Specify 6: Reports and Labels

The purpose of this document is to provide solutions to common report needs and to address recurring stumbling blocks of Specify iReport users. Covered below are some of the basic elements of creating reports and labels, beginning with the Specify Query Builder and continuing with more in-depth examples of iReport capabilities.

The iReport capabilities discussed within this document include:

- · Constructing expressions with the Expression Editor
- Mixed concatenation
- Styles
- Images
- Barcodes
- Report groups
- Scriptlets
- Variables
- · Page orientation bug workaround, and other tips

Creating a Query for the Report

Creating a query in Specify is the first step in defining the fields and data for a report or label. Pulling the correct data without unwanted repetition or duplication is often addressed in this initial step, along with other options like sorting records. Saving a query in the Specify Query Builder will immediately make it available for use in Specify iReport.



Note: Data sets from the Specify Workbench can also be used for creating reports, but the capabilities are somewhat more limited than when using queries. A report based on a data set rather than a query has fields that are less easily manipulated and it will only run data from the data set rather than the entire database. However, the capabilities within Specify iReport are the same when working with either data set- or query-based reports.

Fields that cause duplicates

Certain fields and tables are likely to cause duplicate labels or records to run. For instance, labels based on a Collection Object query are prone to duplicating when there are multiple Preparations, Determinations, or Collectors associated with the single Collection Object record.

Solution: Add the entire table to the query as an aggregated field instead of adding individual fields from that table.

For instance, instead of adding 'first name' and 'last name' from the Collectors Agent table to a query, double-click 'Collectors' to add it to the query as an aggregated field. Upon applying the 'Collectors' field to the report, a list of collector agents will be displayed instead of several record details for each different collector.



Multiple Determinations should be handled differently; add the "Current" field to the query, setting the criteria to "Yes". This way, only the current determination will print a label. Make sure that the "Always" condition is checked so that this condition is used when running the label from record sets, query results, etc. See screenshot below.

Collection Object	Determinations			
Conserv Descriptions	Alternate Name Confidence			
DNA Sequences	🗸 Current	×.		
Deaccessioned	Determination Citations			
Determinations	Determined Date			
Field Notebook Page	Determined Date (Day)			
Field Number	Determined Date (Month)			
GUID	Determined Date (Year)	 + 		
•				•
	Not Operator	Criteria	Sort Show Prompt Always	
Tax Full Name	Contains 👻			1
Det Current	🗌 Yes 💌			

Sorting Label or Report Contents

To sort the results of a query (and report) use the Sort button to the right of the field criteria box.

	Not Operator	Criteria	Sort	Show Prom	ipt Alway	's
Catalog Nu	nber 🗌 🖃 🔻			•		0

iReport Basics

Specify iReport is simplified for Specify users, because the datasource connections are already created, so a JDBC connection does NOT need to be set up. Furthermore, the report fields can be easily manipulated (added/removed) in the Specify Query Builder rather than using SQL queries.

Getting started

• Log in to Specify iReport under the same username that was logged in when saving the query. Queries are only available in Specify iReport to the user who built them.

🕸 Specify iReport	
(Sp) iReport	Login Username: testuser Password: •••••• • More Information • Remember Username Database: example Server: localhost • DBMS: MySQL • Configure Master Key
	Login Cancel Help

• If there are multiple disciplines in the database, select the discipline that the query is saved in or intended to be saved in.

🕌 Choose a Collection	×
KU-Mammais	
Main	
[ок

 Once iReport has launched, access the query that is saved in Specify and begin creating your report by selecting File>Report Wizard or using this button:



• A list of available queries will display. After selecting your query from the list, the Report Properties window will open (shown below).

Report p	roperties	
Report Name:	Example Label	<u>O</u> K
Page size		
Preset Sizes:	Custom	
	Width: 12.982 cm	
	Height: 6.491 cm 💙	
Orientation:	Landscape 💌	
Page Margin	Columns Scriptlet Class More i18n	
-Page margin-		
	Top: 0.494 cm 💌	
	Bottom: 0.000 cm 💌	
	Left: 0.670 cm 💙	
	Right: 0.000 cm 💌	

Report Properties

You will probably have to refer back to Report Properties frequently in the process of creating a report in order to set and modify, among other things:

- Page size and orientation
- Margins
- Columns
- Scriptlet class

Click OK to confirm Report Properties, and the blank report template will appear. To get back to the Report Properties utility, click Edit in the toolbar and select Report Properties from the dropdown menu.

Report Bands

The template for a new report will look similar to the screen capture below. The available bands include Title, Column Header, Detail, Summary, and others, which can be expanded or minimized by dragging the horizontal lines up or down. (NOTE: Band height can also be set by right-clicking the report template, selecting Band Properties, and entering the height in pixels. This is especially useful once a band has been minimized, if it needs to be expanded again.)



The Detail band is an important template aspect with which to be familiar. Any query field that you place in the Detail band will be filled with values from each record used to run the report. For loan invoices and specimen labels, the Detail band generally contains Collection Object data. The other bands, such as Title and Summary, will only display record data *one time* for each report and usually include such data as title, date, agent information, and institution information.

Labels often only consist of the detail band, with all of the other bands minimized to zero.

Adding Fields to a Report

Fields that are saved in the query are listed in the Document Structure pane. Expand the plus next to "Fields" to view all available fields for the report.



(NOTE: The Document structure pane should already be present on your iReport workspace, but if it is not, go to the toolbar and click View>Docking Panes>Document Structure.)

Click on a field in the Document structure pane and drag it onto the report template to add it to the report.

Saving a Report

• To save changes to a report or label, go to the top toolbar and click File> Save.



• A Save version of Report Properties dialog will pop up.



- The uses of the Report Properties Save dialog are as follows:
 - **Name**: edit report name.
 - **Report type**: choose from Report, Label, or Invoice. This does not affect the report, it simply tells Specify which heading to put the report's name under in the left-hand pane of the Reports page.
 - **Save for**: designate who can view the report in Specify, User or Discipline.
 - Repeats: the last option allows you to print multiple labels or reports by setting a constant number or by a numeric Specify field, such as the Prep Count field. If you choose 'By Field' from the Repeats pick list, as many labels or reports will run as specified by the numeric value in that field. Example of the 'By Field' option shown below.

📓 Report Properties 🛛 🛛 🚺	
Name:	NCSU Loan Invoice
Report Type:	Invoice 💌
Save For:	Discipline 🔽
Repeats:	By Field 🔽 Quantity 🔽
	OK Cancel

• Click OK to confirm the Report Properties. After the report has been saved and closed, you can access it again in iReport by going to File>Open. Make sure that you log in with the username under which the report was created.

Using the Expression Editor

In iReport, the Expression Editor is used for editing single fields or combining multiple fields together in the same expression. To access it, right-click on a field that has been added to the report template, and select Edit Expression.



Among other things, the Expression Editor lists the available fields below the editing box. Clicking on a particular field in the center column opens a list of possible field modifiers in the last column. The type of modifiers available depends on the type of field (i.e. string, integer, Boolean, etc.) Double-clicking a field will add it to the editing box.

🏯 Expression editor		
\$F{Date}		
1		Line 1, Column 9
Objects and expressions	Validation errors	
Fields Yariables Parameters Formulas Recent Expressions Wizards	Notes Field String Taxon_Full_Name Field String Original_Latitude_Longitude_Unit Field Integer Current Field Boolean Collectors Field String Date Field String Preferred_Taxon_Full_Name Field String County Field String ID Field Object	compareTo(String) int compareTo(Object) int compareToIgnoreCase(String) int concat(String) String contains(CharSequence) boolean contentEquals(CharSequence) boolean contentEquals(StringBuffer) boolean copyValueOf(char[]) String
Import Export	Check Expression	Apply Cancel

Avoiding "null" Values in Reports and Labels

When a field is blank in the database, it will appear on the report or label in Specify as a "null" value. This can be avoided with two different methods:

1. The first and simplest option is to check "Blank when null" in the Properties pane on the right side of the screen.

Properties	4 >
は 這	
Markup	Default V 🐼
? Text Field	
Expression	(\$F{Shipped_To_First_Name}=
Exp. class	java.lang.String 🛛 💙
Eval. time	Now
Eval. group	*
Stretch with overflow	
Blank when null	
Pattern) 🗱 🗸

• The drawback of the "Blank when null" property is that it only works with a field that has not been edited with the Expression Editor. For instance, if you are combining different fields into a single expression, or if there is static text (any text enclosed in quotation marks) in the box with the field in question, you will have to use the second option to avoid null values.

2. The second way to avoid null values in a report is to use an 'if null, then' statement for each field, enclosed in parentheses. To use the 'if null, then' statement, right-click the desired field on the report template and select Expression Editor. The basic formula to use for the field is:

(\$F{X}==null ? "": \$F{X})

...which means: If the field (\$F{X}) is empty, then print "" for: the field \$F{X}.

Applied to a date field in the Expression Editor:



Note that any static text added in the expression after ? "": will only print if the field is not empty. For example:

(\$F{Date}==null ? ": "Date: "+\$F{X})

The above expression will print "Date: 08/22/2010" if the value in the field is 08/22/2010. If there is no value in the field for a given record, nothing will be printed.

Basics of Expression Writing

- 1. Employ the 'if null, then' statement for any fields that may have null values in the database.
- 2. Start and end parentheses should go around the entire 'if null, then' statement for separate fields, which should then be combined in the expression using a '+'
- 3. Combine dynamic fields and static text using a '+'
- 4. Place quotes around a space, comma, label, or any other static text that should display with the dynamic fields.

Sample: (Expression to display last name and first name fields as 'Collector: John Smith')

quotes around static text

"Collector: " + (\$F{First_Name}==null ? "": \$F{First_Name} + " ") + (\$F{Last_Name}==null ? "":\$F{Last_Name})

'if null, then' statement, enclosed by
parentheses

'+' to combine fields and expressions

Replacing Values Using Modifiers

The most common uses of modifiers for replacing values are for the Sex pick list and dates (loan date, collected date, cataloged date, etc.) Here are a few example scenarios:

• A user wants sex pick list values of 'M', 'F', and 'UN' from the database to display as 'Male', 'Female', and 'Unknown' on the labels. The expression would appear as such:

\$F{Sex}.equals("M") ? "Male" : \$F{Sex}.equals("F") ? "Female" : \$F{Sex}.equals("UN") ? "Sex Unknown" : ""

• A user is using a sex info field in Specify that can contain multiple values, such as 'F', 'Female', 'M', 'Male', and perhaps other data. Example of data in Specify:

🔻 Col Obj Attribute 🕂 💻	
Sex (info): Female (t=6) Measurements: 2

The user wants to use a symbol for the sex instead of text, with any other data in field displaying after. So the expression must account for the multiple sex values:

(\$F{Sex_(info)}==null ? "": \$F{Sex_(info)}.replace("Female","♀").replace("F", "♀").replace("Male", "♂").replace("M","♂"))

On the label, the data will display as:

♀ (t=6)

• Dates are saved in the database in the format "08/22/1994," but the user wants their labels to display "22/Aug/1994." The expression would then look like this:

(\$F{Date_(Day)}==null ? "": \$F{Date_(Day)+"/").toString()+(\$F{Date_(Month)}==null ? "": \$F{Date_(Month)}+"/").toString().replace("10","Oct").replace("11","Nov").replace("12","Dec").repl ace("1","Jan").replace("2","Feb").replace("3","Mar").replace("4","Apr").replace("5","May").replace("6","Jun").replace("7","Jul").replace("8","Aug").replace("9","Sept")+(\$F{Date_(Year)}==null? "": \$F{Date_(Year)}+"").toString()

• To make a date have zeros in front of one-digit numbers (ex: 2012/07/02 vs. 2012/7/2) use this expression: Note that for this report the order is year-month-day, which isn't usual. You can change it around to make it whatever the institution wants.

"Date: " + (\$F{Loan_Date_(Year)}==null?"::\$F{Loan_Date_(Year)}+"").toString() +(\$F{Loan_Date_(Month)}==null?":'/"+((\$F{Loan_Date_(Month)}+"").toString().length() == 2 ? (\$F{Loan_Date_(Month)}+"").toString(): "0" + \$F{Loan_Date_(Month)}+"")).toString() + (\$F{Loan_Date_(Day)}==null?"':"/" + ((\$F{Loan_Date_(Day)}+"").toString().length() == 2 ? (\$F{Loan_Date_(Day)}+"").toString(): "0" + \$F{Loan_Date_(Day)}+"")).toString()

• For dates that are listed day-month-year, use the following expression: (replace the hyphens with slashes if you wish)

```
"Det. Date: "+($F{Determined_Date_(Day)}==null?":$F{Determined_Date_(Day)}+"-
").toString()+($F{Determined_Date_(Month)}==null?":$F{Determined_Date_(Month)}+"-
").toString()+($F{Determined_Date_(Year)}==null?":$F{Determined_Date_(Year)}+"").toString()
```

Non-string Fields in Expressions

All dynamic fields use an Expression Class that determines how they will be evaluated. Most dynamic fields from Specify are String, but some number fields can be Integer, Float, BigDecimal, etc. Fields of different classes are not compatible and, therefore, cannot be combined in a single expression without some extra steps.

1. Right-click the non-string field and select Expression Editor. Note that the field type is listed beside the fields in the Expression Editor.



 In order to combine a non-string field with static text, apply the modifier .toString(), as shown below:



• When using an 'if null, then' statement with a non-string field, place the modifier after the parentheses.



- 3. Apply the expression.
- 4. Right-click the field again and select Properties.

10		Edit Expression	
1	Loan authorized by	Properties	
	Shipped by	Band properties	
82	Received by	🐇 Cut	
	Return receipt by	Сору	<u></u>
	Cupptite " + /85	Paste	
		🗒 Delete	
		Group selected element(s)	
		Ungroup selected element(s)	
		Copy style	
_		Paste Style	
		Transform in Textfield F3	
		Field pattern	

• In the Properties window, change the tab to Text Field.

👶 NCSU Loan Invoice 🛛 🛛 🔀
Common Font Text Field Hyperlink Border All
Text Field Expression Class
Evaluation Time Evaluation Group
Now 💌
Stretch with overflow Blank when null
Pattern
Create
Text Field Expression
"Quantity: " + (\$F{Quantity}==null ? "":

Change the Text Field Expression Class to java.lang.String

ommon Font Text	Field Hyperlink Bord	ler All
ext Field Expression (lass	
iva.lang.Integer		*
va.lang.Double va.lang.Float va.lang.Integer va.lang.Long va.lang.Short va.math.BigDecimal		
va.lang.Number		~

Note: If you have set a non-string field to String in iReport and are still getting an error related to the text field expression class (cannot cast from String to Integer, for example) when running the report in Specify, go back to the Expression Editor in iReport. If the field being set to String is in a simple 'if null, then' statement, like this:

(\$F{X}==null ? "": \$F{X}).toString()

try adding + "" to the second half of the parenthetical statement, like this:

(\$F{X}==null ? "": \$F{X} + "").toString()

This should prevent the expression from causing errors in future.

Mixed Concatenation

Mixed concatenation refers to the combining of different font styles in the same expression.

In the Expression Editor, use the following examples as guidelines.

Replace the \$F{X} with either the dynamic field or static text that is to be concatenated within a larger expression. If static text is to be concatenated, place quotes around it.

For bold text:

```
"<style isBold=\"true\" pdfFontName=\"Helvetica-Bold\">"+$F{X}+"</style>"
```

For italicized text:

```
"<style isItalic=\"true\" pdfFontName=\"Helvetica-Bold\">"+$F{X}+"</style>"
```

For underlined text:

"<style isUnderline=\"true\" pdfFontName=\"Helvetica-Bold\">"+\$F{X}+"</style>"

***Be sure to check	"Styled Text	' in Element Propertie	s for the fields to	o display correctly
in the report.***				

Ele	ement Properties			ą
Ę	: 1			
	Sankeanroagn		_	99
	PDF Font	Helvetica	*	÷
	PDF embedded			
	PDF Encoding	CP1250 (Central European)	*	
	Align	Left	*	
	Vertical align	Тор	~	
	Line spacing	Single	~	
	Rotation	None	~	
	Styled text			
Ŷ	Text Field			
	Expression	" <style isbold='\"true\"' pdffontname='\"He</td'></style>		

NOTE: A bug within the iReport software prevents the mixed concatenation of expressions that use ampersands (in this case, the expression will display as basic html when running the report in Specify). A Scriptlet called escapeForHtml can correct the problem. See the section called "Further Insight into Scriptlets" for more details on this fix.

Adding a Style

Instead of spending time on selecting different style elements and properties for each individual field in your report, you can create styles to easily reuse or set as the default in the report.

• Click on Format in the top toolbar and select Styles.

iReport 3.0	.0 [UAD	C Lab	el 36	8x184 (/	Mo difie	d)]
File Edit View	Format	Data	Build	Options	Plugins	Wind
SansSerif	F A S	tyles onts Ilign ize			•	F D
Files	P	osition Iorizonta	al Spaci	ing	•	
L	V	ertical S)rganize	ipacing as Tab	ole Ctrl+S	► hift+0	-
	B R	ring to l iend to l	Front Back			
						4- - -

• In the Styles window, click New. The Add/modify style window results.

🏯 Add/modify style			
に 這			Style Conditions
Ŷ Style		~	Default
Style name	General		
Default style			
Parent style	×		
? Common			
Mode	Default 🛛 🗸		
Forecolor	===		
Backcolor	=== ···		
? Graphics		~	
Left 0	Right 0 🗢 Bottom 0 🗢		
borders			
	ne width 0	\$	
Lir	ne Style	_	Add Modify Remove Up Down
		••	Sample
			This is a test
Restore defaults		-	
	e color		
L			

- Change and add style properties to your liking remember to give a Style name and click OK.
- The new style should now be added to the Styles window. If you wish this style to be the report default, highlight it and click the Set as Default button. NOTE: Changing the default will not change the style of fields already in place on the report template, so it should be set in the beginning of creating a report.

🏯 Styles		
Style Name	Default	New
General	Yes	Modify Set as Default Delete

 If you intend to use multiple styles in the same report, highlight a field that is placed on the report template and select from the Style dropdown in the Properties pane.

Properties		-01
と 這		
Remove line w		_
Print in first wh		1.0
Print when det		
Print repeated		
Position type	Fix relative to top	~
Print when gro		~
Element key	textField	
Stretch type	No stretch	*
9		*
Print When Exp		-
• Text	General	
• Text Field		

• Save the report.

Adding Images to Reports and Labels

Unlike word processor documents, iReport templates call images from a location on the computer; images cannot be pasted into the report template. For this reason, it is important to consider whether the report will be run on only one computer or multiple computers. If the report is going to be used on only one computer, then the image is most easily browsed and selected directly from within iReport.

If the report will be used on more than one computer, the image should be defined in two places (which ultimately eases setting image locations on multiple computers). The image location is designated in Specify and the image name is designated in iReport with the addition of a parameter.

Furthermore, by adding an extra parameter, there is the added capability of selecting a different image whenever running a report in Specify. Those directions are covered in Part 3 of this section and are NOT necessary for users who only ever want to use one image in a given report.

Images in Reports on a Single Computer

Click th	e Image	tool I	button 💻	and s	ize th	e ima	ge bo>	on the	repo	ort.		
F		I 3 , 4		× *		 12 13 	14 , 15	• 16 + 17) 	C 19 , 20	, 21 ,	22
6- - - - - - - - - - - - - - - - - - -	""+\$F{ID} \$F{Date}			det	ail							

• Right-click the image box and select Properties. In the Properties window, change the tab to Image.

🍰 New Report		
Common Image Hyperlink E	Border All	
Image Expression		
Image Expression Class		Find
java.lang.String		~
Scale Image	On error type	
Fill frame 🔽 🗸 🗸	Error	~
Vertical Alignment	Horizontal Alignment	
Тор 💌	Left	~
🔲 Is Lazy	Using cache	
Evaluation Time	Evaluation Group	
Now		*

• Under the Image Expression text box, click Find and select the specific image file location on your computer.

Images in Reports on Multiple Computers

Part 1: Designating the image name and parameter

- Follow the same directions as for a single computer, but leave the Image Expression blank for now instead of clicking Find.
- Close Properties.
 - Click View in the toolbar and select Parameters.



• Click New.

🏯 New Report va	alues				
Fields Variables P	arameters				
Parameter Name REPORT_VIRTUA REPORT_CLASS REPORT_URL_HA IS_IGNORE_PAGI HIBERNATE_SES XML_DATA_DOC JPA_ENTITY_MA JPA_QUERY_HIN MONDRIAN_CON RPT_IMAGE_DIR image	Class Type net.st.jasperr java.lang.Cla java.net.URL net.sf.jasperr java.lang.Boo org.hibernate org.w3c.dom java.util.Map mondrian.olap java.lang.String	Use as a Prompt no no no no no no no no no no no no no	Built-in yes yes yes yes yes yes yes yes yes yes		New Modify Delete
image	java.lang.string	yes	no	~	

• Type RPT_IMAGE_DIR for the Parameter Name.

🏯 Add/modify parameter	
Parameter Name	
RPT_IMAGE_DIR	
Parameter Class Type	
java.lang.String	~
🔲 Use as a Prompt	
Default Value Expression	
Parameter Description	
Edit parameter properties	
	OK Cancel

- Click OK and Close Parameters.
- Again, right-click the image icon on the report and select Properties..
- Under the Image tab, click the Expression Editor button located next to the Image Expression text box.
- In the Expression Editor, use the following expression (inserting your own image file name with extension where it says "filename.jpg"):



• Apply the expression and Save the report.

Part 2: Designating the image location

• To designate the Reports Image Location, open Specify. Click Edit in the topmost toolbar and select Preferences.

Undo Ctrl-Z V Redo Ctrl-Y ts Inte	11
V Redo Ctrl-Y ts Inte	
	eraction
Cut Ctrl-X	
Copy Ctrl-C	
Paste Ctrl-V	
Eind Ctrl-F	
Preferences	

• Change the view to System. Under Report Images Location, browse for the standard location where your report image file will be placed.

Preference	ences										
aA	t			Q		Er.	٩	Loa	(Sp)	2	۲
Formatting	System	Trees	Email	Task Bar	Google Earth	MySQL	Login Dialog	Loans	LSIDs	GEOLocate	Network
Closing Ta	ıbs ——										
🗌 Ask me	before clo	sing tabs	; (otherw	vise close tł	ne oldest tab)						
Backgrou	nd Image										
	Browse								Browse		
Attachme	nt Storag	e Locati	on —								
C:VAttachm	entStorage	e									Browse
Report Images Location											
C:\Docume	C:\Documents and Settings\All Users\Documents\My Pictures\Sample Pictures Browse										

• Save the change and the image should be ready to run in your report.

Part 3: To allow the selection of an image at the time of running the report

This extra step allows you to select your label upon running the report in Specify instead of designating just one image to be used every time.

- Complete the instructions in Part 2 (for multiple computer use).
- Open iReport. Click View in the topmost toolbar and select Parameters. Click New.
- Name the Parameter 'image' for example. Check 'Use as a Prompt'. (In this window, you can also set a default image filename that will be used if you do not designate a different image when running the report.)

🌲 Add/modify parameter	
Parameter Name	
image	
Parameter Class Type	
java.lang.String	~
🕑 Use as a Prompt	
Default Value Expression	
Parameter Description	
Cuic parameter properties	
	OK Cancel

- Click OK and close Parameters.
- Right-click the image icon on the report and select Properties.
- Under the Image tab, click the Expression Editor button located next to the Image Expression textbox. Enter the following expression:



- Apply the expression and save the report.
- Open Specify and go to Reports.
- Run Report. When the Report Settings window appears, there should now be two tabs: Query Criteria AND Report Parameters.

SP Report Settings				
Query Crite	eria $igl(Report \ Parameters \ igr)$			
	Field	Not Operator	Criteria	Sort
0	ID			
Agt	First Name	Contains 💌		

• Change the tab to Report Parameters. Type the image filename that you want to use for the report. (Remember, the image must be located in the same directory as set in Preferences.)

🛿 Repor	rt Settings	K
Query Cr	riteria Report Parameters)	
image e:	example.jpg	

• Click OK and the report will run with the selected image.

Barcodes

Adding a barcode to a label or report is a fairly straightforward process as long as you know the capabilities of the barcode scanner. Any barcode that is available in iReport can be used on a label or report and run in Specify. The value of the barcode is based on a Specify field, usually catalog number or invoice number.

Note that QR Codes are not available for use in 3.0.0 version of iReport that Specify currently uses. A plugin is available for this use but requires a licensing cost.

- In iReport, click the Barcode tool button and size the barcode box on the report.
- Right-click on the barcode once it is in place. Select Properties.
- Change the Properties tab to Barcode.

🏯 New Report							
Common Hyperlink Barcode	Border All						
Туре							
Int2of5 🛛 💙	🔄 Checksum 🔄 Show Text						
Barcode Expression							
"0815"	"0815"						
Bar Width 0 Bar Heig	pht 0 (0 = default)						
Application Identifier							
Scale Barcode Image	On error type						
Retain shape 🛛 🗸	Error						
Vertical alignment Horizontal Alignment							
Тор 💌	Left 💌						
Evaluation Time	Evaluation Group						
Now							

- Select a type of barcode by choosing from the Type dropdown (see the next section for information about barcode types and compatibility).
- To apply a field to the barcode, click the Expression Editor button next to the Barcode Expression textbox.
- In the Expression Editor, select and add a field from the list of available fields. An example is shown below.

🐥 Expression editor	
\$F{ID}	

• Apply the expression and close the Properties window. Save the report.

NOTE: Occassionally, in iReport, the barcode image will have a text overlay that says 'Barcode Error'. The barcode should still run correctly in Specify and can be scanned with an appropriate barcode scanner.

Barcode Type Compatibility

There are certain barcode types that iReport cannot put into generic AlphaNumeric String format (for example, Catalog Numbers or Accession Numbers):

(A) i.e. generates an error in the creation of the barcode from within iReport.

2of7, 3of9, Bookland, Codabar, Code128C, Code39, EAN13, Int2of5, Monarch, NW7, Std2of5, UCC128, UPCA, USD3, USD4

(B) In revision, some barcodes generate an error from within iReport, but the resulting report turns out fine.

These are the following: 2of7, 3of9, Code128C, Code39, Monarch, NW7, Std2of5, USD3, USD4. Also, I tested these with only numeric values, even though some of them do not process alphanumeric strings. So, some of these barcodes may not work in those circumstances, but it is not a general error but rather simply an incompatibility. The flip side of this list (i.e. the barcodes that cause an error in the filling of the report from within Specify): EAN13, int2of5, UCC128, UPCA.

Report Groups

Groups allow you to organize the records of a report to better structure the report content. Groups are especially valuable when making a loan invoice. When a group is defined by an expression, a new group begins when the expression value changes (**e.g. when a loan number changes, a new invoice begins for the new loan number**). Moreover, Groups are useful for making certain specimen labels and reports as well. For instant, one application has been to list all associated Collection Object records for a single Taxon name – with the list of Collection Objects starting over with each new Taxon name.

• To implement a Report Group in iReport, click View and select Report Groups.



• In the New Report Groups window, click the New button. The Add/modify group window will then open.

Add/modify group	
Group Name	
I	
Start on a New Column	Reset Page Number
Start on a New Page	Print header on each page
Min height to Start New Page	0
Group Expression	
Group Header Band Height	50
Group Footer Band Height	50
	OK Cancel

- Enter a Group Name (e.g. Loan Group).
- To define the Group expression, click the Expression Editor button next to the Group Expression textbox and select a field from the list of Specify fields available.



- Apply the expression.
- Select other features in this window--such as start on a new page or column with each new value for the Group Expression. A finished example is shown below for reference.

Add/modify group	
Group Name	
Loan Group	
Start on a New Column	Reset Page Number
🗹 Start on a New Page	Print header on each page
Min height to Start New Page	0
Group Expression	
\$F{Loan_Number}	
Group Header Band Height	50
Group Footer Band Height	50
	OK Cancel

- Click OK at the bottom of the Add/modify group window and close the groups.
 New Group Header and Group Footer bands should now be visible in the report template.

	G 2	
	Y Repo	rt properti
201.5	Page	
title	Orien	ration Portrait
	Width	595
	Heigh	t 842
	P Page	: margin
	Left	30
	Right	30
Loan GroupHeader	Тор	20
	Botto	n 20
	9 Repo	irt columns
	Colum	ins 1
detail	Width	535
	Spacin	ng O
	P More	:
	Script	let Use this scri
Loan GroupFooter	Script	let Class
columnFooter	Library	
pageFooter	ぼ)Page 第 Total 第 Page 又 Total	Number Pages X of Y
lastPageFooter	Curre 100 Perce	int Date intage
	Styles Lil	orary
	Report st	rvles

Further Insight into Scriptlets

Scriptlets perform special Java functions that pull data from a Specify database and translate it into a given format in a report or label. Scriptlets are predefined in the Specify 6 code and provide for a range of possible formatting issues that a collection might come across when making labels and reports. Directions for use and a list of existing scriptlet functions in Specify 6 can be found at http://files.specifysoftware.org/SpecifyScriptlet.html. There are some that are not currently on the list, including several that are explained in this document.

Note: When using scriptlets in a report, make sure that the Scriptlet Class in Report Properties (Edit>Report Properties) is set to *edu.ku.brc.specify.config.Scriptlet* (see below).

Report pr	operties	X
Report Name:	Example	<u>o</u> k
Page size		
Preset Sizes:	Custom	
	Width: 12.982 cm	
	Height: 6.491 cm 💙	
Orientation:	Landscape	
Page Margin	Columns Scriptlet Class More i18n	
Scriptlet Class		
Use this scrip	tlet class 💙	
edu.ku.brc.sp	becify.config.Scriptlet	
Language		
java	×	

Scriptlets must be added to the Expression Editor in the following format: ((edu.ku.brc.specify.config.Scriptlet)\$P{REPORT_SCRIPTLET}).scriptletName(required fields)

The following examples are common use-case scenarios or further explanation for some existing scriptlets:

Expression for formatted Latitude/Longitude and direction characters:

To display latitude and longitude in the original format (as they are shown in Specify) and with direction characters (N, E, S, W), you would use the .formatLatLon and .getDirChar Scriptlets. The query fields necessary for these two scriptlets are latitude1, longitude1, and original latitude longitude unit.

((edu.ku.brc.specify.config.Scriptlet)\$P{REPORT_SCRIPTLET}).formatLatLon(\$F{Latitude1}, \$F{Original_Latitude_Longitude_Unit}, true) +

((edu.ku.brc.specify.config.Scriptlet)\$P{REPORT_SCRIPTLET}).getDirChar(\$F{Latitude1}, true) + " " +

((edu.ku.brc.specify.config.Scriptlet)\$P{REPORT_SCRIPTLET}).formatLatLon(\$F{Longitude1}, \$F{Original_Latitude_Longitude_Unit}, false) +

((edu.ku.brc.specify.config.Scriptlet)\$P{REPORT_SCRIPTLET}).getDirChar(\$F{Longitude1}, false)

The above expression displays as: 32° 38' 10.00000"N 88° 16' 28.00000"W

To set Latitude and Longitude to appear blank when the value is null, follow these steps:

- 1. In the left panel of iReport, right-click Variables and select "Add..." and choose Variable.
- 2. In the Variable form, use these settings:
 - The name should be either "Latitude" or "Longitude." Each needs its own variable.
 - o Variable Class Type String
 - Calculation Type Nothing
 - Reset Type Report
 - o Increment Type None
- 3. Set the Variable Expression to one of these two, depending on whether the variable is Latitude or Longitude:
 - ((edu.ku.brc.specify.config.Scriptlet)\$P{REPORT_SCRIPTLET}).formatLatLon(\$ F{Latitude1}, \$F{Original_Latitude_Longitude_Unit}, true) + ((edu.ku.brc.specify.config.Scriptlet)\$P{REPORT_SCRIPTLET}).getDirChar(\$F{L atitude1}, true)
 - ((edu.ku.brc.specify.config.Scriptlet)\$P{REPORT_SCRIPTLET}).formatLatLon(\$ F{Longitude1}, \$F{Original_Latitude_Longitude_Unit}, false) + ((edu.ku.brc.specify.config.Scriptlet)\$P{REPORT_SCRIPTLET}).getDirChar(\$F{L ongitude1}, false)

variable Name	
Latitude	
Variable Class Type	Calculation Type
java.lang.String	✓ Nothing
Reset Type	Reset Group
Report	•
Increment Type	Increment Group
None	-
1	
<	•
< Initial Value Expression	•
Initial Value Expression	٩

- 4. The Initial Value Expression should be ""
 5. In the field where you want the latitude and longitude, the expression will look like this:
 o (\$V{Latitude}==null?"":\$V{Latitude})+", "+(\$V{Longitude}==null?"":\$V{Longitude})

A Expression editor	Mile Int	x
(\$V{Latitude}==n	<pre>ull ? "":\$F{Latitude})+", "+[]\$F{Longitude}==null ? "":\$F{</pre>	[Longitude})
Objects and expressions	Validation or or or	Line 1, Column 85
 Fields Variables Parameters Formulas Recent Expressions Wizards 	Valuation errors Remarks Field String Determiner_Last_Name Field String Collectors_First_Name Field String Species Field String Determiner_First_Name Field String County Field String Length_(cm) Field Float SnoutVentLength Field Float	
Import Export.	Check Expression	Apply Cancel

Remember to edit the field's properties and ensure that the Text Field Expression Class is set to String, or you will get an error when you run the report. There are screen shots of creating a Variable in the next section of this document, if you run into trouble setting up the Lat/Long variables.

Some Commonly Used Scriptlets

Scriptlet for mixed concatenation expressions using ampersands:

DON'T FORGET TO CHECK THE STYLED TEXT BOX!!!!!!!!!!

((edu.ku.brc.specify.config.Scriptlet)\$P{REPORT_SCRIPTLET}).escapeForHtml(\$F{Author})

```
"<style isltalic=\"true\" pdfFontName=\"Helvetica-Bold\">" +
($F{Genus}==null?"":((edu.ku.brc.specify.config.Scriptlet)$P{REPORT_SCRIPTLET}).escapeFo
rHtml($F{Genus}))
+ " " +
($F{Species}==null?"":((edu.ku.brc.specify.config.Scriptlet)$P{REPORT_SCRIPTLET}).escapeF
orHtml($F{Species}))
+ "+
($F{Species_Author}==null?"":((edu.ku.brc.specify.config.Scriptlet)$P{REPORT_SCRIPTLET}).
escapeForHtml($F{Species_Author}))
+ " " +
($F{Variety}==null?"":" var. "+"<style isltalic=\"true\" pdfFontName=\"Helvetica-Bold\">" +
$F{Variety}+"</style>") + ($F{Variety_Author}==null?"":$F{Variety_Author})
+ " " +
($F{Subspecies}==null?":" subsp. " + "<style isltalic=\"true\" pdfFontName=\"Helvetica-Bold\">" +
$F{Subspecies}==null?":" subsp. " + "<style isltalic=\"true\" pdfFontName=\"Helvetica-Bold\">" +
$F{Subspecies}==null?": $F{Subspecies_Author}==null?": $F{Subspecies_Author}]
```

Scriptlet for primary collector:

((edu.ku.brc.specify.config.Scriptlet)\$P{REPORT_SCRIPTLET}).getFirstCollector(\$F{Catalog_N umber})

Scriptlet for secondary collectors:

((edu.ku.brc.specify.config.Scriptlet)\$P{REPORT_SCRIPTLET}).getSecondaryCollectors(\$F{Ca talog_Number})

Scriptlet for calculating length of loan:

((edu.ku.brc.specify.config.Scriptlet)\$P{REPORT_SCRIPTLET}).dateStringDifference(\$F{LoanD ate}, \$F{CurrentDueDate})

To retrieve agents by Loan Agent Role, use the following scriptlet:

((edu.ku.brc.specify.config.Scriptlet)\$P{REPORT_SCRIPTLET}).getByLoanAgentRole(\$F{Loan Number},"agent role","agent.field")

"agent role" is the role of the agent in the Loan that you are using. For example, if you are using the scriptlet for the agent who is the recipient of the loan, the role will probably be Borrower. Be sure to compare the loan record with the report to make sure you are using the correct role.

"agent" refers to the table in which the field in question is located. For address fields, the table would be "address," not "agent." *Make sure that the field names match the ones in the schema EXACTLY*. To check this, go to Schema Configuration, select the agent or address table (depending on which field you are checking) and look at the Fields box (below the Tables box) to find the name of the field. Some examples of fields you might use are agent.firstName, agent.lastName, address.address, address.city, and address.state. Be sure to compare the loan record with the report to make sure you are using the correct fields.

*Note: if you use this scriptlet, you do not need to include the Loan Agent fields it calls for in the query. Also, this scriptlet only works for agents added to a Loan record under Loan Agents. It will not work for agents in Shipped To or Shipped By.

To format Preparations to match the format on the default invoice:

(\$F{Quantity}==null?":\$F{Quantity}+"").toString() + " " + (\$F{Prep_Type}==null?":\$F{Prep_Type}+"") + " of " + ((edu.ku.brc.specify.config.Scriptlet)\$P{REPORT_SCRIPTLET}).calcLoanQuantity(\$F{Count}, \$F{Quantity_Returned}, \$F{Quantity_Resolved}) + " " + (\$F{Prep_Type}==null?"":\$F{Prep_Type}+"")

This will print preparations in this format (under Specimen Count):

UNM #	TAXON &	LOCALITY	SPECIMEN COUNT
10046	Pseudognaphalium macounii		1 Sheets of -1 Sheets
	Rio Arriba, New Mexico, USA, Brazas	Canyon, east of Corkins Lodge.	
	Field No.:000010046	Date: 9/13/1953	

Variables

If you're just trying to say how many records are on an invoice, try adding the field "NumberOfRecords) before making a variable. If it worked, it turns out to be a way easier solution then messing with this stuff.

Variables are objects used to store the results of calculations such as subtotal and sums. In this section, two examples are given of creating two different variables that are commonly used in Loan Reports – but they can be of use elsewhere. Other variables are built into iReport, but are not modifiable by the user. Built-in variables are listed in the Library pane and can be dragged to the report. See below for the built-in variables that are available.



Calculating a Distinct Count

For example, a user may want a count of the species being loaned to appear on a loan invoice. Follow these steps:

• In the Document structure pane of iReport, right-click "Variables". Hover your mouse over "Add" and click "Variable" (shown below).

			100
Document stru	cture	Ψ×	- e
Document	ters		
Harishi	Edit	Ì.	- თ-
title	Add 🕨	Parar Field	neter ——
coli	Copy	Varia	ble
e det	Paste	Sub c	lataset
E 🔔 Acc	🗒 Delete		- 9-
	New Report Group Wizard		4

- The "Add/modify variable" window allows you to define your variable. Use the given criteria in the listed fields and use the screen capture as reference.
 - o Variable Class Type: java.lang.Integer
 - Calculation Type: Distinct Count
 - Reset Type: Report
 - Reset Group: leave blank, *unless* you are using a Report Group and want only one group to be used for the calculation.
 - o Increment Type: None
 - Increment Group: leave blank, *unless* you are using a Report Group to specify when the variable value has to be evaluated.
 - Variable Expression: Click the Edit button next to the text box and select the field that should be counted distinctly. In this scenario, the Taxon Full Name is being evaluated.

🙀 Add/modify variable	
Variable Name	
Example	
Variable Class Type	Calculation Type
java.lang.Integer 🛛 🗸 🗸	Distinct Count 🛛 💌
Reset Type	Reset Group
Report	~
Increment Type	Increment Group
None	~
Custom Incrementer Factory Class	
Variable Expression	
\$F{Full_Name}	
Initial Value Expression	
	OK Cancel

• Click OK. Once the Variable has been created, it will be available under "Variables" in the Document structure pane. Drag the variable onto your report as if you were adding a field to the report.

Calculating a Sum

A user may want to calculate the total specimens being loaned to appear on a loan invoice.

- Follow the same directions as given above for a distinct count *with the exception of the changed criteria for Calculation Type and Variable Expression.* Use the screen capture below for reference.
 - Calculation Type: Sum
 - Variable Expression: click the Edit button next to the text box and select the field that should be calculated for a sum. In most cases, the Count field (or its equivalent) from Loan Preparations is evaluated for the sum of specimens being loaned.

🙀 Add/modify variable			×
Variable Name			
SUM_Count_1			
Variable Class Type		Calculation Type	
java.lang.Integer	*	Sum	*
Reset Type		Reset Group	
Report	*		~
Increment Type		Increment Group	
None	*		~
Custom Incrementer Factory Class			
Variable Expression			
\$F{Count}			
Initial Value Expression			

Labels: Manually changing page orientation to portrait (workaround for iReport bug)

An active iReport bug does not allow page orientation to be set as portrait when the page length is greater than the height – iReport automatically changes the orientation to landscape. This is problematic for some user's printing requirements, especially in regard to labels. To manually change the orientation to portrait, follow these directions:

- When the label is in its final draft, check the Page Size in Report Properties (Edit > Report Properties). Make sure the dimensions are correct even though the orientation is incorrect.
- Open Specify and go to System, located on the top toolbar. Open Resource Import/Export from the System dropdown.

File Edit Data	System <u>T</u> abs <u>H</u> elp	
Welcome Data	System Setup Eorms Irees WorkBench Schema Configuration Schema Configuration	ery WorkBenc
	Resource Import/Export	
	Export <u>M</u> appings Edit C <u>o</u> llection Rel Plugins	

• Make sure that any changes in Specify have been saved and click Continue to the dialog below.

Restart	May Be Required		
7	Note: Any changes made with this tool will require you to exit Specify. You will need to log back in for those changes to take effect.		
	Continue Cancel		

• Reports are usually located under the Discipline level, so change the pick list to "Discipline" and change the tab to "Report Resources" to see your report.

Resource Import / Export			
	User: testuser		
	Discipline 🔫		
│ Form Sets 〉 Report Resources			
	Report Resources		
Add New Resource			
Accession Sheet (Database)			
basic_label.jrxml			
fish_label.jrxml			
fish_LoanInvoice.jrxml			
fish_LoanInvoice_subreport1.jrxml			
UAIC Label (Database)			
upload_problem_report.jrxml			-
Export	Import	Revert	
		Close	Help

• Highlight your report or label and click the Export button. Export the report or label to a location on your computer as a zipped file by adding the .zip extension to the filename (e.g. Example.zip).

• Go to the zipped file on your computer and unzip it. The unzipped folder will contain three xml files.

📮 Fish Catalog Card					
<u>File E</u> dit <u>V</u> iew F <u>a</u> vorites <u>T</u> o	ols <u>H</u> elp				1
🜀 Back 👻 🕥 👻 🏂 🔎	Search 😥 Folders 🛄 🗸				
Address 🛅 C:\Documents and Settin	ngs\tester\Desktop\Fish Catalog Card				💌 🋃 Go
	🔺 Name 🔺	Size	Туре	Date Modified	
File and Folder Tasks 🔕	app.xml	1 KB	XML Document	6/14/2010 10:57 AM	
All Make a new folder	data.xml	32 KB	XML Document	6/14/2010 10:58 AM	
Publish this folder to the Web	SpReport.xml	14 KB	XML Document	6/14/2010 10:57 AM	
😰 Share this folder	~				
3 objects			45.1	KB 🔤 My Comput	er ":

- Open the data.xml file with a word processor such as Notepad in order to edit it. (On Windows, right-click data.xml and select "Open With" Notepad.)
- The file document will look something similar to the screen capture below. Find orientation="Landscape", located close to the top of the page.

E- datassini - Notepau	
<u>File E</u> dit F <u>o</u> rmat <u>V</u> iew <u>H</u> elp	
<pre><?xml version="1.0" encoding="UTF-8" ?> <!-- Created with iReport - A designer for JasperReports--> <idoctype "="" design="" dtd="" en"<br="" jasperreport="" jasperreports="" public="" report="">"http://jasperreports.sourceforge.net/dtds/jasperreport.dtd"> <jasperreport name="Fish Catalog Card" columnCount="1" printOrder="Vertical" orientation="Landscape" pageWidth="612" pageHeight="360" columnSpacing="0" leftMargin="0" rightMargin="0" topMargin="0" bottomMargin="0" whenNoDataType="NoPages" isTitleNewPage="false" isSummaryNewPage="false"></jasperreport </idoctype></pre>	

- Change "Landscape" to "Portrait". Save your changes.
- Rezip the entire folder.
- In Specify, go to System > Resource Import/Export and import the zipped file to Discipline level, under the Report Resources tab.

NOTE: Once the orientation has manually been changed, do not edit the orientation for the label from within iReport.

Another thing you might have to do:

When you run the report in Specify, click Print and go to the printing options. Mess around with the orientation and size there (make the label just under 2 inches in iReport if the printer has it set to be 2 inches high OR try making the label print upside down by making the orientation be Portrait x 180)

Tips, Tricks, and Workarounds

Disappearing text boxes:

If text boxes are visible on the report template but not showing up when the report is run in Specify, check the font size and text box size. The usual culprit is height: the text box should have a height at least three pixels greater than the point size of the text entered in the box.

en Files		
[Fish Label]		""+\$F{Catalog_Number}
	🚆 Fish Label	on}
	Common Font Text Field Hype	erlink Border All
	Band detail	
_	Top 0 Width 159	Foreground
_	Left 0 Height	Background
_	Transparent	Position Type
_	Remove line when blank	Fix relative to top
_	Print in first whole band	Print when group changes
		· · · · · · · · · · · · · · · · · · ·
	Print when detail overflows	Key
	Print repeated values	
	Stretch Type	Style
ent structur	No stretch 👻	▼
ument	Print when expression	

For example, if the text is Arial 12 pt. font, the text box should be at least 15 pixels tall for one line of text. It is not necessary to add three pixels for each line of text if the box has multiple lines, but it is a good idea to leave some extra room if possible.

Issues with changing line thickness and text box size in the Properties pane:

Due to a bug, iReport sometimes does not change graphic line thickness or text box size when these numbers are entered in the Properties pane on the right side of the screen. To change line thickness, set the line thickness (the default value is 0) to 1, and then re-set it to the desired line thickness.

Ŷ	Graphic			
	Line width	1.00		
	Line style			
	Ren	Default 🗸 🗸		
	Fill	Default 👻		
9	Line	Design of the second seco		
	Direction	Top-down (V)	+	+
Li	orary		Ļ	x
# # # Σ %	Page Number Total Pages Page X of Y Total Current Date Percentage			

If iReport is not saving changes to text box size, try opening the Properties pop-up window (right-click the text box and select Properties) and changing the numbers that way. Restarting iReport may be required if it is still impossible to make changes.

Resizing the page, columns, column spaces, and report bands:

When making labels, it is necessary to match the sizing and spaces exactly to a sample page, which may be printed from MS Word, Specify 5, etc. Unfortunately, iReport's Report Properties window is not as accurate as is sometimes required. To get the exact size you need for the template margins, columns, column spaces, and report bands, use these methods:

- Margin width, column width, and column space width can all be adjusted one pixel at a time in the Properties pane on the right size of the iReport window.

Ę	: 1		
Ŷ	Report propertie		*
	Report Name	SCDNR Fish Label	
Ŷ	Page size		
	Orientation	Portrait 👻	
	Width	612	
	Height	792	
Ŷ	Page margin		
	Left	26	
	Right	93	
	Тор	36	
	Bottom	20	
Ŷ	Report columns		=
	Columns	4	
	Width	119	
	Spacing	5	
Ŷ	More		
	Scriptlet	Use this scriptlet da 👻	
	Scriptlet Class	brc.specify.config.Scriptlet	
	Language	Java 👻	
	Title on a new p		
	Summary on a n		
	Floating column		
	Ignore pagination	E	
	Print Order	Vertical 👻	
	When no data	No pages 👻	
	Format Factory		7

- Band height can be adjusted one pixel at a time by going to View>Bands, selecting the Detail band (or another band, if you are not using Detail,) entering a height in the box, and clicking Apply.

SCDNR Fish Label 1	ands	
background title pageHeader columnHeader detail columnFooter pageFooter lastPageFooter summary noData		Band properties Band Height 86 Split allowed Print When expression
	Ŧ	Apply

Using Your Report or Label in Specify

Once the report has been saved in iReport, it can be used in a variety of contexts in the Specify application.

• Log into Specify.

 Click on the Report tool 	
--	--

Specify 6.3.03									
Eile	<u>E</u> dit	<u>D</u> ata	<u>S</u> ystem	<u>T</u> abs	Help				
100000	(Sp)	abel		6	22	1	0		
	Welco	Data	Trees	Reports	Interactions	Statistics	Query	WorkBen	

- In the Reports tool, your report or label will be placed in the left-hand side menu under the applicable heading Reports or Labels.
- After making changes to a report in iReport, click Refresh to see changes when running the report. During the process of creating and editing a report, this Action will be repeated over and over again.
- To Run a report from the Reports tool:
- 1. Under the Actions heading in the left-hand side menu, click 'Run Report' to select from a list of available reports OR
- 2. Click directly on the report OR
- 3. If record sets are available, they can be dragged and dropped on a report name to run it.

In the first two scenarios listed above, a Report Settings window will appear, displaying the queried fields for the report or label. From this window, you can turn on/off sorting, change operators, and enter criteria to be searched and then displayed in the report.

Report 🕼	Settings			
	Field	Not Operator	Criteria	Sort
0	Cat No	=		
Tax	Full Name	🗌 Contains 🔻		
Det	Current	🗌 Yes 💌		•
Geo	Continent	= •		•
Geo	Country	= •		
Geo	County	= -		
Geo	State	= •		
Loc	Locality	Contains 🔻		
Loc	Latitude1	= •		
Loc	Longitude1	= •		
Œ	Start Date	= •		•
		ОК	Cancel	Help

Other contexts within Specify for running reports:
 The Search Results toolbar contains a Rep

Actions	 Other contexts within Specify for running reports: The Search Results toolbar contains a Report View tool 	
Run Report	that can be used for all given search results or just highlight-selected results.	
Reports	f y 6.3.03 i Data System Iabs <u>H</u> elp	
Gift Invoice	n 🔤 🖣 🎦 🏦 🎢 🧭 Q 🚳 Data Trees Reports Interactions Statistics Guery WorkBen	•
Loan Invoice	Sets V Search Results - 5735	
NCSU Loan Invoice	ipie D 1	
New Pepart	2 3	
R	4	
Labela	5	
Lapers	7	
Botany Labels	9	
2	10	
NCSU Fungi Label	12	
	13	
Record Sets		
	 From the Collection Object or Loan forms. 	
E	Generate Label on Save Generate Label	

• From the Workbench left-hand sidemenu.



Getting rid of an extra blank page in a report

This happened to me when I was working on a label. I'm not sure why, but changing the drop down menu from 'vertical' to 'horizontal' in the 'print order' option on the 'more...' tab in Report Properties fixed the problems. I think I had to save and refresh the report a few times for the change to take place though.

Getting rid of extra punctuation when fields are null

For example, you don't want a report to look like 'South America, Paraguay , , , ' if the rest of some of the fields in the middle of the expression are null. To only make extra punctuation or even words show up only when there is information in the field, format like this: (example)

Insert your own fields or do whatever you want, but this should work perfectly.

Making dates have extra zeros

For example, you date looks like this 2012/7/9 and you want it to look like 2012/07/09. Note that the format is year/month/day here, you can switch it around as you wish. Use this expression:

"Date: " + (\$F{Date_(Year)}==null?"::\$F{Date_(Year)}+"").toString() +(\$F{Date_(Month)}==null?":"/"+((\$F{Date_(Month)}+"").toString().length() == 2 ? (\$F{Date_(Month)}+"").toString(): "0" + \$F{Date_(Month)}+"")).toString() + (\$F{Date_(Day)}==null?"":"/" + ((\$F{Date_(Day)}+"").toString().length() == 2 ? (\$F{Date_(Day)}+"").toString(): "0" + \$F{Date_(Day)}+"")).toString()

Making dates display full month names instead of numbers

(\$F{Collection_Date_(Day)}==null?"':\$F{Collection_Date_(Day)}+" ").toString()+(\$F{Collection_Date_(Month)}==null?"':\$F{Collection_Date_(Month)}+" ").toString().replace("10","October").replace("11","November").replace("12","December").replace ("1","January").replace("2","February").replace("3","March").replace("4","April").replace("5","May ").replace("6","June").replace("7","July").replace("8","August").replace("9","September") +(\$F{Collection_Date_(Year)}==null?"':\$F{Collection_Date_(Year)}+"").toString()