



Maestro – Owner Statement PDFs

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Introduction

Maestro Client Porto Cupecoy has requested an enhancement to Maestro that will enable the production of Owner Statements that can be emailed directly to Owners without the need for user intervention.

Strategy/Objectives

The objective of this task is documented in the introduction. However, the traditional method for producing high quality reports (using Crystal Reports), has not been deemed suitable due to that product's inflexibility in producing large numbers of individual reports during a single run.

Consequently, Northwind strategy has been to generate Owner Statements directly in the PDF format, on an owner by owner basis, that can be readily emailed to the owner.

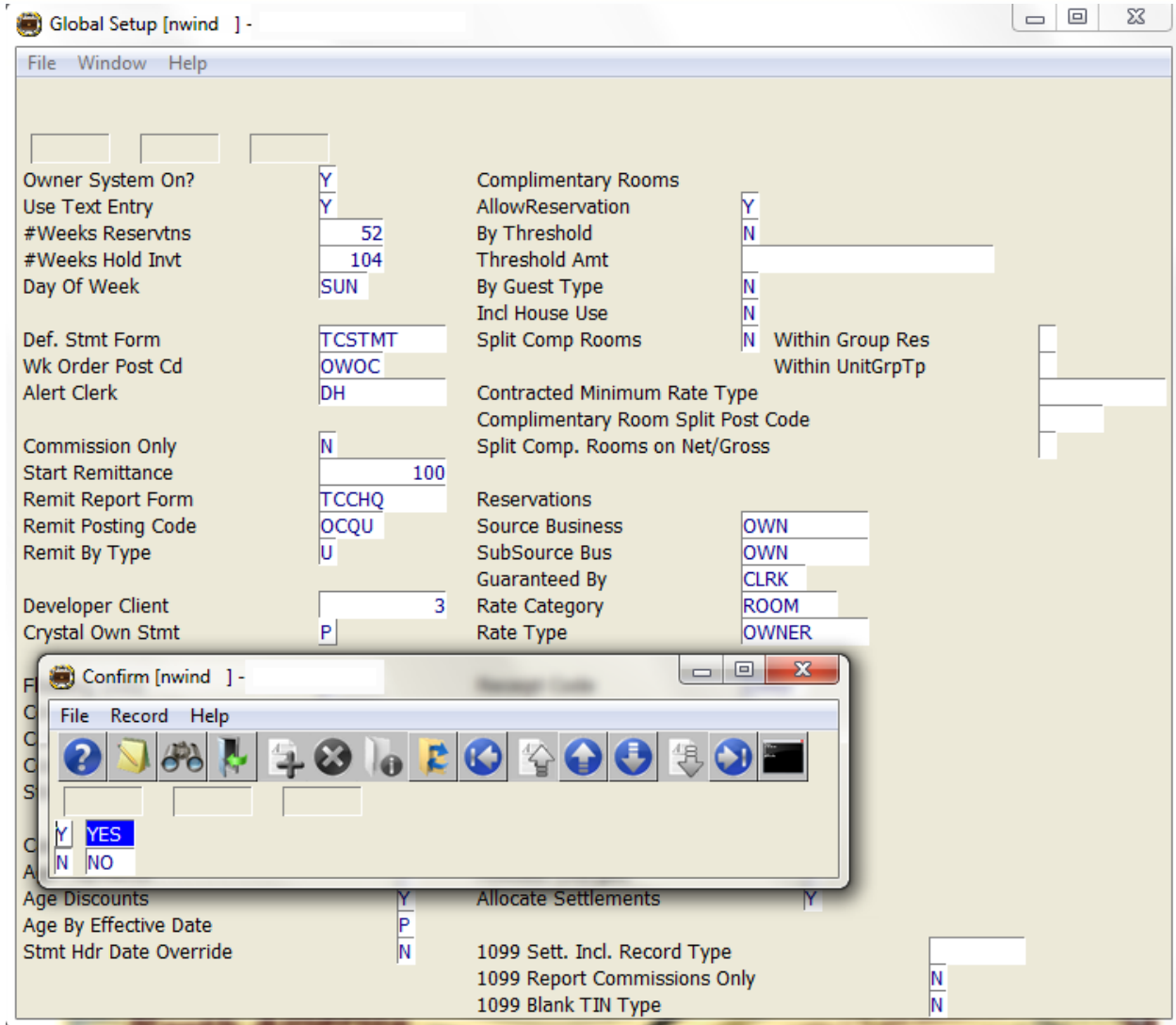
This strategy is not without its drawbacks. Construction of a PDF within Maestro is a programmatic exercise (as opposed to having the Crystal Report Editor for on the fly changes). Consequently, any changes to the content of the generated PDF will require a new release of Maestro.

That being said, the PDF implementation within Maestro has provided for an XML formatting document, that will allow a Report Designer considerable flexibility with respect to layout positioning, Font, font-size and underlining.

Configuration Using Owner Maintenance

Production of Owner Statements as PDF documents is controlled using the Owner Maintenance suite of programs.

The Global Setup screen is where the PDF format of Owner Statement gets selected. As can be seen from the screen-shot below, PDF gets selected by setting the value 'P' within the Crystal Owner Statement field.

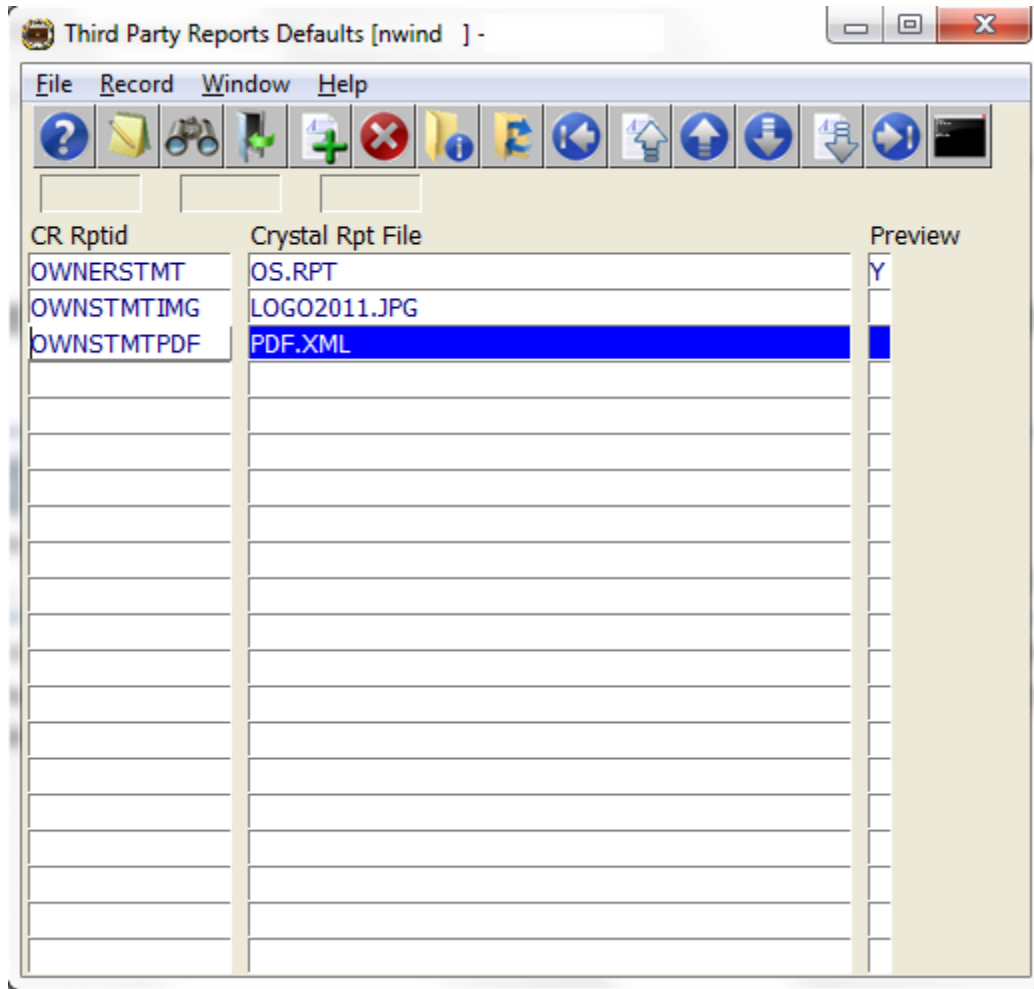


As can also be seen, Northwind are only advertising values of 'Y' and 'N' for this field. This is because the PDF facility requires a certain amount of configuration and should be done so with the assistance of Northwind Support to ensure results are satisfactory.

Further configuration setup is required using the Third Party Reports Defaults screen. In order to configure for PDF Owner Statements it is necessary to specify the XML formatting file and also the image file that is to be displayed on the Owner Statement. It should be noted that currently only JPG images are supported as the image file displayed on the Owner Statement.

Appendix B demonstrates and describes the contents of the XML formatting file.

As shown in the screen-shot below, the XML formatting file is specified using the code 'OWNSTMTPDF' and the image file is specified using the code 'OWNSTMTIMG'. Both files are located in the Northwind reports folder, typical configured as N:/REPORTS.



Email Configuration

- Certain Email configuration is required before Statements can be emailed to Owners.
- From E-mail address. This information gets placed in the header of the email and informs the receiving Owner, the email address from which the email originated. This information is configured in the Global System Options Maintenance program gb7800 as shown below:

Global System Options Maintenance [nwind] -

File Record Help

Option	Prop	Description	Option Data
343		RESERVED FOR FUTURE USE	N
344		RESERVED FOR FUTURE USE	N
345		RESERVED FOR FUTURE USE	N
346		RESERVED FOR FUTURE USE	N
347		RESERVED FOR FUTURE USE	N
348		RESERVED FOR FUTURE USE	N
349		RESERVED FOR FUTURE USE	N
350		RESERVED FOR FUTURE USE	N
351		RESERVED FOR FUTURE USE	N
352		RESERVED FOR FUTURE USE	N
353		RESERVED FOR FUTURE USE	N
354		CONDO/TIMESHARE DEF. GUESTTYPE	
355		OWNER STATS GUEST TYPE FLAG	
356		OWNER STMTNT EMAIL FROM ADDRESS	RND@WOODBINE.AVE

- Email templates. The subject and text body of Owner Statement emails are configured using the Email Names Maintenance program gb6500:

Email Names Maintenance [nwind] -

File Record Window Help

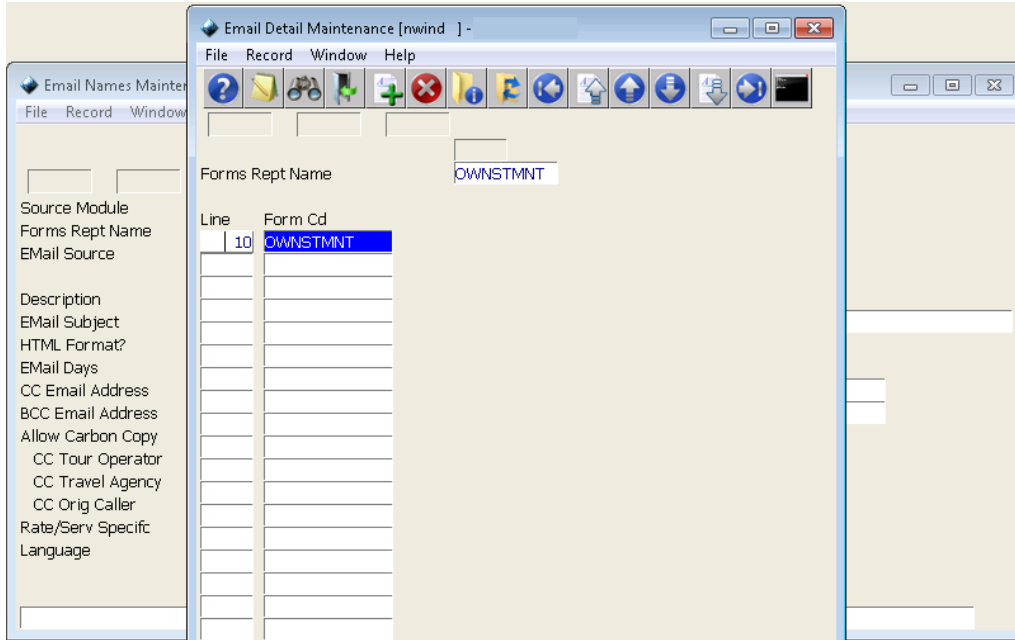
Source Module: |rc|
 Forms Rept Name: |OWNSTMNT|
 Email Source: |OS|

Description: |Owner Statement|
 Email Subject: |Hotel X Owner Statement|
 HTML Format?: |Y|
 Email Days: | |
 CC Email Address: | |
 BCC Email Address: | |
 Allow Carbon Copy: |N|
 CC Tour Operator: |N|
 CC Travel Agency: |N|
 CC Orig Caller: |N|
 Rate/Serv Specific: |N|
 Language: |EN|

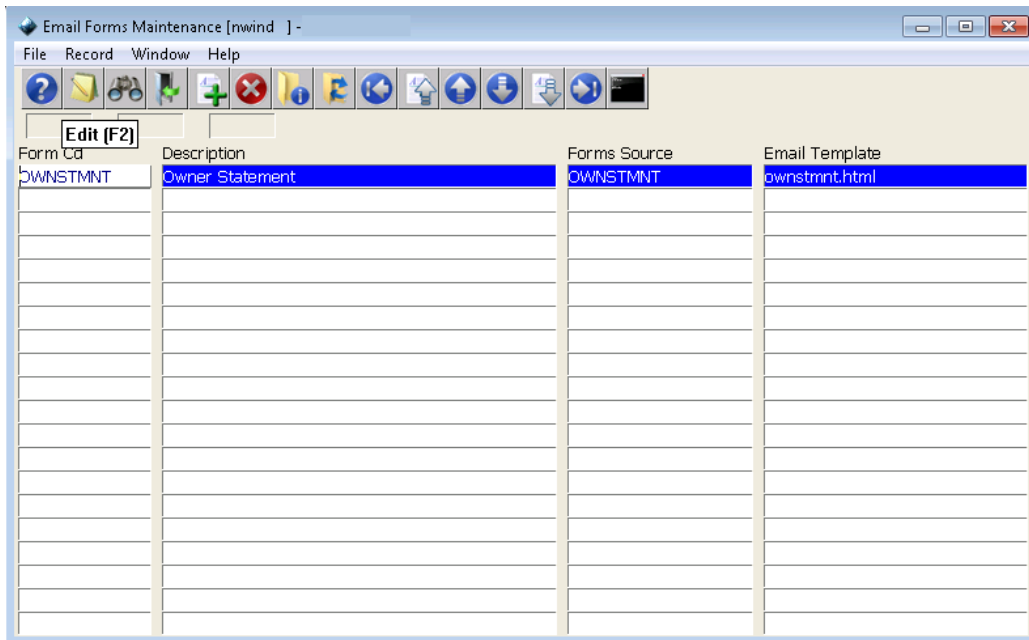
HTML Images location: | |

Both text and HTML format s are supported.

An Email Detail must be configured using the Email Detail Maintenance screen gb6510:



It is also necessary to configure an Email Form using the Email Forms Maintenance screen gb6600:



The Owner Statement Email template currently supports five tags:

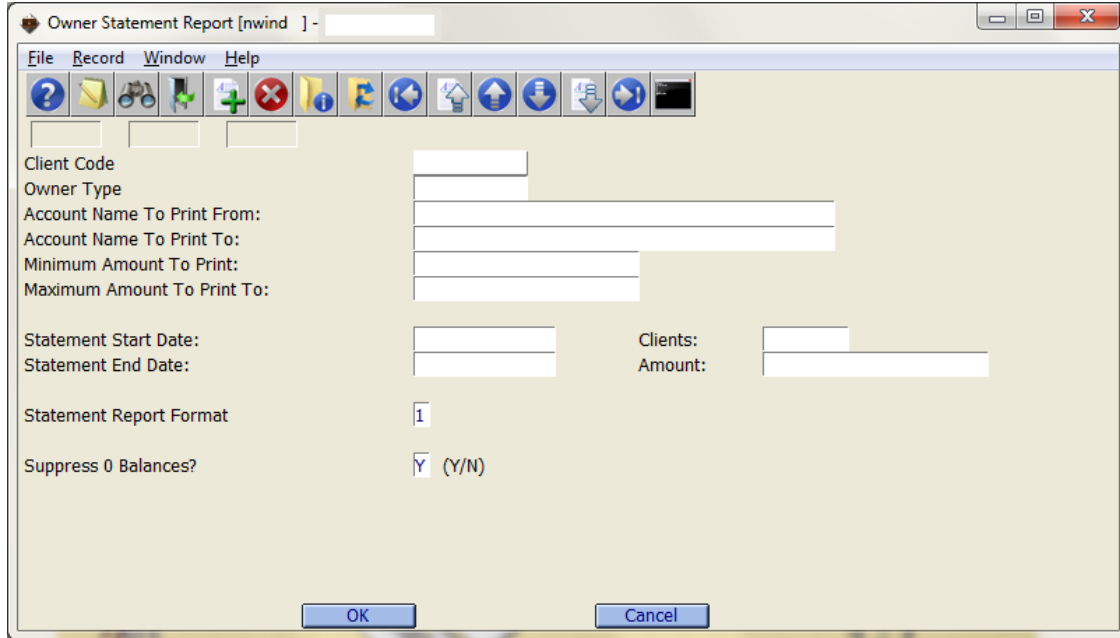
1. <em_ownstmnt.client_code> Owner's client code
2. <em_ownstmnt.first_Name> Owner's first name
3. <em_ownstmnt.last_name> Owner's last name
4. <em_ownstmnt.start_date> Start date of reporting period
5. <em_ownstmnt.end_date> Statement Date.

These tags are available for use within the text or HTML template.

Creating PDF Owner Statements Using Owner System

Production of Owner Statements as PDF documents is controlled using the Owner suite of programs, using the existing Owner Statement Report screen.

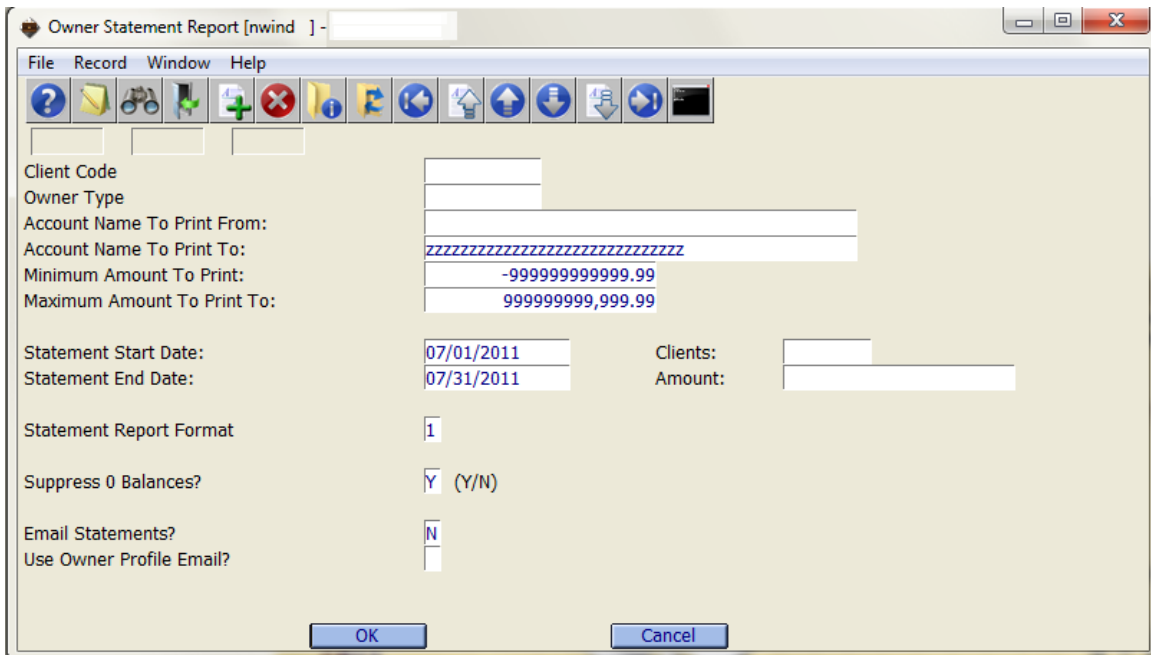
With Maestro not configured to create PDF statements the report screen looks as displayed below:



The screenshot shows the 'Owner Statement Report' dialog box with the following fields and values:

Client Code			
Owner Type			
Account Name To Print From:			
Account Name To Print To:			
Minimum Amount To Print:			
Maximum Amount To Print To:			
Statement Start Date:		Clients:	
Statement End Date:		Amount:	
Statement Report Format	I		
Suppress 0 Balances?	<input checked="" type="checkbox"/> (Y/N)		

However, with Maestro configured to create PDF statements then the report screen displays as shown below:



The screenshot shows the 'Owner Statement Report' dialog box with the following fields and values:

Client Code			
Owner Type			
Account Name To Print From:			
Account Name To Print To:	////////////////////////		
Minimum Amount To Print:	-999999999999.99		
Maximum Amount To Print To:	999999999,999.99		
Statement Start Date:	07/01/2011	Clients:	
Statement End Date:	07/31/2011	Amount:	
Statement Report Format	I		
Suppress 0 Balances?	<input checked="" type="checkbox"/> (Y/N)		
Email Statements?	<input type="checkbox"/> (N)		
Use Owner Profile Email?			

The screen now displays the additional fields at the bottom of the screen: **'Email Statements?'** and **'Use Owner Profile Email?'**

The default behavior is that the PDF Statements generated do NOT get emailed to the Owners. This provides the Client with the ability to generate and review the PDF statements that get generated. The PDF statements will be generated in the location defined as OTHER_REPOTS_DIR within the initialization file.

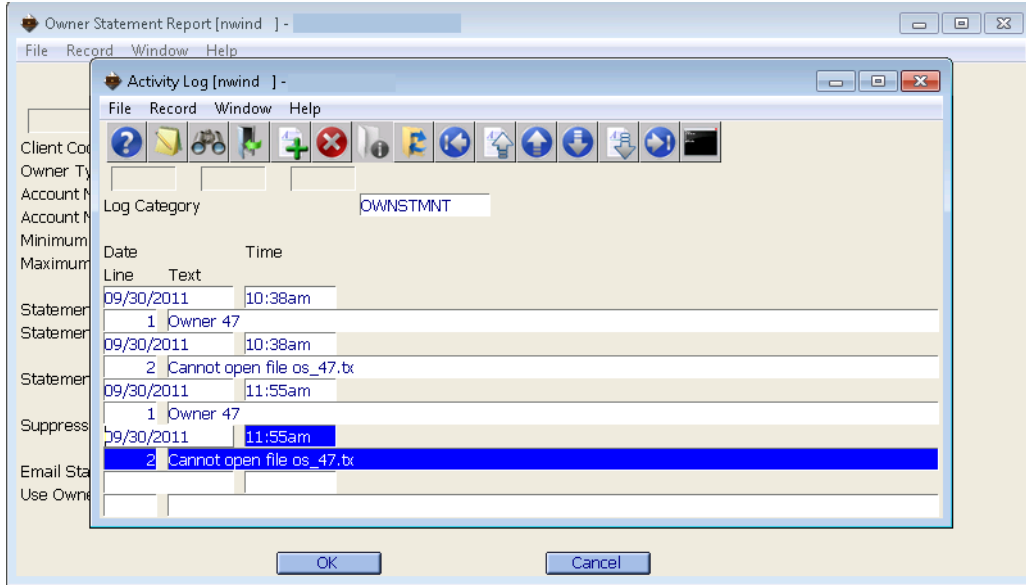
If the Client wants the PDF statements to be emailed to the Owners, then they set the 'Email Statements?' field to 'Y'.

If the PDF statements are being generated for more than a single Owner, then the reports will be emailed to the email address held on the Owner's respective profiles.

If a PDF statement is being generated for a single owner, then the screen will offer the ability to email the statement to a specified email address, as shown below. In order to make use of this facility, the user will need to indicate 'N' in the 'Use Owner Profile Email?' field and then enter the required email address in the 'Email Addr' field.

Error Logging

Any errors encountered during the generation of the Statements are logged and can be viewed using the 'Display Log' menu option:



Appendix A demonstrates the PDF content of an Owner Statement formatted according to the XML formatting file described in Appendix B.

Appendix A

Example PDF Owner Statement, generated using the XML formatting file described in Appendix B.

Owner Statement

Hubbs, Michael David
 Suite 401
 10000 401 St
 Dutchess County

Print Date Monday, August 29, 2011
 Statement Date Thursday, June 30, 2011
 Owner Number 401

Opening Balance	0.00
Room # Owned	106b
Activity from	June 1, 2011 to June 30, 2011

Reference	Date	Description	Room #	Res #	Income	Expenses
2716	06/18/2011	Maintenance Fee Q3 2011	106b	0		2519.52
2444	06/22/2011	Airconditioning Q2 2011	106b	0		656.70

Total Income	0.00
Total Expenses	3176.22
Total Amount Due To Property	3176.22

Summary	Owner Number	401
----------------	---------------------	-----

<u>Current Due</u>	<u>Over 30</u>	<u>Over 60</u>	<u>Over 90</u>	<u>Over 120</u>
3176.22	0.00	0.00	0.00	0.00

Please remit payment to

It should be noted that the Owner Statement can be considered as a set of the following components:

- A Title
- An image/logo
- A block of date information
- Name and Address information
- Opening Balance information
- A colored box containing
- Column Header information
- A series of columned details
- A boxed area containing Closing Balance information
- Summary information containing aged balances and remit to information

Appendix B

Example XML formatting file, used to generate the PDF Owner Statement, described in Appendix A. It is assumed that the reader has some basic familiarity with XML, especially the concept that data is contained with opening and closing TAGS. These tags begin with an angle bracket '<' and end with an angle bracket '>'.

It should also be understood that the closing tag has to match the opening tag, with an additional '/' character, before the tag name.

```
<?xml version="1.0" encoding="utf-8"?>
<format>
  <title>
    <data>Owner Statement</data>
    <font>Helvetica-Bold</font>
    <font-size>12</font-size>
    <underline>y</underline>
    <xpos>center</xpos>
    <ypos>top</ypos>
  </title>
  <logo>
    <xpos>30</xpos>
    <ypos>top</ypos>
    <width>177</width>
    <height>106</height>
  </logo>
  <dates>
    <font>Helvetica</font>
    <font-size>10</font-size>
    <xpos>right</xpos>
    <ypos>90</ypos>
    <line3>
      <header>
        <font>Helvetica</font>
      </header>
      <value>
        <underline>n</underline>
      </value>
    </line3>
  </dates>
  <name_address>
    <font>Helvetica</font>
    <font-size>10</font-size>
    <xpos>80</xpos>
```

```

<ypos>120</ypos>
<name>
  <font>Helvetica</font>
  <underline>n</underline>
</name>
<address3>
  <font>Helvetica</font>
</address3>
</name_address>
<open>
  <font>Helvetica</font>
  <font-size>10</font-size>
  <xpos>left</xpos>
  <ypos>220</ypos>
  <line2>
    <header>
      <font>Helvetica-Bold</font>
    </header>
    <value>
      <underline>n</underline>
    </value>
  </line2>
  <line3>
    <header>
      <font>Helvetica-Bold</font>
    </header>
  </line3>
</open>
<colorbox>
  <xpos>left</xpos>
  <ypos>280</ypos>
  <width>580</width>
  <height>30</height>
  <red>102</red>
  <green>256</green>
  <blue>154</blue>
</colorbox>
<detailhdr>
  <font>Helvetica</font>
  <font-size>10</font-size>
  <ref>
    <xpos>left</xpos>
    <ypos>290</ypos>
    <width>60</width>
    <height>20</height>
    <data>Reference</data>
    <underline>y</underline>
    <align>right</align>
  </ref>
  <date>
    <xpos>76</xpos>
    <ypos>290</ypos>
    <width>60</width>
    <height>20</height>
    <data>Date</data>
    <underline>y</underline>

```

```

    <align>left</align>
  </date>
  <desc>
    <xpos>136</xpos>
    <ypos>290</ypos>
    <width>200</width>
    <height>20</height>
    <data>Description</data>
    <underline>y</underline>
    <align>left</align>
  </desc>
  <room>
    <xpos>346</xpos>
    <ypos>290</ypos>
    <width>50</width>
    <height>20</height>
    <data>Room #</data>
    <underline>y</underline>
    <align>left</align>
  </room>
  <res>
    <xpos>396</xpos>
    <ypos>290</ypos>
    <width>50</width>
    <height>20</height>
    <data>Res #</data>
    <underline>y</underline>
    <align>left</align>
  </res>
  <inc>
    <xpos>446</xpos>
    <ypos>290</ypos>
    <width>60</width>
    <height>20</height>
    <data>Income</data>
    <underline>y</underline>
    <align>right</align>
  </inc>
  <exp>
    <xpos>516</xpos>
    <ypos>290</ypos>
    <width>60</width>
    <height>20</height>
    <data>Expenses</data>
    <underline>y</underline>
    <align>right</align>
  </exp>
</detailhdr>
<detail>
  <font>Helvetica</font>
  <font-size>10</font-size>
  <ypos>315</ypos>
  <height>15</height>
  <ref>
    <xpos>left</xpos>
    <width>60</width>

```

```

    <align>right</align>
  </ref>
  <date>
    <xpos>76</xpos>
    <width>60</width>
    <align>left</align>
  </date>
  <desc>
    <xpos>136</xpos>
    <width>200</width>
    <align>left</align>
  </desc>
  <room>
    <xpos>346</xpos>
    <width>50</width>
    <align>left</align>
  </room>
  <res>
    <xpos>396</xpos>
    <width>50</width>
    <align>left</align>
  </res>
  <inc>
    <xpos>446</xpos>
    <width>60</width>
    <align>right</align>
  </inc>
  <exp>
    <xpos>516</xpos>
    <width>60</width>
    <align>right</align>
  </exp>
</detail>
<close>
  <xpos>left</xpos>
  <ypos>315</ypos>
  <width>580</width>
  <height>80</height>
  <line_style>dashed</line_style>
  <font>Helvetica-BoldOblique</font>
  <font-size>10</font-size>
  <line1>
    <xpos>150</xpos>
    <ypos>20</ypos>
  </line1>
</close>
<summary>
  <font>Helvetica</font>
  <font-size>10</font-size>
  <height>100</height>
  <ypos>395</ypos>
  <title>
    <data>Summary</data>
    <font>Helvetica-Bold</font>
    <xpos>120</xpos>
    <underline>y</underline>

```

```

</title>
<owner>
  <header>
    <font>Helvetica-Bold</font>
    <xpos>350</xpos>
    <underline>y</underline>
  </header>
  <value>
    <xpos>470</xpos>
  </value>
</owner>
<aging0>
  <xpos>100</xpos>
  <width>60</width>
  <height>15</height>
  <align>center</align>
  <header>
    <underline>y</underline>
  </header>
</aging0>
<aging30>
  <xpos>180</xpos>
  <width>60</width>
  <height>15</height>
  <align>center</align>
  <header>
    <underline>y</underline>
  </header>
</aging30>
<aging60>
  <xpos>260</xpos>
  <width>60</width>
  <height>15</height>
  <align>center</align>
  <header>
    <underline>y</underline>
  </header>
</aging60>
<aging90>
  <xpos>340</xpos>
  <width>60</width>
  <height>15</height>
  <align>center</align>
  <header>
    <underline>y</underline>
  </header>
</aging90>
<aging120>
  <xpos>420</xpos>
  <width>60</width>
  <height>15</height>
  <align>center</align>
  <header>
    <underline>y</underline>
  </header>
</aging120>

```

```
<remit>
  <font>Helvetica-Bold</font>
  <xpos>center</xpos>
  <data>Please remit payment to XXXXXXXXXXXXXXXXXXXXXXX</data>
</remit>
</summary>
</format>
```

Whilst this file seems considerable; as with the PDF document, it should be examined as a series of components:

Title

```
<title>
  <data>Owner Statement</data>
  <font>Helvetica-Bold</font>
  <font-size>12</font-size>
  <underline>y</underline>
  <xpos>center</xpos>
  <ypos>top</ypos>
</title>
```

These instructions describe the data to be written into the title, the font and font size to be used, the positioning of the title and that the data is to be underlined.

The Maestro XML formatting file supports the following fonts:

- Courier
- Courier-Bold
- Courier-Oblique
- Courier-BoldOblique
- Helvetica
- Helvetica-Bold
- Helvetica-Oblique
- Helvetica-BoldOblique
- Times-Roman
- Times-Bold
- Times-Italic
- Times-BoldItalic
- Symbol
- ZapfDingbats

The positioning tag <xpos> can have the values left, center, right or it can have a numeric value indicating the distance in pixels or points from the left of the page.

The positioning tag <ypos> can have the values top, bottom or it can have a numeric value indicating the distance in pixels or points from the top of the page.

Logo

```
<logo>
  <xpos>30</xpos>
  <ypos>top</ypos>
  <width>177</width>
  <height>106</height>
</logo>
```

The positioning tags are as described in the section for Title.

The <width> and <height> tags describe the number of pixels or points for the length of the width and height respectively for the image. Note: the width and height values do not have to match the natural size of the image being used, and therefore, these tags can be used to scale the image displayed on the page.

Dates

```
<dates>
  <font>Helvetica</font>
  <font-size>10</font-size>
  <xpos>right</xpos>
  <ypos>90</ypos>
  <line3>
    <header>
      <font>Helvetica</font>
    </header>
    <value>
      <underline>n</underline>
    </value>
  </line3>
</dates>
```

The Dates block comprises three lines. Within each line is a header and a value. These formatting instructions demonstrate that the header and value for each line can have customized formatting instructions, if required.

Name and Address

```
<name_address>
  <font>Helvetica</font>
  <font-size>10</font-size>
  <xpos>80</xpos>
  <ypos>120</ypos>
  <name>
    <font>Helvetica</font>
    <underline>n</underline>
  </name>
  <address3>
    <font>Helvetica</font>
  </address3>
</name_address>
```

The name and address block comprises a name line and three address lines, each of which can be individually customized.

Opening Balance

```
<open>
  <font>Helvetica</font>
  <font-size>10</font-size>
  <xpos>left</xpos>
  <ypos>220</ypos>
  <line2>
    <header>
      <font>Helvetica-Bold</font>
```

```

</header>
<value>
  <underline>n</underline>
</value>
</line2>
<line3>
  <header>
    <font>Helvetica-Bold</font>
  </header>
</line3>
</open>

```

The opening balance block comprises three lines. Within each line is a header and a value. These formatting instructions demonstrate that the header and value for each line can have customized formatting instructions, if required.

Color Box

```

<colorbox>
  <xpos>left</xpos>
  <ypos>280</ypos>
  <width>580</width>
  <height>30</height>
  <red>102</red>
  <green>256</green>
  <blue>154</blue>
</colorbox>

```

The Color Box block is a rectangle of color. The instructions describe where this rectangle is positioned and how large it is. The color can be defined as shown. It uses the RGB color model, where each of the colors: red, blue and green are described in terms of a number from 0 to 255. 0, 0, 0 is black and 255, 255, 255 is white.

Details Header

```

<detailhdr>
  <font>Helvetica</font>
  <font-size>10</font-size>
  <ref>
    <xpos>left</xpos>
    <ypos>290</ypos>
    <width>60</width>
    <height>20</height>
    <data>Reference</data>
    <underline>y</underline>
    <align>right</align>
  </ref>
  <date>
    <xpos>76</xpos>
    <ypos>290</ypos>
    <width>60</width>
    <height>20</height>
    <data>Date</data>
    <underline>y</underline>
    <align>left</align>

```



```

</date>
<desc>
  <xpos>136</xpos>
  <ypos>290</ypos>
  <width>200</width>
  <height>20</height>
  <data>Description</data>
  <underline>y</underline>
  <align>left</align>
</desc>
<room>
  <xpos>346</xpos>
  <ypos>290</ypos>
  <width>50</width>
  <height>20</height>
  <data>Room #</data>
  <underline>y</underline>
  <align>left</align>
</room>
<res>
  <xpos>396</xpos>
  <ypos>290</ypos>
  <width>50</width>
  <height>20</height>
  <data>Res #</data>
  <underline>y</underline>
  <align>left</align>
</res>
<inc>
  <xpos>446</xpos>
  <ypos>290</ypos>
  <width>60</width>
  <height>20</height>
  <data>Income</data>
  <underline>y</underline>
  <align>right</align>
</inc>
<exp>
  <xpos>516</xpos>
  <ypos>290</ypos>
  <width>60</width>
  <height>20</height>
  <data>Expenses</data>
  <underline>y</underline>
  <align>right</align>
</exp>
</detailhdr>

```

The Details header block is comprised of 7 parts which form the columns for the details. The parts comprise Reference, Date, Description, Room #, Reservation #, Income and Expenses. Each part has its own formatting instructions and can also inherit instructions from the enclosing detail header. The data values for each part are described in these instructions. Each part must have positioning instructions, must have a width and height, and must have alignment instructions where the allowed values are: left, right, center or justify.

Details Header

```

<detail>
  <font>Helvetica</font>
  <font-size>10</font-size>
  <ypos>315</ypos>
  <height>15</height>
  <ref>
    <xpos>left</xpos>
    <width>60</width>
    <align>right</align>
  </ref>
  <date>
    <xpos>76</xpos>
    <width>60</width>
    <align>left</align>
  </date>
  <desc>
    <xpos>136</xpos>
    <width>200</width>
    <align>left</align>
  </desc>
  <room>
    <xpos>346</xpos>
    <width>50</width>
    <align>left</align>
  </room>
  <res>
    <xpos>396</xpos>
    <width>50</width>
    <align>left</align>
  </res>
  <inc>
    <xpos>446</xpos>
    <width>60</width>
    <align>right</align>
  </inc>
  <exp>
    <xpos>516</xpos>
    <width>60</width>
    <align>right</align>
  </exp>
</detail>

```

The Details block is comprised of 7 parts which form the columns for the details. The parts comprise Reference, Date, Description, Room #, Reservation #, Income and Expenses.

The details block follows on from the details header block. Therefore, y positioning information is not required. Each part has its own formatting instructions and can also inherit instructions from the enclosing detail header. Each part must have x positioning instructions (which should match those of the Details Header), must have a width and height, and must have alignment instructions.

Closing Balance

```
<close>
  <xpos>left</xpos>
  <ypos>315</ypos>
  <width>580</width>
  <height>80</height>
  <line_style>dashed</line_style>
  <font>Helvetica-BoldOblique</font>
  <font-size>10</font-size>
  <line1>
    <xpos>150</xpos>
    <ypos>20</ypos>
  </line1>
</close>
```

This block contains Y positioning information in case there are no details on the Statement. If there are details, then this block follows on directly after the details.

The closing balance block is a rectangle that can be bounded by a line style. The following line styles are supported: dotted or dashed. Omitting the line style will result in no boundary.

The closing balance block comprises three lines. Within each line is a header and a value. The x and y positioning values are required for the first line and indicate the distance from the top left position of the closing balance block. The header and values for each line can be customized, if required.

Summary

```
<summary>
  <font>Helvetica</font>
  <font-size>10</font-size>
  <height>100</height>
  <ypos>395</ypos>
  <title>
    <data>Summary</data>
    <font>Helvetica-Bold</font>
    <xpos>120</xpos>
    <underline>y</underline>
  </title>
  <owner>
    <header>
      <font>Helvetica-Bold</font>
      <xpos>350</xpos>
      <underline>y</underline>
    </header>
    <value>
      <xpos>470</xpos>
    </value>
  </owner>
  <aging0>
    <xpos>100</xpos>
    <width>60</width>
    <height>15</height>
    <align>center</align>
    <header>
      <underline>y</underline>
    </header>
```

```

</aging0>
<aging30>
  <xpos>180</xpos>
  <width>60</width>
  <height>15</height>
  <align>center</align>
  <header>
    <underline>y</underline>
  </header>
</aging30>
<aging60>
  <xpos>260</xpos>
  <width>60</width>
  <height>15</height>
  <align>center</align>
  <header>
    <underline>y</underline>
  </header>
</aging60>
<aging90>
  <xpos>340</xpos>
  <width>60</width>
  <height>15</height>
  <align>center</align>
  <header>
    <underline>y</underline>
  </header>
</aging90>
<aging120>
  <xpos>420</xpos>
  <width>60</width>
  <height>15</height>
  <align>center</align>
  <header>
    <underline>y</underline>
  </header>
</aging120>
<remit>
  <font>Helvetica-Bold</font>
  <xpos>center</xpos>
  <data>Please remit payment to Porto Cupecoy Owners Association</data>
</remit>
</summary>

```

The summary block comprises title information, owner information, aging information and a remit to notice. The block contains Y positioning information in case there are no details on the Statement. If there are details, then this block follows on directly after the closing balance block. The block contains a height instruction, which is used to ensure that the report can keep the summary details together on the same page.

The data for the title and remit to notice are contained within these formatting instructions.

The aging details comprise header and value information, both of which can be formatted independently.