Printing In LiveCode

Introduction

Printing is a vital aspect of many applications. LiveCode provides a comprehensive set of printing capabilities. Whether you want a simple print out of your stack, want to print labels or produce complex reports, LiveCode has the features you need.

LiveCode supports a number of methods of printing. You can use the *print card command* and have LiveCode manage the layout of cards on the paper. Alternatively you can use the *print into rectangle commands* which allow you to take full control over the layout of your print out. The former method is most suited to implementing simple print functionality, while the latter

is better suited for more complex layout printing or printing reports. Finally, you can use the built-in field printing script library to print the contents of any text field using a simple command.

LiveCode also includes a full set of features to access and set printer device options, including options such as margins, page range and number of copies. This feature is invaluable if you want to produce a high resolution PDF file from your stack.

Controlling Printer Device Settings

LiveCode gives you full programmatic control over your printer device and any available settings.

Choosing a Printer

Use the **availablePrinters** to list the printers available on the user's system. Printers can include fax modems and networked devices. If the **availablePrinters** is empty, no printer is assigned. For example, to place a list of the available printers into a list field:

```
put the
availablePrinters
into field "list of
printers"
```

Set the **printerName** to the printer you want to use to print. You can use any printer listed in the availablePrinters. This property is useful when producing an in-house utility that needs to print to a specific printer on the corporate network, or for automatically restoring the user's previous printer choice stored in a preferences file.

```
set the printerName
to the
cSavedPrinter of
stack "My
Preferences"
```

The **printerFeatures** provides a list of the features supported by the currently selected printer. Features will vary widely from device to device, but typical features may include things such as "collate", "color" and "duplex". Use this property to enable and disable output options in any custom printer settings dialog.

Choosing Output Mode (e.g. Print to File)

The **printerOutput** global property allows you to choose the output mode for subsequent printing commands. This property is set by the system to the default printer on startup and will be changed if you open a system print dialog in which the user chooses a different printer. If this property is set to *device* it will output to the physical printer. Alternatively, you can set it to a file path to print to a file. On Mac you can set this to *preview* to create a preview.

For example, to save the current card to a file:

```
ask file "Save as:
set the
printerOutput to
("file:" & it )
print this card
```

Working with Printer Dialogs

In most applications that need to print, you will want to provide a way to bring up the standard OS Print and Page Setup dialogs. Typically you

would make these dialogs available from Print and Page Setup items in the File menu of your application. When the user makes changes in these dialogs the changes are made accessible to you in global properties. We discuss how to save and utilize these properties below.

> **Note:** It is not necessary to bring up the standard OS dialogs to alter printer settings. You may set the appropriate printer setting directly by script instead.

On Linux systems you will need a recent version of GTK installed in order to display the OS printer dialog. If you don't have this installed, LiveCode will display its own printer dialog which has been built as a stack and script library. This dialog mimics the standard system printer dialog and sets the LiveCode printing global properties directly.

Tip: You may force LiveCode to use its own internal print settings dialog by setting the `systemPrintSelector` global property to false. Advanced users may customize the printer dialog that LiveCode uses by running `toplevel "print dialog"` or `toplevel "page setup"` in the Message Box. Remember to save a copy of the stack as it will be overwritten each time you upgrade your copy of LiveCode.

> **Important:** The LiveCode print and page setup dialogs must be included in a standalone application if you use them. Ensure that the check box Print Dialog is turned on in the Standalone Application Settings dialog for your application. You do not need to include these dialogs if you only use the OS native print dialogs. For more information on including resources in your standalone application, see the chapter on Building Standalone Applications.

To bring up the standard OS printer dialog, use the

```
answer printer
```

command.

```
answer printer
```

If the user does not press the cancel button then any changes to the printer settings will be reflected in the global printing properties, discussed below.

To bring up the standard OS page setup dialog, use the **answer page setup** command.

```
answer page setup
```

Saving Printer Settings

To save or set a complete set of options relating to the current printer which includes every setting in the OS Page Setup and Print dialogs, use the **printerSettings** global property.

The **printerSettings** property is a binary string that completely describes the current settings. The property contains the name of the printer and the settings currently in use.

You should not attempt to modify the printerSettings but rather get and set it in its entirety. To access individual

printer properties, use the global printing properties described below.

When you set the **printerSettings** property to a saved value, LiveCode will choose the printer named in the property and set all of its settings to those contained within the property. If the printer cannot be found LiveCode will return the error "unknown printer" in the result. If the printer is found but the settings are not valid then LiveCode will choose the printer and reset it to default values.

Note: You must save a separate copy of the printerSettings property for each printer or OS you intend to use. The printerSettings property cannot be transferred between platforms. For example, a printerSettings property generated on a Windows computer cannot be used on Mac – even for the same printer. If you want to alter settings across different platforms and printer types use the global printing properties described below. Use the printerSettings for convenience when you know you will be using the same printer and want to save all the settings, or where you are setting esoteric properties not listed in the global printing properties described below.

To save the current printer settings into a custom property stored on the current stack:

```
set the cSavedPrinterSettings of this stack to the printerSettings
save this stack
```

Then to restore these settings:

```
set the printerSettings to the cSavedPrinterSettings of this stack
```

Paper Related Options

This section discusses how you get and set paper related options – the rectangle area of the paper, the paper size, the orientation and the scale to use to print onto the paper. These paper options apply to all types of printing, i.e. card, field and layout printing.

Use the **printRectangle** to get the printable rectangle area within the paper

(returned in device co-ordinates). This property takes into account any settings applied by the user in the Page Setup and Printer dialogs including the print orientation (e.g. landscape or portrait). The rectangle is represented left,top,right,bottom and is always relative to the top left of the page – thus the top left will always be 0,0. The printRectangle will always be within the **printPaperRectangle** – the rectangular area of the sheet of paper.

The printRectangle property is read only and cannot be set directly – to alter it you must set other options relating to the paper, for example the **printPaperOrientation**(discussed below).

Do not confuse the **printMargins**and other card layout printing properties with paper properties such as the **printRectangle**. The **printMargins**only applies to printing cards using LiveCode's automatic card layout capabilities (discussed

below). Thus the **printMargins**has no effect on **printRectangle**.

Use the **printPaperOrientation** to get and set the orientation of your print out. This property may be set to one of the following values:

portrait: rotated 0 degrees.

landscape: rotated 90 degrees clockwise.

reverse portrait: rotated 180 degrees clockwise.

reverse landscape: 270 degrees clockwise.

```
set the
printPaperOrientati
on to "landscape"
```

Use the **printPaperScale** property to apply a scale factor to your print out after all other settings have been taking into account.

The **printPaperScale** is applied after all other layout and scaling options. For example, if you have used the layout printing features to print a series of cards at 50% scale, then set the **printPaperScale**, this factor

will be applied to the entire layout after the card layout scaling has been calculated.

To print a range between 1 and 100% set the **printPaperScale** to a number between 0 and 1. To print at 200% set the **printPaperScale** to 2.

```
set the
printPaperScale to
0.5 -- 50%
```

Job Related Options

This section discusses how to get and set job related options – the number of copies, duplex printing, collation, color, title and printable area.

> **Important:** The available job options all depend on what the currently selected printer supports (use the **printerFeatures**property, described above, to retrieve a list of features supported by the current printer).

Use the **printCopies** property to get and set the number of copies to print. The printCopies should be set to a value of 1 or more.

```
set the printCopies to 5 -- print 5 copies
```

Use the **printDuplex** property to tell the printer to print double sided. This property may be set to any of the following values:

- *none*: no double-sided printing
- *short edge*: double-sided printing with tumble (flip the non-facing page)

- *long edge*: double-sided printing without tumble.

  set the printDuplex to "short edge"

Use the **printCollate** property to specify whether to interleave multiple copies of a print job. If a print job has three pages, P1, P2 and P3, with printCollate set to *true* and **printCopies**set to 2 the output order will be P1, P2, P3, P1, P2, P3. With printCollate set to *false* the output will be P1, P1, P2, P2, P3, P3.

```
set the
printCollate to
true
```

Use the **printColors** property to specify whether to print in color or not. If "color" is not among the lines of the **printerFeatures** then this property will have no effect and all print jobs will be printed in monochrome. This property may be set to either *true* or *false*.

For example, to check if color printing is supported on the current printer and use it

if it is:

```
if "color" is among
the lines of the
printerFeatures
then
    set the
printColors to true
end if
```

Use the **printTitle** property to specify the name of the next print job in the system printer queue. Setting this property to match the name of the user's document will ensure that the user is able to recognize it in the system printer queue utility. If the **printTitle**is empty at the start of a printing loop, the title of the defaultStack will be used.

```
set the printTitle
to "My Report 1"
```

Use the **printRectangle** property to determine the printable region of the physical page as returned by the printer. This rectangle will always be contained within the **printPaperRectangle**. Thus you should use the printRectangle and not the **printPaperRectangle** when calculating a print layout. The

printPaperRectangle is useful if you are generating a print preview and want to show the entire area of the paper including any margin areas that cannot be printed on. This property is read only and cannot be set directly.

Printer Font Metrics (Windows)

Windows systems sometimes use different versions of the same font for displaying text on screen and printing. This can result in layouts and line breaks differing between the screen display and the printed output. To prevent this from happening, you can tell LiveCode to use the printer fonts for display on screen. To do this, set a stacks **formatForPrinting** property to true.

Do:

- Set the **formatForPrinting**stack property to true before loading a stack in memory. If the stack is already loaded, set this property to true then save and reload it. (Save then use *Close*

and Remove from Memory in the File menu).

- Create a stack off screen (with **formatForPrinting** set to true) with your print layout template and copy text into it prior to printing.
- Set the **formatForPrinting**before doing any print layout related calculations on the stack.
- Set the **formatForPrinting**to true on any print preview stack being displayed to the user.

Don't:

- Allow the user to directly edit text in fields whose **formatForPrinting** is set to true. Attempting to do this may cause display anomalies. Set this property to false and reload the stack first.
- Generally use stacks with **formatForPrinting**set to true for display on screen, as this will show text that has been

optimized for print display (instead of screen display), which is harder to read on screen.

- Use this property on other platforms – Windows is the only platform that uses different fonts on screen vs. in a print out.
- Use the **windowBoundingRect** property to constrain display of a stack who's **formatForPrinting**has been set to true – this property will be ignored when the stack is opened or maximized.

Printing a Card

Once you have set your printer, paper and job options (above) you are now ready to use one of the print commands to start printing. At its simplest, the **print** card command allows you to print a card. Later we will discuss ways of printing more complex layouts, fields and text.

```
print this card --
prints the
current card
print card 12 --
prints card 12
```

For more details on how to specify which cards to print, see the **print** command in the *LiveCode Dictionary*.

To print a scale between 1 and 100% set the **printScale** to a number between 0 and 1. To print at 200% set the **printScale** to 2.

The printScale applies to each card that you print. It is not related to the **printPaperScale** which is applied to the entire print job after all other scaling calculations have been applied. Thus you may set the **printPaperScale** to 0.5 to print at 50%, then print individual cards at different printScale values. With a **printPaperScale** of 0.5, a printScale of 2 would result in that card being printed at 100%.

When printing a card, use the **printMargins** to specify the margins around the border of the card on the page.

> **Note:** When calculating placement on the printed page, all calculations assume that there are 72 dots per inch – regardless of platform or printer device. LiveCode will automatically adjust the print out for resolution of the actual device. This makes it simple to calculate your printed layout.

```
-- a one-inch margin on each side
set the printMargins is set to 72,72,72,72
```

The **printMargins** only applies when using print card directly. It does not have any effect on printing cards into a layout (described below).

The **printCardBorders** property specifies whether or not the bevel border around the edge of a card should appear in the print out.

Card Layout Options

When using the basic print card form of the print command, there are two layout options that allow you to customize the positioning of cards on the printed page. If you require further flexibility, see the section on printing a layout, below.

Use the **printRowsFirst** property to specify whether cards should be printed across and down or down then across.

Consider a simple example of printing multiple cards – this example is useful for printing labels. In this example we have a stack that contains 8 cards, each one containing a mailing label. If you want to try out this example:

- Create a stack and size it to be small – the size of a mailing label
- Create a single field, and in the field Inspector turn off the *Shared Text* property
- Group the field and in the group property *Inspector* turn on *Behave as Background*
- Turn on *Select Grouped* on the Toolbar and

select the field

- Place the contents of the first mailing label into the *Contents* tab of the *Inspector*
- Create 8 more cards, and in each select the field and place the contents of a different label

Thus we have a stack that looks like the figure below.

Now we will implement the printing commands. If this was a real application you would probably want to put these in a Print command in the File menu. In this instance you may execute the following in the multi-line message box (open the Message Box then press the second icon to get the multi-line pane).

```
-- allow the user
to choose printer
output options
answer printer
print 9 cards
```

Press enter to execute the commands.

The resulting print out will look like the figure below.

If we modify the print commands to include an additional line to turn off the printRowsFirst:

```
answer printer
set the
printRowsFirst to
false
print 9 cards
```

The resulting print out will look like the figure below.

Use the **printGutters** property to specify the margin between each card. By default the printGutters are set to 36,36 or one half inch horizontally and vertically.

In the following example, we print the same label stack but reduce the space between each label to 1/10th of an inch. To make it easy to see the differente we also turn on printing of card borders using the printCardBorders property.

```
answer printer
set the
printGutters to 7,7
set the
printCardBorders to
true
print 9 cards
```

The resulting print out will look like the figure below.

Printing Fields & Text

To print a field, use the **revPrintField** command. This command takes a single parameter, a reference to a field. This command only allows printing a single field. If you need to include a header and footer or text you have constructed programmatically, see the **revPrintText** command below.

```
revPrintField the
long id of field
"text document"
```

revPrintField is implemented as a script library located in the LiveCode IDE. The script library creates an invisible stack, sets the rectangle of that stack to the current paper size, sets the **formatForPrinting**to true, creates a field, then copies the contents of the field you specify into this invisible stack. It then prints the field one page at a time, scrolling the text after each page. Advanced users can locate this library script by going to the *Back Scripts* tab in the Message Box, turning on the checkbox for *Show LiveCode UI Back Scripts*, then editing the script of *stack "revPrintLibrary"*. The *revPrintField* handler is near the top of the script.

Use the **revShowPrintDialog** command to control whether the system printer and page setups dialogs should be shown by **revPrintField** or **revPrintText**.

```
-- show the
system printer
dialog, but not
page setup
revShowPrintDialo
g true, false
revPrintField the
long id of field
"text document"
```

Use the **revPrintText** command to print plain or styled text together with an optional header and footer.

```
revPrintText
textToPrint
[,headerText
[,footerText
[,fieldTemplate]]]
```

The *textToPrint* is anything which evaluates to a string. If you want to printed styled text, pass HTML instead of plain text. (To convert a field containing styled text to a HTML use the **htmlText** property.)

The *headerText* and *footerText* contains the text to use as a header and footer. You may include an expression that is computed for each page. For more

details on using expressions, see the *LiveCode Dictionary* entry for **revPrintText**.

The *fieldTemplate* parameter allows you to specify a field reference to use. Fonts in the print out will be inherited from this field.

Printing a Layout

If you need to print a more complex layout than allowed with the basic print card command or text printing commands (described above), you can use the **print card into rect** syntax to create any sort of layout you choose.

```
print card from
topLeft to
rightBottom into
pageRect
```

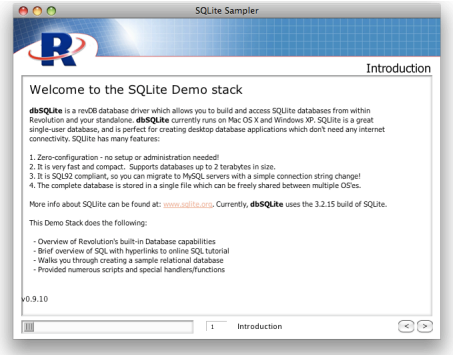
The *topLeft* is the top left coordinate of the current card to start printing at.

The *rightBottom* is the bottom right coordinate of the current card to stop printing at.

The *pageRect* is therectangular area on the paper to print into.

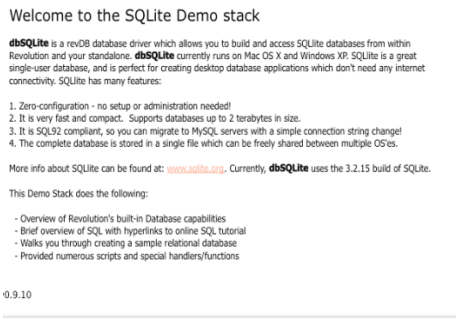
printMargins only applies when using print card directly. It does not have any effect on printing cards into a layout. Use the **printRectangle** to get the printable area when working with layout printing.

For example, lets say that we want to print the text field from the middle of the stack in the figure below. (You can load the stack shown in the picture by going to your LiveCode installation folder then opening Resources-> Examples-> SQLite Sampler.rev.) We want the output to scale to take up the entire width of the paper and half the height.



```
local tRect
put 0,0,item 3 of
the printRectangle,
    round(item 4 of
the printRectangle
/ 2) into tRect
print this card
from the topleft of
field "theText"
    to the
bottomRight of
field "theText"
    into tRect
```

This results in the print out shown in the figure below.



Welcome to the SQLite Demo stack

dbSQLite is a revDB database driver which allows you to build and access SQLite databases from within Revolution and your standalone. **dbSQLite** currently runs on Mac OS X and Windows XP. SQLite is a great single-user database, and is perfect for creating desktop database applications which don't need any internet connectivity. SQLite has many features:

1. Zero-configuration - no setup or administration needed!
2. It is very fast and compact. Supports databases up to 2 terabytes in size.
3. It is SQL92 compliant, so you can migrate to MySQL servers with a simple connection string change!
4. The complete database is stored in a single file which can be freely shared between multiple OS'es.

More info about SQLite can be found at: www.sqlite.org. Currently, **dbSQLite** uses the 3.2.15 build of SQLite.

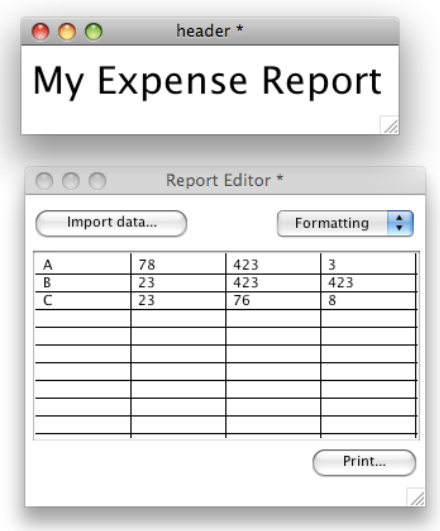
This Demo Stack does the following:

- Overview of Revolution's built-in Database capabilities
- Brief overview of SQL with hyperlinks to online SQL tutorial
- Walks you through creating a sample relational database
- Provided numerous scripts and special handlers/functions

0.9.10

You can construct a complex layout taking components from multiple stacks by printing a sequence of rectangles onto the same page. For example, you may have a stack that contains a standard header and footer, another that contains a logo, and a layout that contains

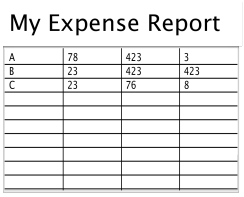
text. Use the **open printing** command to start a print job, then print each element into the appropriate rectangle on the paper. The use then **close printing** command to send the print job to the printer. The example in the figure below shows two stacks with printable regions that we want to combine onto a single sheet of paper.



To print these onto a single sheet:

```
answer printer --
show the system
print settings
dialog
open printing --
start a print job
-- work with the
header stack
set the
defaultStack to
"header"
-- print the
header field onto
the top left of
the paper
```

```
print this card
from the topLeft of
field "header"
    to the
bottomRight of
field "header"
    into the rect
of field "header"
-- save the
bottom of the
header
put the bottom of
field "header" into
tHeaderBottom
set the
defaultStack to
"report editor"
-- print the
table field below
the header
print this card
from the
`topLeft`of field
"report table"
    to the
bottomRight of
field "report
table"
    into
0,tHeaderBottom,the
`right of field
"report table",
    the bottom of
field "report
table" +
tHeaderBottom
-- send `the`job
to `the`printer
close`printing
```

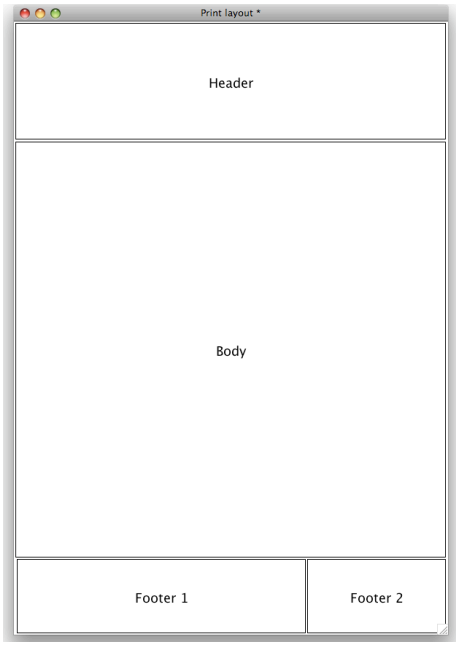


Printing a complex layout

To print a more complicated layout, create a stack and set its rectangle to the current **printRectangle**. Add rectangular areas for each component you will be printing. Then set *Geometry* properties (see the section on the *Geometry Manager*, in the **LiveCode Script** guide for more information) on each of these rectangles so they resize correctly when the stack is scaled. Set up your print routine so that you open this stack invisibly then resize it to the **printRectangle**. This will trigger the geometry routines and scale the rectangular areas correctly.

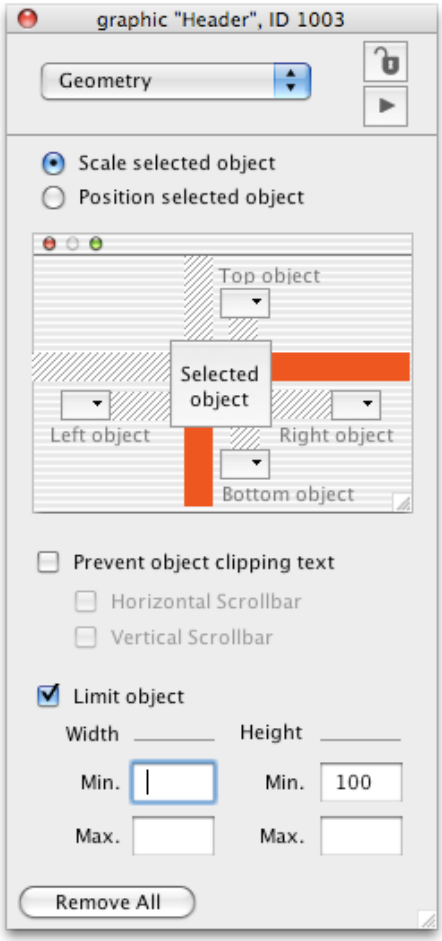
Then run your sequence of print commands to print into each rectangle.

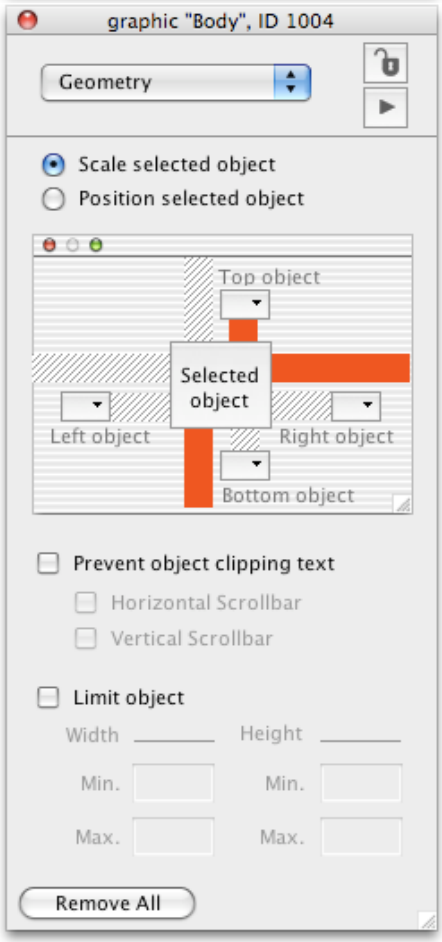
In the figure below, we have set the size of the stack to the **printRectangle** then added 4 rectangle graphics. We have named each graphic and turned on the *Show Name* property for each so you can see the name.



Next, we set Geometry properties for each of the rectangle graphics. The header graphic is set to scale relative to the right and bottom, with a minimum size limit of 100 pixels (see the figure below). The body graphic is set to link the top edge to the header graphic, the right and bottom to the stack (see the figure below). The footer 1 graphic is set to

scale the right edge and position the bottom edge. And footer 2 is set to position both the right and bottom.


graphic "Header", ID 1003
Geometry
Scale selected object
Position selected object
Top object
Selected object
Left object
Right object
Bottom object
Prevent object clipping text
Horizontal Scrollbar
Vertical Scrollbar
Limit object
Width
Height
Min.
Min.
100
Max.
Max.
Remove All


graphic "Body", ID 1004
Geometry
Scale selected object
Position selected object
Top object
Selected object
Left object
Right object
Bottom object
Prevent object clipping text
Horizontal Scrollbar
Vertical Scrollbar
Limit object
Width
Height
Min.
Min.
Max.
Max.
Remove All

To make the printing template stack take on the size of the paper, we can add the following handler to the stack script:

```
on preOpenStack
    set the width
of this stack to
(item 3 of the
printRectangle -
item 1 of the
printRectangle)
    set the height
of this stack to
(item 4 of the
printRectangle -
item 2 of the
printRectangle)
end preOpenStack
```

We now have a working print template stack. All that remains is to write the script that prints into the rectangles:

```
-- prepare to
load this stack
off screen
hide stack "print
layout"

-- this will
trigger the stack
to resize, which
run the geometry
-- routines,
giving us the
correct values
for each
rectangle
go stack "print
layout"

-- now we store
```

```
these rectangle
coordinates in
variables
put the rect of
graphic "header"
into tHeaderRect
put the rect of
graphic "body" into
tBodyRect
put the rect of
graphic "footer 1"
into tFooter1Rect
put the rect of
graphic "footer 2"
into tFooter2Rect

-- we can close
the layout stack
as its no longer
needed
close stack "print
layout"

-- load the
system printer
dialog to allow
the user
-- to choose
number of copies,
etc.
answer printer

-- start the
print job
open printing

-- set the stack
we are working on
to a stack
containing the
header
-- you could use
any stack or
region within a
card here
set the
defaultStack to
stack "header
graphics"

-- print from the
rectangle of our
header group
-- into the
rectangle we
stored earlier
-- we could use a
```

```
graphic or any
rectangular area
instead of a
group
print this card
from the topLeft of
group "header"
    to the
bottomRight of
group "header" into
tHeaderRect

set the
defaultStack to
"body contents"

print this card
from the topLeft
`of`group "body"
    to the
bottomRight of
group "body" into
tBodyRect

set the
defaultStack to
"footer1"

print this card
from the topLeft of
group "footer1"
    to the
bottomRight of
group "footer1"
into tFooter1Rect

set the
defaultStack to
"footer2"

print this card
from the topLeft of
group "footer2"
    to the
bottomRight of
group "footer2"

-- send the print
job to the
printer
close printing

-- check to see
if the user
cancelled or
there was an
error
```

```
if the result is
“cancel” then
    -- insert any
code you need
here to handle
cancellation
else if the result
is not empty then
    -- bring up
an error dialog
    answer
“Printer Error”
else
    -- insert any
code you need
here to handle
success
end if
```

For more information on how to print multiple pages of a complex layout, see the section on *Printing Multiple Pages*, below. For information on printing scrolling text fields into an area within a layout, see the section on *Working with Scrolling Fields when Layout Printing*, below.

Printing Multiple Pages

Multiple pages using card printing

To print multiple pages when printing cards, simply specify which cards you want to print as part of the print command.

```
print {range}
```

Examples:

```
-- prints the
current card
print this card
-- prints all
cards in the
current stack
print all cards
-- prints the
next 10 cards,
starting with the
current card
print 10 cards
-- prints card 3
to 7 of the
current stack
print card 3 to 7
print marked cards
-- prints all
cards where the
mark property is
true
print marked cards
```

Multiple pages when using layout printing

To print multiple pages when printing layouts, use the **open printing** command to open a print job. Then print the layout for the first page (see above). Then use the **print break** command to insert a page break into the print job. Then lay out the second page and so on.

Finally, use the **close printing** command to send the print job to the printer.

Working with Scrolling Fields when Layout Printing

To print a single scrolling text field, use the **revPrintText** command (see above for more information). If you want to incorporate the contents of a scrolling field within a layout, use the **pageHeights** property to scroll the field each time you print a page, then **print break** to move to the next page.

The pageHeights returns a list of values to indicate how far a scrolling field needs to be scrolled to avoid clipping a line of text on each page of your print out. (You should use this feature in conjunction with the formatForPrinting property, above.)

```
-- store a list
of pageHeights
put the pageHeights
of field "body
text" into
tHeightsList
-- scroll the
field to the
start
set the scroll of
field “body text”
to 0
-- start the
print job
open printing
repeat for each
line l in
tHeightsList
-- clip the field
to the bottom of
the last visible
line
set the height of
field “body text”
to l
-- print the
field rectangle
-- you may want
to add an output
"into" rectangle

print this card
from the topLeft of
field "body text"
    to the
bottomRight of
field "body text"

-- print a new
page
print break
end repeat
-- send the job
to the printer
close printing
```

> **Important:** Set the Lock Location (lockLoc) property of the field to true before setting the height in the loop above to avoid the field "drifting" each time you alter the height.

> **Tip:** Turn off the scroll bar properties (hScrollbar and vScrollbar) of the field before printing and set the border width to 0 if you want to avoid printing a border or scroll bar.

You can incorporate scrolling fields into a template print layout stack (see the section *Printing a Complex Layout* above) to make it easier to manage printing a complex layout. Create a field in your template print stack instead of a graphic, turn off the scroll bar, set the border width to 0, the lock location to true and then the geometry properties as per the section above. At the

start of each print job, copy the text font and size by using the **textFont** and **textSize** properties, then the contents of the text field you want to print using the **htmlText** property.

Working with Print Ranges

Use the **printRanges** property to get a list of pages that the user has selected in the printer settings dialog. Use this property when printing to avoid printing pages the user has not selected. To use this property, open a system printer dialog, then store the **printRanges** in a variable. Then set the **printRanges** to "all", then send only the pages that were selected (stored in the variable) to the printer.

> **Note:** If you ignore the printRanges property LiveCode will handle this setting automatically. Simply send every page to the printer as normal and LiveCode will ignore the pages the user has not selected in the print dialog. Handle this option manually only if you are printing an extremely complex layout and want to save processing time building the layout for every unselected page.

Use the **printPageNumber** to get the number of the page currently being printed during your printing loop.

Printing a Browser Object

To print the contents of a browser object, use the **revBrowserPrint** command. For more information, see the **revBrowserPrint** command in the *LiveCode Dictionary*.