Report Roadmap Users Guide

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Purpose

The Report Roadmap utility allows the user to attach an identification label to a dimension item in order to compliment the inspection report.
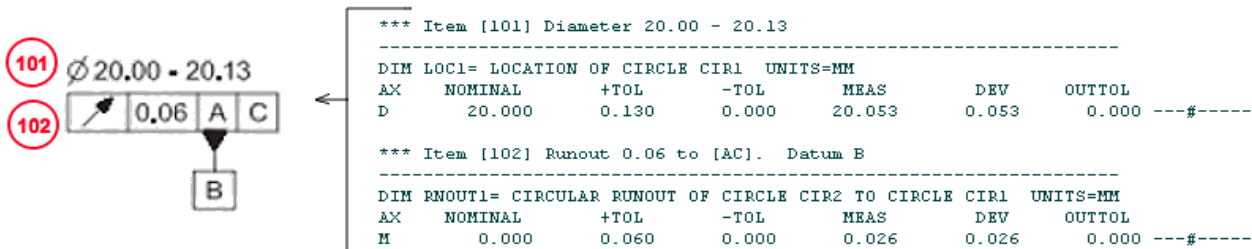


```
*** Item [101] Diameter 20.00 - 20.13
-----------------------------------------------------------------
DIM LOC1= LOCATION OF CIRCLE CIR1  UNITS=MM
AX    NOMINAL        +TOL        -TOL        MEAS       DEV      OUTTOL
D       20.000      0.130       0.000      20.053     0.053      0.000 ---#-----

*** Item [102] Runout 0.06 to [AC].  Datum B
-----------------------------------------------------------------
DIM RNOUT1= CIRCULAR RUNOUT OF CIRCLE CIR2 TO CIRCLE CIR1  UNITS=MM
AX    NOMINAL        +TOL        -TOL        MEAS       DEV      OUTTOL
M        0.000      0.060       0.000       0.026     0.026      0.000 ---#-----
```

Illustration 1: Example of relationship between inspection report and drawing items.

In the example shown in illustration 1 the drawing has identified dimension items that are cross referenced in the inspection report. This reduces ambiguity in the inspection report particularly if the report is text based.

This utility is cross platform and can be run on GNU/Linux, MacOS, and Windows.

User Interface

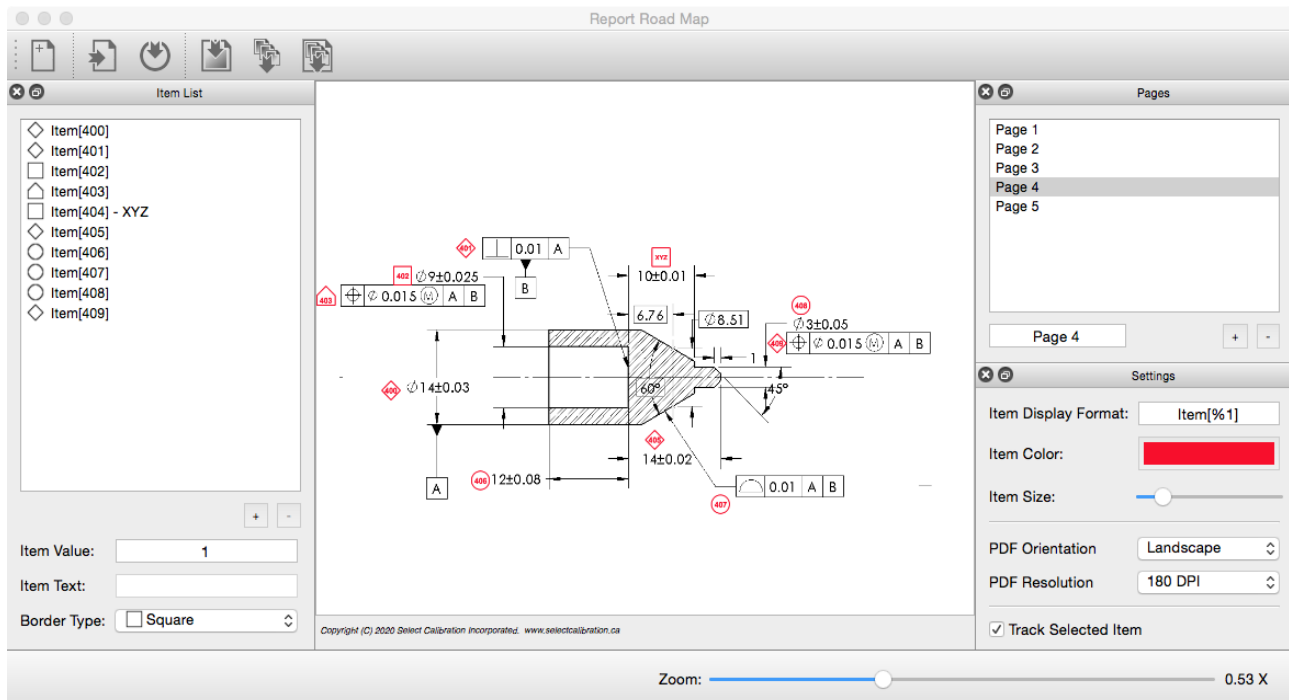The user interface of the Report Roadmap utility is shown in illustration 2.

Illustration 2: Report Roadmap main screen.

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The design of the Report Roadmap interface starting with version 3.0 uses three dock windows each controlling a specific group of functions.

The dock windows can be separated from the main window or moved to either side of the main window. If separated they can be moved anywhere outside the area of the main window. The dock windows can be hidden or restored from the View menu. Attaching or detaching a dock window can be done by double clicking on the title bar.

Pages Dock Window

The *Pages* dock window deals with the individual report pages. Each page contains a single image that can have one or more label items attached to it. All the pages is used for the output report.

New pages are automatically created when one or more images are imported with one page created for each imported image. Pages can be individually created by pressing the + button then importing an image file. The background image of the current page can be replaced by importing a new image file provided the selected page has no item labels (a new page is created in this case).
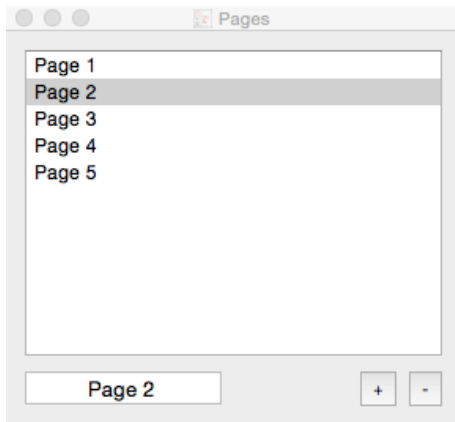

Illustration 3: Pages dock widget and related controls.

Page Options:

Option	Description
+	Adds a new page to the list of pages *An image must be added to the page before item labels can be added.*
-	Remove the selected pages. Label items attached to the deleted pages are also deleted.

The name of the page can be changed by selecting and updating the text shown below the page list. The order of the pages is changed by dragging the individual items to the preferred position.

The order of the pages of the report is the same as the order of the pages in this window.

Settings Dock Window

The *Settings* dock window contains options that directly affect the appearance of the label items or generated report. These settings are frequently changed so they on are a separate dock window.
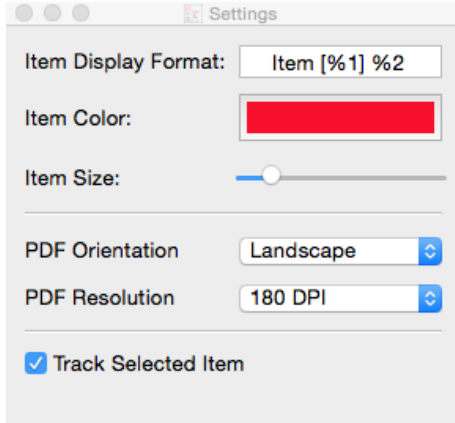

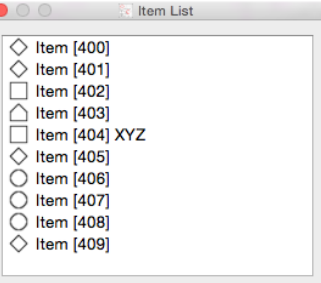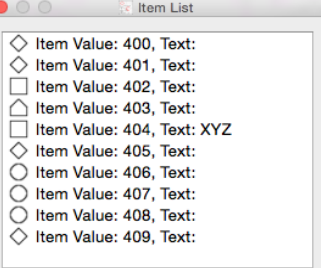*Illustration 4: Settings dock widget with frequently changed items.*

Setting Options:

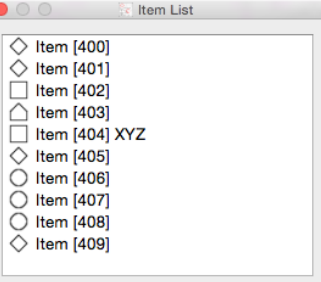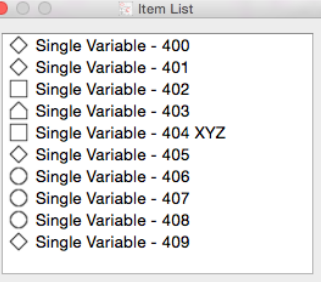| Option	Description
Item Display Format	Set the format for the display of individual labels for the *Item List*. See section *Item Display Format* below.
Item Color	Color of the label items drawn on the graphics window.
Item Size	Size of the label items drawn on the graphics window.
PDF Orientation	PDF reports will have an orientation of either Portrait or Landscape based on this option.
PDF Resolution	Pixel resolution of the PDF report. The lowest resolution is 96 DPI (dots per inch) and the highest is 372 DPI.
Track Selected Item	When checked, selecting an item from the *Item List* will make it visible in the graphics window.

Item Display Format

The option *Item Display Format* defines the text in the *Item List* dock window. Two variables can be used which is the item value (%1) and the item text (%2). If the entry for the *Item Display Format* doesn't contain the value variable (%1) the default expression of 'Item [%1] %2' is used. If the entry doesn't contain the text variable (%2) the text is automatically added to the end each item entry.

The following shows examples of various entries for the *Item Display Format*:

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Item Display Format Expression	Result in Label Item List	Comment
Item [%1] %2	Item List ◇ Item [400] ◇ Item [401] ☐ Item [402] ⌂ Item [403] ☐ Item [404] XYZ ◇ Item [405] ○ Item [406] ○ Item [407] ○ Item [408] ◇ Item [409]	Default format for expression
Item Value: %1, Text: %2	Item List ◇ Item Value: 400, Text: ◇ Item Value: 401, Text: ☐ Item Value: 402, Text: ⌂ Item Value: 403, Text: ☐ Item Value: 404, Text: XYZ ◇ Item Value: 405, Text: ○ Item Value: 406, Text: ○ Item Value: 407, Text: ○ Item Value: 408, Text: ◇ Item Value: 409, Text:	
No Variables	Item List ◇ Item [400] ◇ Item [401] ☐ Item [402] ⌂ Item [403] ☐ Item [404] XYZ ◇ Item [405] ○ Item [406] ○ Item [407] ○ Item [408] ◇ Item [409]	The default expression is used automatically.
Single Variable - %1	Item List ◇ Single Variable - 400 ◇ Single Variable - 401 ☐ Single Variable - 402 ⌂ Single Variable - 403 ☐ Single Variable - 404 XYZ ◇ Single Variable - 405 ○ Single Variable - 406 ○ Single Variable - 407 ○ Single Variable - 408 ◇ Single Variable - 409	The item text is automatically shown at the end of the name.

Item List Dock Window

The *Item List* dock window shows all the labels associated with the selected page. Each item shows the numerical value, text value (if it exists), and the type of symbol drawn around the label item.
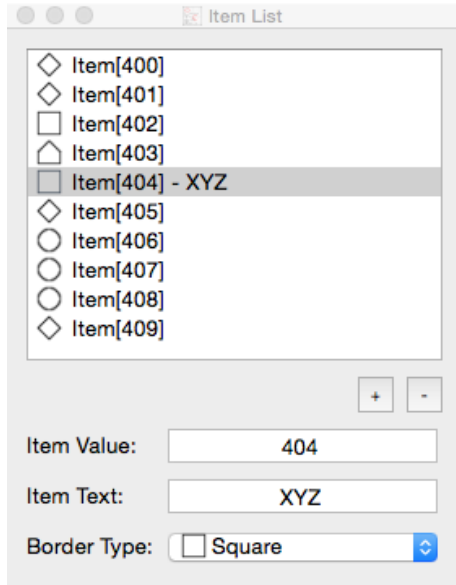

Illustration 5: Item list dock widget.

Item List Options:

Option	Description
+	Add a new item to the active page. The location of the item will always be at the top left corner of the graphics window when added this way. The new item is created using the current *Item Value* and *Border Type* settings.
-	Remove the selected labels.
Item Value	Numerical value of the item. This is the value displayed on the graphics window if the *Item Text* field is empty.
Item Text	Text for the item. If this field is empty the numerical value is used for the graphical display of the item.
Border Type	The border type used for the label item.

Graphics Window

The graphics window shows the background image and all label items associated with a given page of the report. The background image can be panned using a left mouse click and drag. A zoom slider is shown at the bottom of the Report Roadmap utility allowing the image scale to be changed.

Adding Label Items

New label items can be added at a specific location by clicking with the right mouse button. If using a mouse with a single button (typical Apple mouse) hold the CTRL key down while clicking the mouse button.

Moving Label Items

Existing label items can be moved by left mouse clicking then dragging to the new position.

Toolbar and Menu Options

The Report Roadmap utility uses a standard menu with commonly used items placed on the toolbar.

Menu and toolbar options:

Option	Icon	Description
File - New		Clear all existing data.
File - Open		Open an existing Report Roadmap data file. These files use the extension ".reportmap".
File – Save		Save the existing data. If the data has been previously saved the same file name is used. *Use Save As to save existing data with a different file name.*
File – Save As		Save the Report Roadmap data prompting for the file name.
File - Import		Import one or more image files into the Report Roadmap utility. Each imported image will be assigned a new page.
File – Export Images		Creates an image file (PNG) for each page of the report. The output file name is based on the page name plus the current date and time.
File – Export PDF		Creates a PDF file from all the images. The PDF report has two user definable title lines that is displayed on each page of the report.
File – Quit		Close the Report Roadmap utility.
Edit – Reindex Items		Assigns new values to the item labels. See section *Reindex Items* for more details.

Option	Icon	Description
View – Item List		Allows toggling the visibly of the Item List dock widget.
View – Pages		Allows toggling the visibly of the Pages dock widget.
View - Settings		Allows toggling the visibly of the Settings dock widget.
Help – About		Displays the version information for the Report Roadmap utility.

Reindex Items

The values for the labels can be updated using the Reindex option. The dialog for label reindexing is shown in illustration 6:
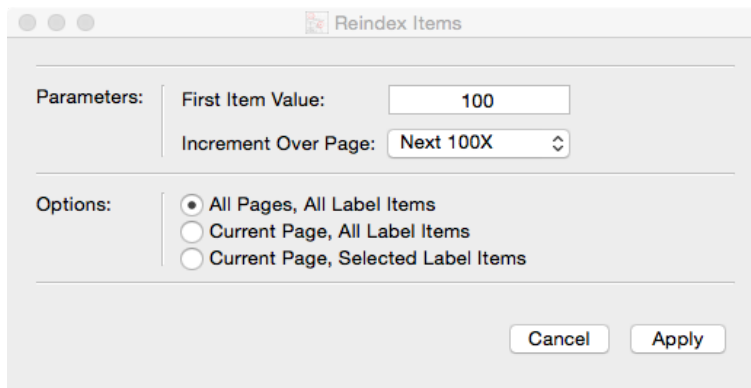

Illustration 6: Reindex Items dialog.

Reindex Items Options:

Option	Description
First Item Value	First label item value. Item labels are incremented by one from this initial value.
Increment Over Page	Method used to increment the label value when crossing from page to page. See section *Increment Over Page* for details.
All Pages, All Label Items	Assign new values to all labels over all pages.
Current Page, All Label Items	Assign new values to all labels on the active page.
Current Page, Selected Label Items	Assign new values to the selected labels on the active page.

Increment Over Page

When incrementing label items over a page the next value can be based on one of the four options:

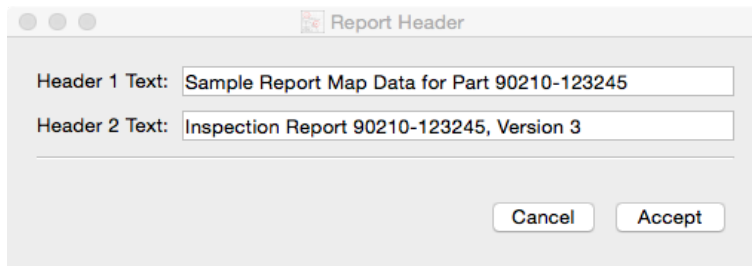| Option	Description
Next 1X	First item value of the new page will be 1 higher than the current value.
Next 10X	First item value of the new page will be next value evenly divisible by 10.
Next 100X	First item value of the new page will be next value evenly divisible by 100.
Next 1000X	First item value of the new page will be next value evenly divisible by 1000.

The settings shown in illustration 6 will rename all items on the first page starting with an item value of 100, page 2 starting with an item value of 200, page 3 starting with an item value of 300, and so on provided each page contains no more than 100 items.

Reindexing label items does not affect the item text.

Report Header

The report header section allows the user to enter up to two lines of text that will appear at the top of the PDF report. An example of this dialog is shown in illustration 7.

Illustration 7: Report Header dialog that appears when exporting PDF files.

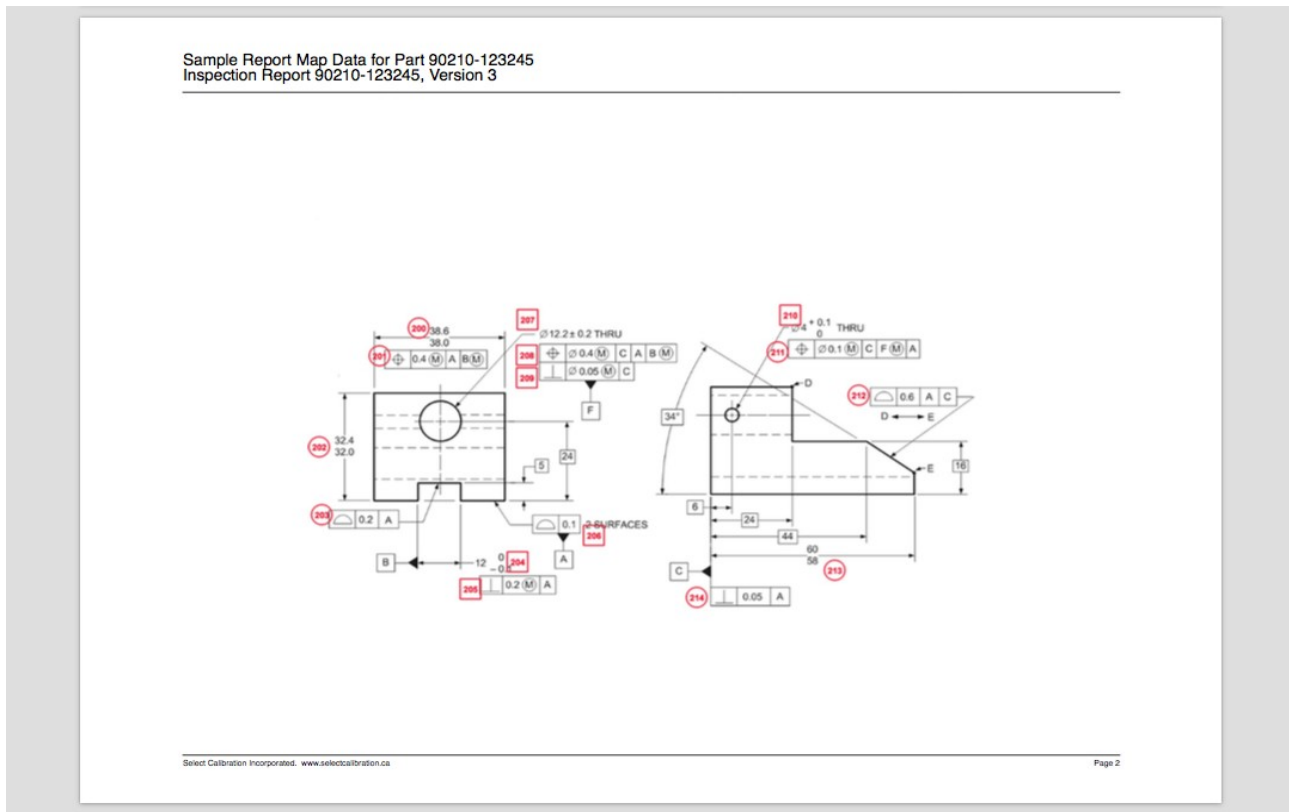*Exported image files do not include the header data.*

Illustration 8: Report output example showing the two report header lines.

Example Usage of the Report Roadmap Utility

The following example shows how to create a report roadmap for inspection data.

1. Create one or more image files (PNG, JPEG, Bitmap, ...) of the inspection drawings. Preferably all images have the same dimensions.

2. Open the Report Roadmap utility and select *File – Import* from the main menu. Import all the images files created in step 1.

3. Select the page of interest and add one or more labels (right mouse button click in the graphics display) for each item of interest. Each new item will use the values shown in the *Item List* window.

4. Select the option *File – Export PDF* from the main menu. Enter suitable title names in the Report Header dialog.

5. Select *File – Save* in order to save the Report Roadmap data for future use.

Revision History

Date	Version	Changes
March 2014	1.0	New program
Oct 21, 2014	2.0	Update to improve usability. Added new item fields.
Apr 28, 2020	3.0	Rewrite of GUI elements and main window. Added option for multiple pages. Added PDF output report. Combined saved data into a single file. Addition of Diamond symbol.