



Rpv Reports

The quickest guide for programmers II

Working with templates: Rpx & Rpd

About this guide

This document is oriented to those programmers that have worked with the Rpv concept. Since Rpx & Rpd format are files that contain data to be inserted into an Rpv file, it is required to know the main format: Rpv.

If you have not seen Rpv format yet, we strongly suggest that you get the Quickest Guide One because Rpx and Rpd formats are complement of the main Rpv format, which is clearly explained on that document.

Introduction

If you are already working with Rpv, you will find this document very useful.

Rpx and Rpd are two data files format. This means that they do not contain commands inside but only data. Additionally you will have a template file (usually with Rpv extension but not required) that will "receive" that data and will give it format.

Working with templates

If you have learnt how to generate Rpv reports, you are done. However, templates can help you in many ways. Here we highlight some advantages of the use of templates.

- **Quicker development. Your program will contain less code.** ONLY THE NECESSARY to export the data to a delimited file. **By using templates, you can save more than 40% of the coding time.**
- **Programs more stable.** Your programs will be more stable because they will not be modified every time you need to alter the report. In most of cases, altering the template (external) will be enough.
- **Programs easier to be understood by others.** What your program does it not to format the report. What your program does is to EXPORT THE DATA to a plain delimited file that will be formatted later by the program according the parameters given in the template.



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Rpx & Rpd. Differences.

Rpx and **rpd** are formats that contain data to be inserted into **rpv** files.

However, we must explain now the difference between **rpd** and **rpx**.

Both, **rpx** and **rpd** have the same **advantage**: you can modify your template without compiling your main application and you can "decide" when to show a field or not. This means that you may want to include some data in your rpx/rpd file and after that you don't show it in the final report.

Rpx files

Rpx, like rpd, also give data to an existing rpv file, but it is designed to handle **UNDEFINED NUMBER OF PAGES** and its structure can vary according the needings of the programmer. Rpx is also able to handle large ammounts of data.

Rpd files

Rpd is a format that contains data to be inserted into an existing rpv file that has a **DEFINED NUMBER OF PAGES** and its structure is always the same. For example, invoices, receipts, or any form. Generally, rpd files contain only one page, but they can contain more than one. The only requirement is that the number of pages is defined.

Which one is the best then? How do I know the one I better for me?

There is no doubt that Rpx is the most important format. Rpd is an old format that was included in version 2.0 of Rpv Printing System. However, if you need to prepare an invoice for example or a form that contains a predefined number of pages, Rpd can be a great option.

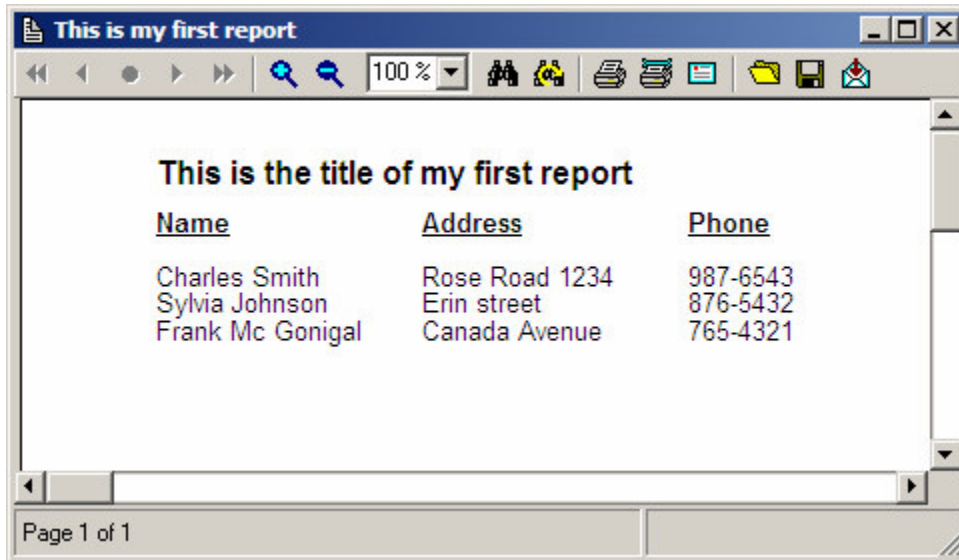


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Generating an Rpx file

Let's begin seeing the Rpv file that we need to transform to Rpx.



The Rpv file that generates this report is the following:

```
Report_title=This is my first report
$1=1000
$2=3000
$3=5000
[header]
{f=arial;s=12;b=y}
{\n;\n}
{$1} This is the title of my first report {\n;\n}
{u=y;s=10}
{$1} Name {$2} Address {$3} Phone {\n;\n;u=n;b=n}
[data]
{$1} Charles Smith      {$2} Rose Road 1234{$3} 987-6543 {\n}
{$1} Sylvia Johnson    {$2} Erin street    {$3} 876-5432 {\n}
{$1} Frank Mc Gonigal  {$2} Canada Avenue {$3} 765-4321 {\n}
```

What kind of file do I have to generate from my program?

To obtain the same report that we saw before, the data to be written to the output file is the following:

File name: test.rpx

```
Template=c:\mytemplates\Reportpersons.rpv
|lineofdata|Charles Smith |Rose Road 1234|987-6543|
|lineofdata|Sylvia Johnson|Erin street|876-5432|
|lineofdata|Frank Mc Gonigal|Canada Avenue|765-4321|
```

This example is delimited by pipes. The first character of the line is the delimiter. In this case the pipe is the delimiter for all the lines.



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Is possible to have one delimiter for each line.

If you observe the file, you will identify the first line that contains the name of the template that will receive the data contained in the rest of the file.

The rest of the lines are delimited, containing the fields in the order they will be passed to the template. The first field (lineofdata) indicates that the data in the line will be inserted in the sub-section "lineofdata" of the template.

The following is the code of the template:

```
Report_title=This is my first report
$1=1000
$2=3000
$3=5000
[header]
{f=arial;s=12;b=y}
{\n;\n}
{1000} This is the title of my first report {\n;\n}
{u=y;s=10}
{$1} Name {$2} Address {$3} Phone {\n;\n;u=n;b=n}
[data]
[lineofdata:@name,@address,@phone]
{$1} @name {$2} @address {$3} @phone {\n}
```

Observe the two lines of the template: the first one indicates that "sub section" lineofdata begins (the name of the section is invented by the user) and it reads @name, @address and @phone in that order.

When the data file (the RPX) includes a line identified with "lineofdata", Rpv Reports reads the fields and assign them to the variables to be handled after.

Faqs about the use of templates

Shall I waste my time learning how to use the templates? Isn't it enough with Rpv format? NO WAY. If you know how to prepare a report using Rpv format you are done. But if you take 30 minutes (or less) to learn the use of templates (Rpx & Rpd) and it will give you more possibilities and will save much time than 30 minutes.

How many lines can a sub-section contain? As many as you want. It is not necessary that a sub-section contains only one line. This is a simple example.

How many sub-sections can I have on each template? Many, you can have as many sub-sections as you want.

What if I have a sub-section declared but I do not send any line identified with its name? Nothing. If it is necessary it is used, if not, nothing happens.

Is it necessary that I show/print the fields in the same order that they have being read? Not at all. You can show or print the fields in the order that you wish, can repeat them if needed and can omit any field if is necessary. This means that you could generate a file containing all the fields of a table but you will only show some of them.



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Setting titles on an Rpx file

The [header] section accepts to receive data from the rpx file. To do so, you should generate a sub-section into the [header] section that receives the data from the rpx.

```
Report_title=This is my first report
$1=1000
$2=3000
$3=5000
[header]
[head01:@datefrom,@dateto]
{f=arial;s=12;b=y}
{\n;\n}
{1000 Employees report from @datefrom to @dateto {\n;\n}
{u=y;s=10}
{$1} Name {$2} Address {$3} Phone {\n;\n;u=n;b=n}
[data]
[lineofdata:@name,@address,@phone,@email]
{$1;link=mailto:@email} @name {$2} @address {$3} @phone {\n}
```

The rpx file should now send a line named "Head01" with @datefrom and @dateto inside.

```
Template=c:\mytemplates\Reportpersons.rpv
|head01|01/01/2004|12/31/2004| | |
|lineofdata|Charles Smith |Rose Road 1234|987-6543|charles@smith.co.uk|
|lineofdata|Sylvia Johnson|Erin street|876-5432|sylvia@johnson.com|
|lineofdata|Frank Mc Gonigal|Canada Avenue|765-4321|frank@mcgonigal.com|
```

Sending direct commands to rpx

Rpx format accepts that you send direct commands to it. Direct commands are rpv commands that the programmer sends to the rpx file without any subsection declared.

For example, you may need to force for a new page once in a while but you do not consider necessary to declare a subsection only to do so. In that case, you can insert a direct command by using ">" (greater than char) followed by rpv syntax.

Example:

```
Template=c:\mytemplates\Reportpersons.rpv
|head01|01/01/2004|12/31/2004|
|lineofdata|Charles Smith |Rose Road 1234|987-6543|charles@smith.co.uk|
>{\np}
|lineofdata|Sylvia Johnson|Erin street|876-5432|sylvia@johnson.com|
|lineofdata|Frank Mc Gonigal|Canada Avenue|765-4321|frank@mcgonigal.com|
```

Another way to send direct commands

Depending on the language that you work with, it is easier also to send another kind of direct commands.

For example, if you want to highlight one of the names of the reports but not all the names, it is accepted that you place rpv commands into the variables.



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```
Template=c:\mytemplates\Reportpersons.rpv
|head01|01/01/2004|12/31/2004| | |
|lineofdata|{b=y}Charles Smith{b=n}|Rose Road 1234|987-6543|charles@smith.co.uk|
|lineofdata|Sylvia Johnson|Erin street|876-5432|sylvia@johnson.com|
|lineofdata|Frank Mc Gonigal|Canada Avenue|765-4321|frank@mcgonigal.com|
```

Important information regarding the names of the variables

To declare a variable on the template is really simple, but it is required that you observe the following point:

If you need to declare more than one variable of the same type: for example @address, @address2, @address3, etc you must do it in the following way:

```
@address1, @address2 , @address3
```

What you need to observe is **not** to declare the following:

```
@address, @address2, @address3
```

What is the error there? The error is that "second name of the variable contains the first one".

Remember that the template file could contain a command like this one:

```
{pic=c:\images\@idnumber.bmp}
```

Where @idnumber has a value.



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Generating an Rpd file

Generating an rpd file is pretty simple also and it does not require to declare any subsection in the template file.

In this case, like with rpx, the template must have rpv format (not required .rpv extension) and must contain the variables

The structure is really basic: in the first line of the report, the template must be declared. In this case, this Rpd file will work with the template **c:\templates\template_id.rpv**.

After the first line, the structure is very simple;

```
@Variable_1=Literal #1
@Variable_2=Literal #2
@Variable_3=Literal #3
```

File name: test.rpd

```
template=c:\templates\template_id.rpv
@photo=c:\program files\rvp\11011.bmp
@id_num=11011
@name=Charles Smith
@address=Rose Road 1234
@phone=987-6543
@birth_date=01/01/1956
```

On the other hand, to make this work we must have the template where the Rpd file says it is placed.
Here we show the contents of "c:\templates\template_id.rpv"

```
report_title=Id card
spacing=200
barwidth=2
$c0=1700
$c1=3500
$c2=3700
$c3=4300
[header]
{f=arial}
[data]
{w=1;box=800,1000,5000,3000}
{box=850,1050,1800,1800;spacing=1200;\N}
{pic=@photo,900,1100,1700,1700}
{c=1;f=Times new roman;s=11;b=y;a=c}
{4300} Rpv Software {SPACING=250;\N}
{\N;\N}
{f=arial;c=0}
{b=n;a=r;$c1} ID: {b=y;a=1;$c2} @id_num {\n}
{b=n;a=r;$c1} Name: {b=y;a=1;$c2} @name {\n}
{b=n;a=r;$c1} Address: {b=y;a=1;$c2} @address {\n}
{b=n;a=r;$c1} Phone: {b=y;a=1;$c2} @phone {\n}
{b=n;a=c;$c0} @id_num {a=r}
{$c1} Birth date: {b=y;a=1;$c2} @birth_date {\n;\n}
{s=18;1200;bar} @id_num {nobar;\n}
```

If you open this code as an Rpv report, you will see all the variables, but if you open the Rpd file, you will see the final result.