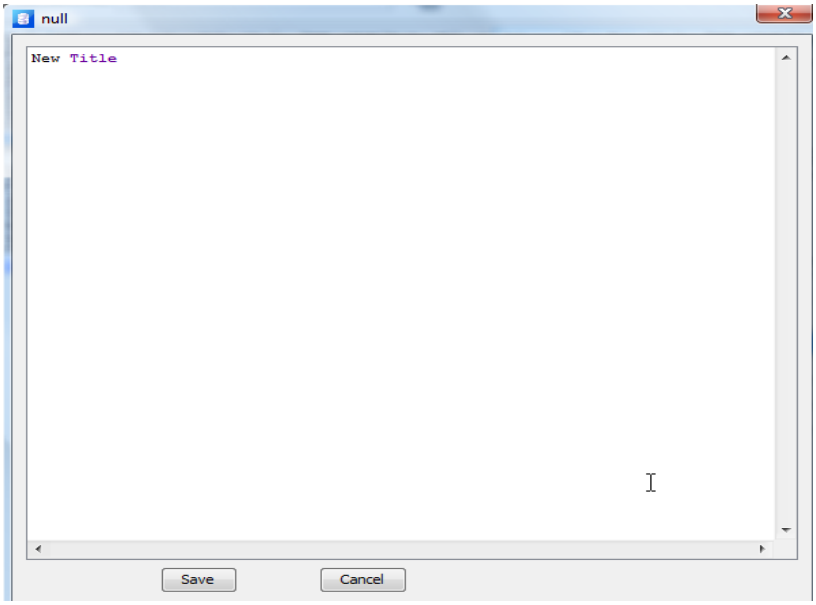
Pressing Enter key will save the current data and move the cursor to the next editable data element



Up and Down keyboard keys can be used to move the cursor respectively to the previous or next editable data element.
The Pick button will be enabled if a pick list is provided for a field.
Dark pink cells cannot be edited

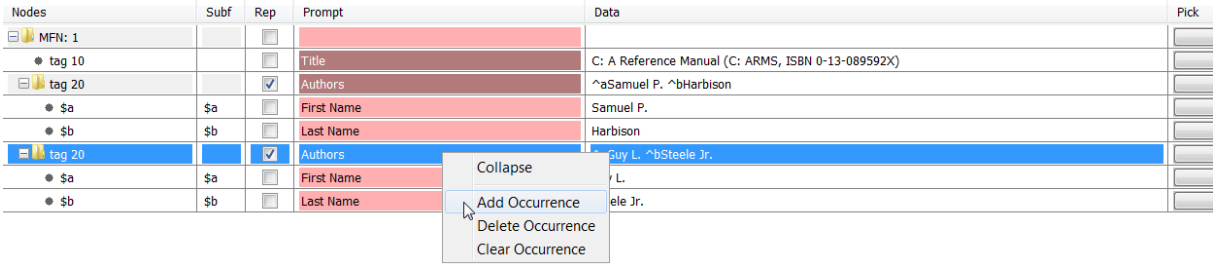


Clicking on the pencil will provide a dialog with an editor.

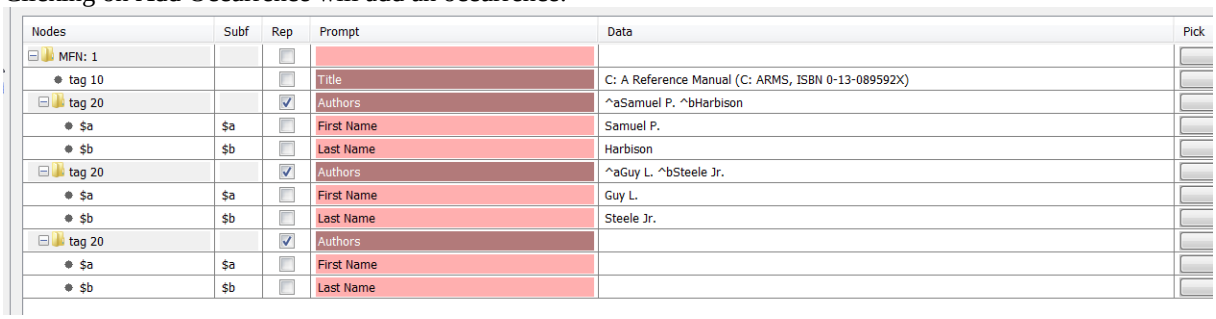


Add/Delete/Clear field occurrences

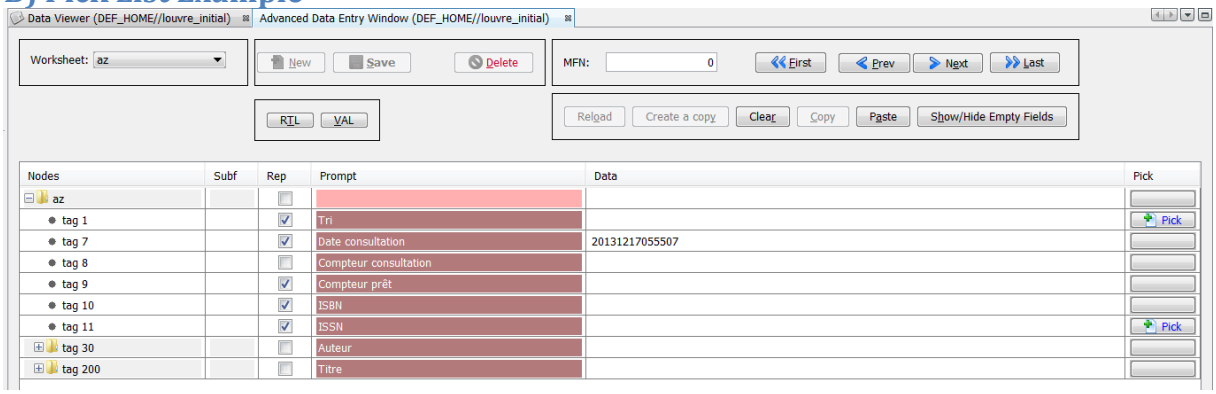
Clicking on the right mouse button when a repeatable field occurrence is selected will open the following context menu:

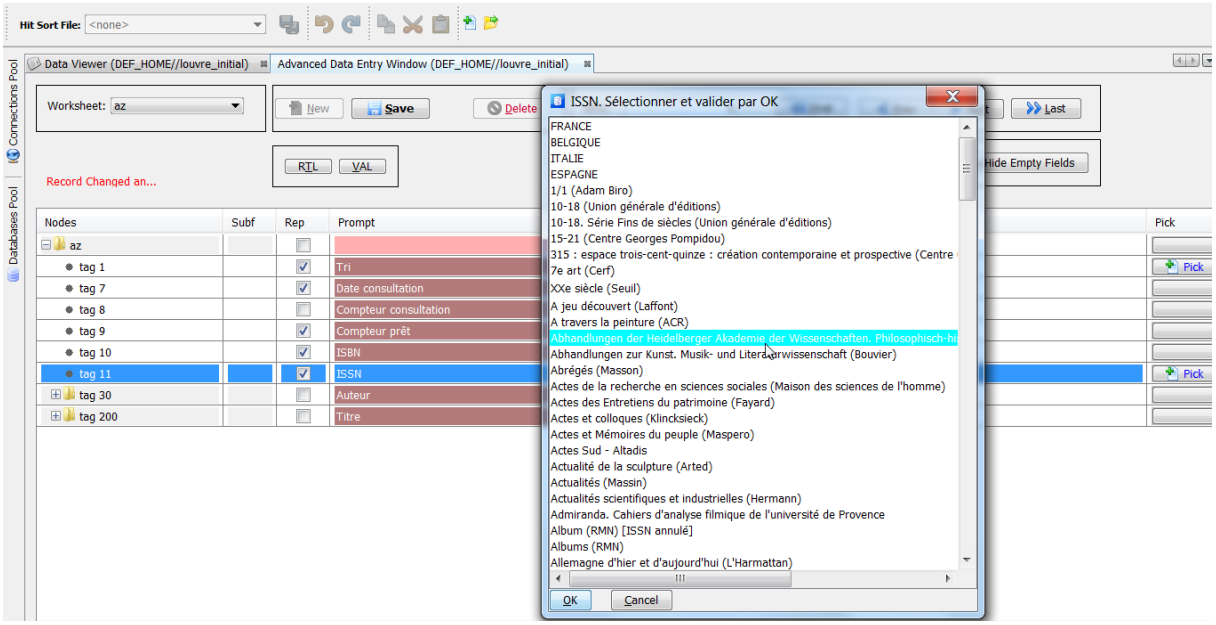


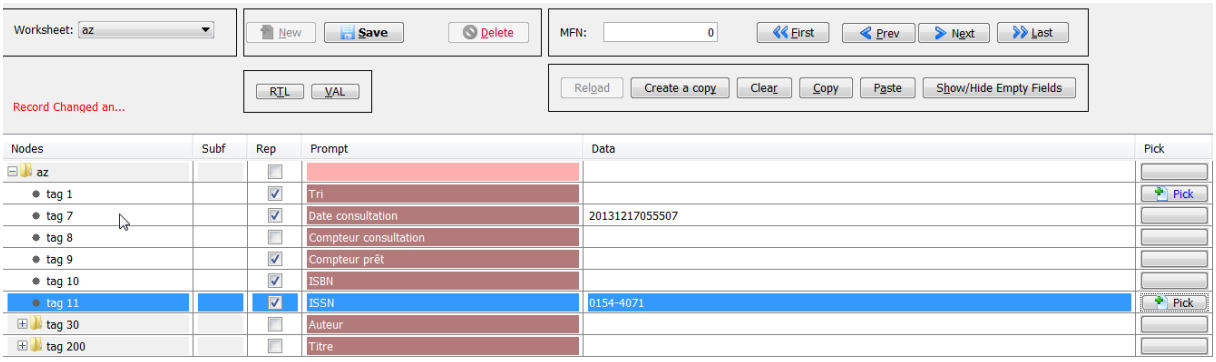
Clicking on Add Occurrence will add an occurrence:



B) Pick List Example







C) Copy Record Content from One Database to Another

You can open two databases at the same time, and start the Advanced Data Entry module on both databases. Then you can copy the record content of one record in one database and then after clicking on New in the other database, you can paste the record content. The new record will need to be saved if you are satisfied with the content.