



The Boosting Triad - *March 2006*

Three hot utilities

Give your iSeries applications a new dimension

iGRAPH
iEXCEL
iEXPLORE

glg Books

www-iSeries.iweb.com/manuals

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Introduction

One of the major reasons why iSeries 5250 legacy applications look older than they actually are, is their inability to take advantage of rather recent features widely used on other platforms.

Just to give an example, the OS/400 Integrated File System (IFS) offers the ability to store on directories any type of file supported on PC's, to retrieve and display such files whenever needed. This would allow for instance to maintain on the iSeries catalogs of documents, pictures, musics, and so on. Supporting such a range of archives, could open opportunities for new iSeries developments and for extending existing applications. What it takes, in this case, is the ability to develop programs dealing with IFS directories and files. However, as a matter of fact, RPG programmers are widely missing such a technology, mainly because such a teaching is not given and because code examples cannot be easily found.

A second example could be that of end users who need, for their jobs, to make computations or projections by exporting business data into EXCEL spreadsheets. Is there any way a traditional RPG programmer could provide that under the appropriate security umbrella?

The next example could be that of a manager needing to present a diagram or a graphic of company monthly sales. Though data could be available on some iSeries database, (s)he would have ask her/his assistant to perform such a clerical work. Why not providing tools, within the iSeries applications, for fulfilling immediately any such needs at the time they arise?

iWEB, by moving legacy applications into the WEB world, and by providing support to IFS extensions is a move towards a modern application perspective.

We also believe that providing iWEB users with some further tooling may significantly help in implementing modern looking iSeries applications. This is why we have decided to equip iWEB Runtime with three significant utilities:

- **iExcel**
 - **iGraph**
 - **iExplore**
-

License note - The above three utilities, *iExcel*, *iGraph*, and *iExplore* are licensed programs by Galgano Informatica and are bundled with the iWEB package. In order to run, they require an unexpired license of the iWEB Runtime.

1

iEXCEL

The utility iEXCEL is driven by a single command, **iweb/iexcel**, through which you may display a DB2 database file in an **.xls** Excel spreadsheet.

- Field definitions are integrated in the Excel document
- Column titles are taken from the database fields column headings
- The display of the document is performed by the iWEB Runtime Applet in a new browser window

-
- 1.1 - Prerequisites
 - 1.2 - The iEXCEL command
 - 1.3 - Dynamic command generation
 - 1.4 - Try iEXCEL now
 - 1.5 - Displaying an iEXCEL document through iWEB Runtime
-

1.1 - Prerequisites

iEXCEL requires the free of charge IBM License Product **5722JV1** with the following options:

option	title
*base	Developer kit for Java
5	Java Developer Kit 1.3

1.2 - Command iExcel

```
>>-IEXCEL--FILE(--library-name/file-name--)----->
>>-WHERE(---*NONE-----+)----->
      \-SQL Where clause-`
>>-ORDER(---*NONE-----+)----->
      \-SQL Order By clause-`
>>-TOSTMF(---*NONE-----+)----->
      \-to-stream-file-name.xls-`
>>-RUN(---*YES+++)------>
      -*NO-
```

Figure 1-1 Structure of command iExcel

Command parameters

- **FILE** - Qualified name of the input DB2 database file.
- **WHERE** - Character string (2048 char max, within quotes) specifying an SQL WHERE rule. Default value is *NONE. If used, it should mention the database field names to be investigated. SQL keywords **AND** and **OR** may be used. Each field name must be followed by a compare operator ("=", "<" or ">") and a comparison value.
 - comparison values related to alphanumeric fields must be within quotes ('')
 - comparison values related to numeric fields must be without quotes ('')
 Example:
 WHERE(' BTYPE=' Superboat' OR BLEN>100')

- **ORDER** - Character string (2048 char max, within quotes) specifying an SQL ORDER BY rule. Default value is *NONE. If used, it should mention the database field names to be used for ordering, separated by commas. Example:
`ORDER('BTYPE,BLEN')`
- **TOSTMF**- Fully qualified name of the IFS stream file where the Excel document should be generated. Extension **.xls** is mandatory. The user profile running the *iExcel* command must have write authority over the specified IFS path. You must also make sure that the target directory is allowed to the HTTP instance (e.g. the iWEB Runtime instance) supposed to be used to display the graph. If you specify ***NONE** for this parameter, you must also specify **RUN(*YES)**. In this case, just a temporary Excel document is created. Once displayed, it is gone.
- **RUN** - This parameter tells whether the Excel document should be immediately displayed by the iWEB Runtime Applet. Select
 - ***YES**, to have the graph immediately displayed by the iWEB Runtime Applet
 - ***NO**, to just save the Excel document as an IFS stream file. Such a graph could be shown at a later time, see section [Displaying an iExcel document](#) at the end of this chapter.

1.3 - Dynamic command generation

Usually the *iweb/iExcel* command is generated and run from an RPG or a CL program. Typically such a program would

- run the *iweb/iExcel* command by calling program *qsys/qcmdexc*.

```

D iExcelCmd      s          2000
D cmdLen         s          15p 5 inz(%len(iExcelCmd))

* Build the iExcel command
C               eval      iExcelCmd='iweb/iExcel +
C                   file(iwebdemo/boatsale) +
C                   tostmf('/iwebdir/dir01/boatsale.xls')
+
C                   where('btype=''Superboat'' +
C                   or blen>100') +
C                   order('btype,blen') +
C                   run(*yes)'

* Run the iExcel command
C               call      'QSYS/QCMDExc'
C               parm      iExcelCmd
C               parm      cmdLen

```

Figure 1-2 Program generating the iExcel document

	B	C	D	E	F	G	H	I	J
	Boat type	Manufacturer	Boat name	Boat length (Feet)	Year built	Price (US \$)	City where located	State where located	Contry where located
2	Motoryacht	Broward Marine		124,00	1996		Fort Lauderdale	Florida (FL)	USA
3	Motoryacht	Feadship	White Rabbit	125,00	1989	11950000			
4	Motoryacht	SM Ital. Yachts	Indigo Star	125,00	1994	10900000	Mediterranean	Cruise	
5	Motoryacht	Broward		125,00	1995	1950000			
6	Motoryacht	SM Italian		125,00	1994	990000			
7	Motoryacht	Christensen	Alteza	130,00	1993	8975000	Fort Lauderdale	Florida (FL)	USA
8	Motoryacht	Freeport		130,00	1991	3600000	FL	Florida (FL)	USA
9	Motoryacht	Amel	Princess Marfa	132,00	1988	9500000	Fort Lauderdale	Florida (FL)	USA
10	Motoryacht	Feadship	Sea Sedan	141,00	1993	18225000	Athens		Greece
11	Motoryacht	Swiftships	Swiftships	155,00	1996	12750000	Montecarlo		France
12	Motoryacht	Schweers	Intrepid II	168,00	1987	15900000	Antibes		France
13	Pilothouse	Christensen	Glade Johnson	184,00	1994	6250000		CA	USA
14	Sail	Grand Banks	Schooner	126,00	1924	1250000	San Diego	California (CA)	USA
15	Sail	Concorde	High Performance	131,00	1992	7950000	Fort Lauderdale	Florida (FL)	USA
16	Sail	James Shipyard	Grand Banks	137,00	1925	875000	Camden	Maine (ME)	USA
17	Superyacht	Christensen	Bonheur 2	130,00	1990	6900000	FL	Florida (FL)	USA
18	Superyacht	Amel		132,00	1988	8650000	FL	Florida (FL)	USA
19	Superyacht	Darly Yachts	Custom	145,00	1992	9800000	KY		
20	Superyacht	Benetti	Benetti Superyacht	163,00	1996	16500000	Viareggio		Italy
21	Superyacht	German-Built	October Rose	192,00	1986	13500000	Antibes		France
22	Superyacht	Codecasa	Jonikal	195,00	1996	24000000	Viareggio		Italy
23	Tug	Miki Miki	Florence Fielberg	126,00	1944	24900	Seattle	Washington	USA
24	Workboat	Coastguard	Canadian	126,00	1959	195000	Fort Lauderdale	Florida (FL)	USA

1.4 - Try iExcel now

Trying iExcel through an iWEBMaster button running a program of your own could initially result to an useless cumbersome experiment.

On the other way, trying iExcel "asis" through a simple native WEB interface may rise some excitement of yours and provide you with some adequate counseling as to provide similar functions to your users.

If you feel like trying iExcel now, and if you already did download and install the IWEBDEMO, you may try to run iExcel by entering the following in your WEB browser location line:

<http://as400TcpAddress:portNumber/iwebp/doiexcel.pgm>

where

- *as400TcpAddress* is the TCP/IP address of your AS/400
- *portNumber* is the port used by your iWEB Runtime instance

As a result you would get the page in Figure 1.4: try and enjoy it!

run iExcel

iExcel command	example
Database file: <input style="width: 80%;" type="text"/>	Database file: boatsale
library: <input style="width: 80%;" type="text"/>	library: iwebdemo
Target stream file: <input style="width: 95%;" type="text"/>	Target stream file: iwebdir/boatsale.xls
WHERE clause: <input style="width: 95%; height: 40px;" type="text"/>	WHERE clause: btype='Cruiser' or blen>50
ORDER clause: <input style="width: 95%; height: 40px;" type="text"/>	ORDER clause: btype,blen
<input type="button" value="go"/>	<input type="button" value="copy this example"/>

Figure 1-4 Try iExcel now

1.5 - Displaying an iEXCEL document through iWEB Runtime

To create an iEXCEL document, command *iweb/iExcel* must be executed. This is generally done through an RPG or a CL program (see Figure 1-1). The question is when and how such a program would be called.

One way could be that of generating the iExcel IFS stream file in advance, for instance through a daily batch job. The iExcel document could then be displayed through one of the following techniques implemented via iWEBMaster language:

- Creating a "link" to be connected to some display file record format(s); example:
`IWEB/CRTOBJDFN OBJ(...) OBJTYPE(LINK) HREF('/iwebdir/dir01/boatsale.xls') ...`
 In this case the iExcel document is displayed along with the 5250 screen page.
- Creating a "button" to appear on some some display file record format(s); example:
`IWEB/CRTOBJDFN OBJ(...) OBJTYPE(BUTTON) BUTTONACT(LINK) HREF('/iwebdir/dir01/boatsale.xls target=_blank') ...`
 In this case the graph is displayed in a new window when the user presses the button.

If, instead, the iExcel document should be temporarily generated and displayed at the time the user presses a button, the technique would be that of assigning the display file record format a iWEBMaster language button invoking the iExcel document generating program.

Example:

```
IWEB/CRTOBJDFN OBJ(...) OBJTYPE(BUTTON) BUTTONACT(SYSCMD) SYSCMD(''call mylib/mypgm''')
```


2

iGRAPH

The utility iGRAPH is driven by a single command, **iweb/igraph**, through which you generate an IFS stream file containing the desired graph. A parameter of the command tells whether you want the graph be immediately displayed from the iWEB Runtime Applet.

-
- 2.1 - Types of graphs
 - 2.2 - The iGraph command
 - 2.3 - Dynamic command generation
 - 2.4 - Displaying a generated graph through iWEB Runtime
-

2.1 - Types of graphs

The following are some examples of the graphs that can be generated through command *iweb/igraph*. Please note that the size of the generated graph depends on some parameters specified in the command.

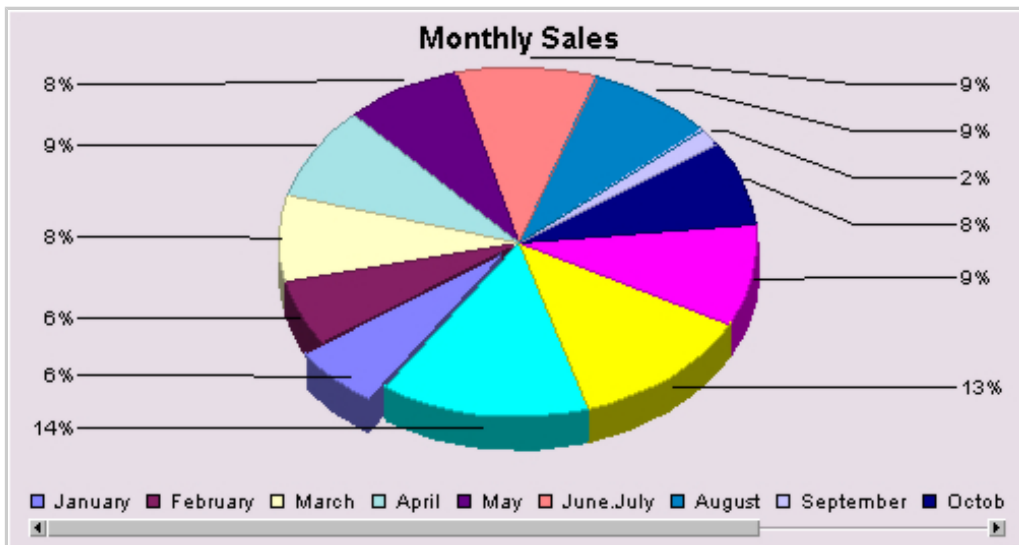
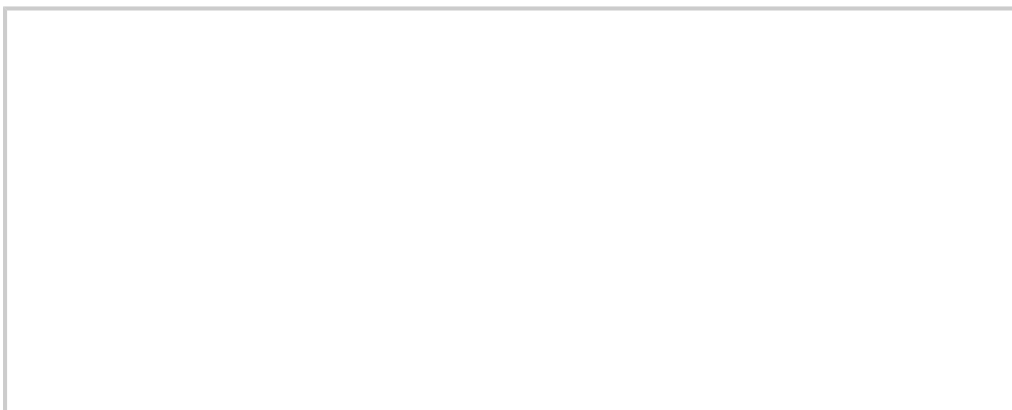


Figure 2-1 Sample pie graph

- the pie can be rotated
- whenever the legend does not fit in the picture, you can move it through a ruler.



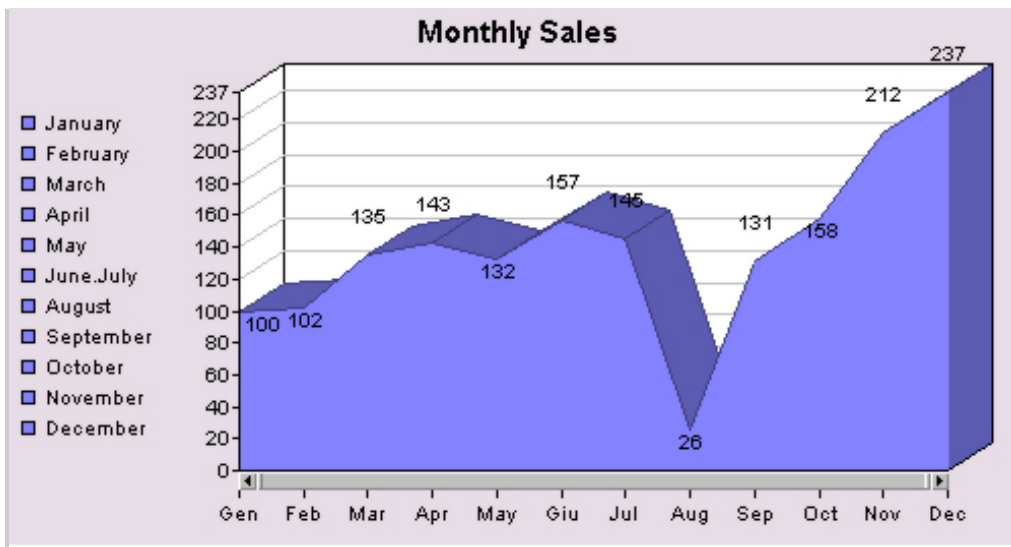


Figure 2-2 Sample line graph

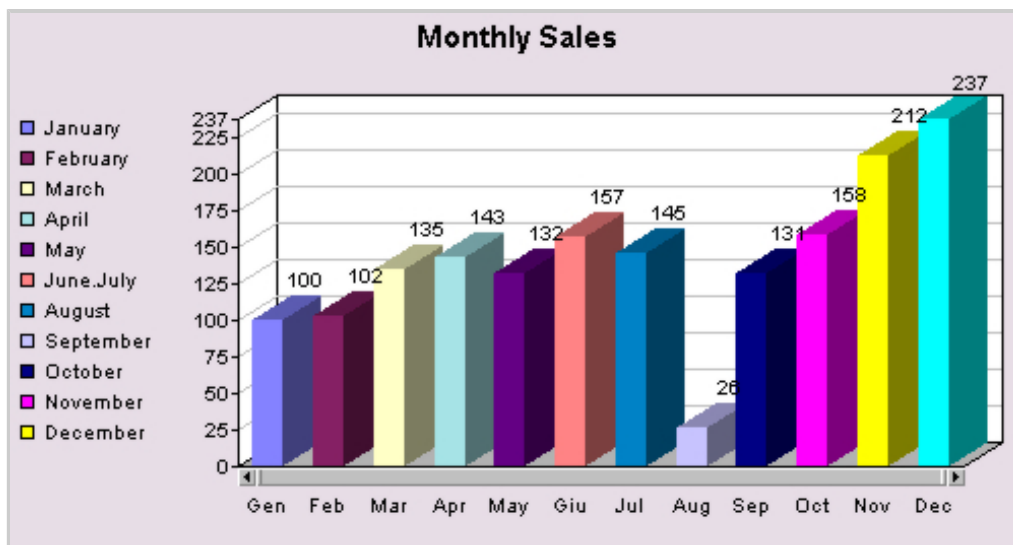


Figure 2-3 Sample vertical bar chart

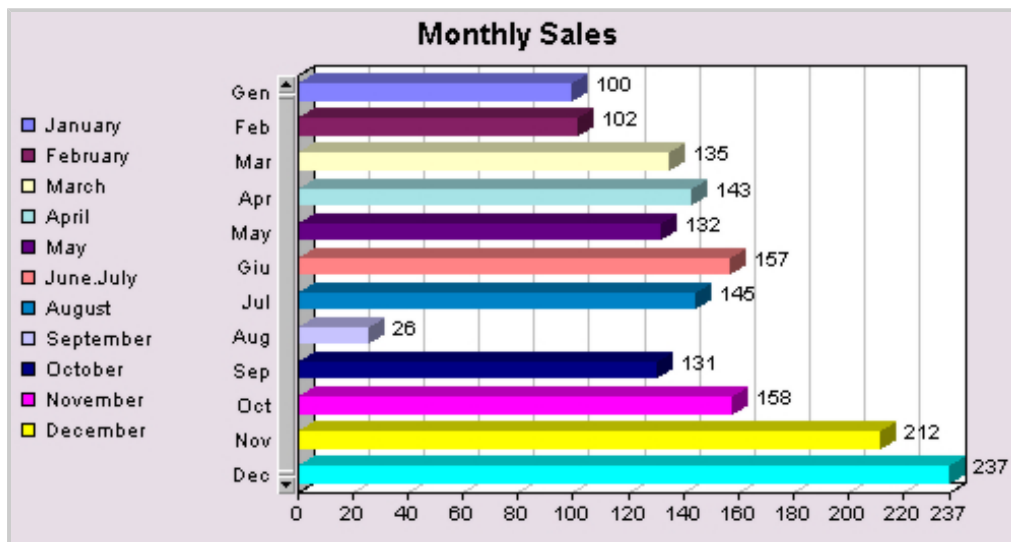


Figure 2-4 Sample horizontal bar chart

2.2 - Command iGraph

```

>>-IGRAPH--TYPE(--+*BAR+--)------>
      +-*PIE--+
      -*LIN-
>--WIDTH(--chart-pixel-width--)------>
>--HEIGHT(--chart-pixel-height--)------>
>--TITLE(--+*NONE-----+)------>
      `chart-title-`
>--VALUES(--1st-element-value---)------>
      [,2nd-element-value]
      [,3rd-element-value]
      [,nth-element-value]
      ...
      (1)
>--DECIMALS(--fixed-number-of-decimals--)------>
>--LABELS(--1st-element-label---)------>
      [,2nd-element-label]
      [,3rd-element-label]
      [,nth-element-label]
      ...
      (1)
>--LEGEND(--1st-element-legend---)------>
      [,2nd-element-legend]
      [,3rd-element-legend]
      [,nth-element-legend]
      ...
      (1)
>--BARALIGNME(--+*VERTICAL---+--)------>
      -*HORIZONTAL-
>--TOSTMF(--+*NONE-----+)------>
      `to-stream-file-name.html-`
>--RUN(--+*YES+--)------>
      -*NO-

```

Figure 2-5 Structure of command iGraph
(1) = Up to 1025 elements

Command parameters

- **TYPE** - Identifies the type of the graph.
Select one of the following:
 - *BAR to create a 3D bar chart.
See [Figure 2-3](#) and [Figure 2-4](#).
 - *LIN to create a 3D line graph.
See [Figure 2-2](#).
 - *PIE to create a 3D pie graph.
See [Figure 2-1](#).
- **WIDTH** - Identifies the width of the graph in pixel (px).
The default value is 850 px.
- **HEIGHT** - Identifies the height of the graph in pixel (px).
The default value is 450 px.
- **TITLE** - The title of the graph (256 char max). Must be within quotes.
Example: `TITLE('Monthly Sales')`
- **VALUES** - The most important parameter. This is a list of the values to be plotted by the graph.
 - the list must be within quotes
 - each value is separated from the next one by a comma (,)
 - up to 5 decimal digits supported; a decimal point (.) must be used
 - the total length of this string must not exceed 2,048 char
 Example: `VALUES('2.33,5.5,4.6')`
- **DECIMALS** - Fixed number of decimals to be assigned to all the values. Adjustments performed as needed. Default is 0.
- **LABELS** - This is a list of small labels to be assigned to each value in the VALUES list.
 - the list must be within quotes
 - there must be as many labels as values
 - each label is separated from the next one by a comma (,)
 - the total length of this string must not exceed 2,048 char
 Labels are shown on one of the axes for the bar chart and for the line graph. For the pie graph, instead, labels are shown by moving the mouse over the appropriate slices.
- **LEGEND** - This is a list of legends to be assigned to each value in the VALUES list.
 - the list must be within quotes
 - there must be as many legends as values
 - each legend is separated from the next one by a comma (,)
 - the total length of this string must not exceed 2,048 char
 Legends are displayed aside from the graph.
- **BARALIGNME** - This parameter, though requested in all cases, is meaningful only for TYPE(*BAR).
Two values are allowed:
 - *VERTICAL (default), for vertical bar charts, see [Figure 2-3](#)
 - *HORIZONTAL, for horizontal bar charts, see [Figure 2-4](#)
- **TOSTMF** - Fully qualified name of the IFS stream file where the graph should be generated.
Extension `.html` is mandatory.

The user profile running the *igraph* command must have write authority over the specified IFS path.

You must also make sure that the target directory is allowed to the HTTP instance (e.g. the iWEB Runtime instance) supposed to be used to display the graph.

If you specify ***NONE** for this parameter, you must also specify RUN(*YES). In this case, just a temporary graph is created. Once displayed, it is gone.

- **RUN** - This parameter tells whether the graph should be immediately displayed by the iWEB Runtime Applet. Select
 - *YES, to have the graph immediately displayed by the iWEB Runtime Applet
 - *NO, to just save the graph as an IFS stream file. Such a graph could be shown at a later time, see section [Displaying a generated graph](#) at the end of this chapter.

For an example of the *iweb/igraph* command used to generate the graphs in Figures 2.1 to 2.4, see Figure 2.6.

```
IWEB/IGRAPH TYPE(*BAR)
      WIDTH(500)
      HEIGHT(265)
      TITLE('Monthly Sales')
      VALUES('100,102,135,143,132,157,145,26,131,158,212,237')
      DECIMALS(0)
      LABELS('Gen, Feb, Mar, Apr, May, Giu, Jul, Aug, Sep, Oct, Nov,
Dec')
      LEGEND('January, February, March, April, May, June,
July, August, September, October, November,
December')
      BARALIGNME(*HORIZONTAL)
      TOSTMF('/iwebdir/dira/bar02.html')
      RUN(*NO)
```

Figure 2-6 Sample iGraph command

2.3 - Dynamic command generation

Usually the *iweb/igraph* command is generated and run from an RPG program. Typically such a program would

1. scan some database file(s) and score some results in a table
2. build the *iweb/igraph* command in a string (character) program variable
3. run the *iweb/igraph* command by calling program *qsys/qcmdexc* and passing such a string variable.

```
D iGraphCmd      s
2000
D cmdLen         s          15p 5 inz(%len
(iGraphCmd))
D Results       s          10i 0 dim
(12)

* Scan the database file(s) and score results in Results
table
C              exsr
DBScan
* Build the iGraph
command
C              eval      iGraphCmd='iweb/igraph
+
C              tostmf('/iwebdir/dir01/pie01.html')
+
C              run(*yes) +
C              type(*pie) width(850) height(450)
+
C              title('Monthly Sales')
+
C              decimals(0)
+
C              labels('Jan, Feb, Mar, Apr, May, Jun,
+
C              Jul, Aug, Sep, Oct, Nov, Dec')
+
C              legend('January, February, March, April,
+
C              May, June, July, August, September,
+
C              October, November, December')
+
C              baralignme(*VERTICAL) values
(''
C      1          do      12
i
C              eval      iGraphCmd=%trim(iGraphCmd)
+
C              %editc(Results
(i):'1')
```

```

C           if           i>1 and
i<12
C           eval           iGraphCmd=%trim(iGraphCmd) +','
C           endif
C           enddo
C           eval           iGraphCmd=%trim(iGraphCmd) +''''
* Run the iGraph command
C           call           'QSYS/QCMDEXC'
C           parm           iGraphCmd
C           parm           cmdLen

```

Figure 2-7 Program generating the iGraph command

2.4 - Displaying a generated graph through iWEB Runtime

To create a graph, command *iweb/igraph* must be executed. This is generally done through an RPG program (see [Figure 2-7](#)). The question is when and how such a program would be called.

One way could be that of generating the graph IFS stream file in advance, for instance through a daily batch job. The graph could then be displayed through one of the following techniques implemented via [iWEBMaster language](#):

- Creating a "link" to be connected to some display file record format(s); example:
`IWEB/CRTOBJDFN OBJ(...) OBJTYPE(LINK) HREF('/iwebdir/dir01/pie01.html') ...`
 In this case the graph is displayed along with the 5250 screen page.
- Creating a "button" to appear on some some display file record format(s); example:
`IWEB/CRTOBJDFN OBJ(...) OBJTYPE(BUTTON) BUTTONACT(LINK) HREF('/iwebdir/dir01/pie01.html target=_blank') ...`
 In this case the graph is displayed in a new window when the user presses the button.

If, instead, the graph should be temporarily generated and displayed at the time the user presses a button, the technique would be that of assigning the display file record format a [iWEBMaster language](#) button invoking the graph generating program. Example:

```
IWEB/CRTOBJDFN OBJ(...) OBJTYPE(BUTTON) BUTTONACT(SYSCMD) SYSCMD(''call mylib/myppgm''')
```

iEXPLORE

iEXPLORE is a WEB navigator for the Root File Systems of the iSeries Integrated File System (IFS).

A list of tasks that can be performed is shown below.

- A list of directories in the integrated file system can be displayed and navigated
- From the list, files can be viewed or downloaded
- Management functions are provided for
 - creating, renaming, copying, moving and deleting directories
 - uploading, renaming, copying, moving and deleting files
 - changing the ownerships of directories and files

-
- 3.1 - HTTP server instance
 - 3.2 - Starting iExplore
 - 3.3 - Mode setting
 - 3.4 - Operating iExplore
 - 3.5 - The Restricted Mode
-

3.1 - HTTP server instance

iExplore is served by the iWEB Runtime HTTP instance. The default rules of this instance may restrict to quite an extent the ability of iExplore to access IFS objects (directories and stream files) and to display / download stream files. Please read through.

3.1.1 - IFS objects authority restrictions

iWEB Runtime HTTP instance requires a user logon in order to start iExplore. A valid user logon is done by entering an existing user profile name and the related password.

iExplore would then execute under that user profile. As a consequence:

- only directories allowed to that user profile are listed
- only stream files allowed to that user profile can be displayed / downloaded
- only management functions on objects allowed to that user profile can be performed

3.1.2 - HTTP access to IFS directories

By default, this instance allows HTTP to display / download only stream files residing in directories

- `/iweb`
- `/iwebdata`
- `/iwebdir`

and related subdirectories. This means that, though iExplore is able to navigate through the whole Root directory tree, only stream files in the above directories and in their related subdirectories can be viewed or downloaded.

In order to extend the viewing capabilities of iExplore, you may want to add some directives to the iWEB Runtime HTTP instance. The following examples show how to do it.

Original Runtime Instance

1-To add directory */mydir*

```
Pass /mydir/*
```

2-To add all directories starting by */mydir*

```
Pass /mydir*
```

3-To add all directories in the Root

```
Pass /*
```

Apache Runtime Instance

1-To add directory */mydir*

```
Alias /mydir/ /mydir/  
<Directory /mydir>  
    AllowOverride None  
    Options None  
    order allow,deny  
    allow from all  
</Directory>
```

2-To add all directories starting by */mydir*

```
AliasMatch ^/mydir(.*) /mydir$1  
<LocationMatch /mydir(.*)>  
    AllowOverride None  
    Options None  
    order allow,deny  
    allow from all  
</LocationMatch>
```

3-To add all directories in the Root

```
AliasMatch ^/(.*) /$1  
<LocationMatch /(.)>  
    AllowOverride None  
    Options None  
    order allow,deny  
    allow from all  
</LocationMatch>
```

3.2 - Starting iExplore

iExplore cannot be called from a 5250 program. It must be invoked from the iWEB Runtime HTTP instance via an HTML link.

- Basic links:
 - ``
 - ``
- If you want iExplore to be initially displaying the contents of IFS directory */mydir*, invoke it as follow:
 - ``
- If you want iExplore to be initially ready to upload a local file to IFS directory */mydir* as stream file *abc.xxx*, invoke it as follow:
 - ``

3.3 - Mode setting

iExplore can be set to one of the following execution modes:

- **Full mode**
This is the default mode. This mode allows any user profile to navigate across the full IFS Root tree. Display, download and management functions are strictly related to the user profile authorities over the individual IFS objects.
- **Restricted mode**
This mode provides an easy approach for mastering the access to IFS sensitive information. When this mode is set, only IFS directory */iwebdir* and its subdirectories can be accessed. Besides, only authorized user profile can access these IFS directories. A given user profile may be authorized to the objects of a given IFS directory
 - in *read only* mode, or
 - in *read / write* mode, which includes all management rights.See the section Restricted mode, later in this chapter, for setting this mode and operate with it.

3.4 - Operating iExplore

iExplore runs through a frameset made of 4 frames. This explains why at the first invocation iExplore may take a while to show up: in that moment there is a peak of jobs starting in the HTTP server. The following figure provides the general layout of frames in the iExplore page.

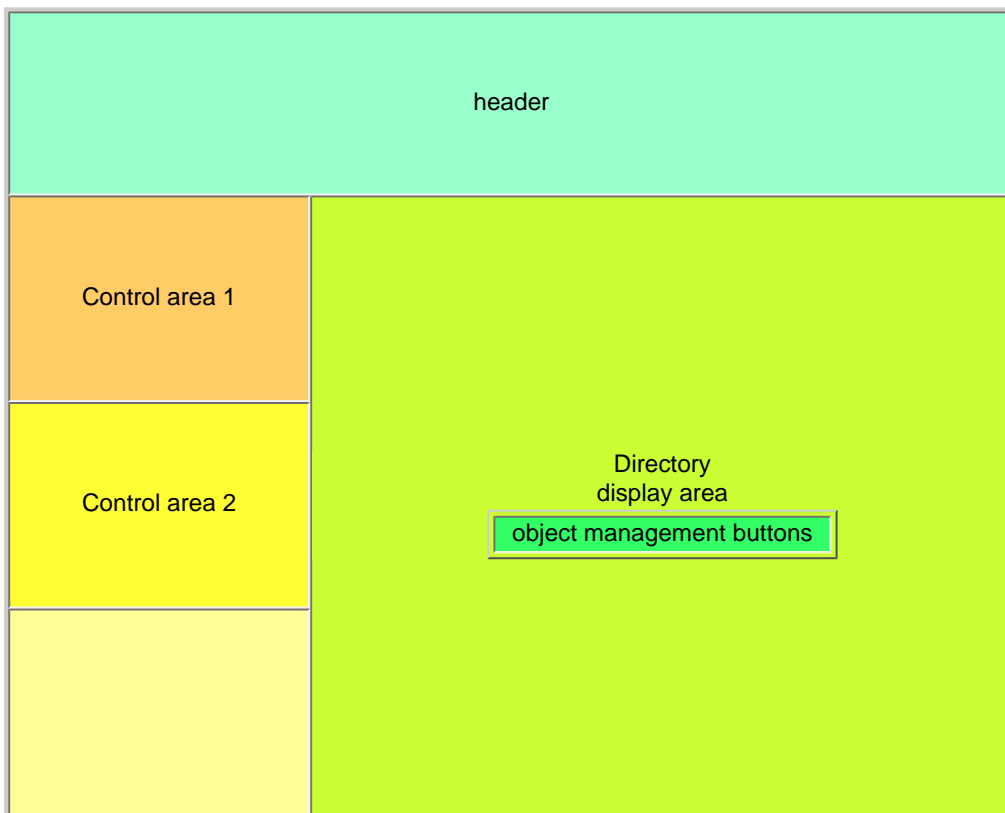


Figure 3.1 - Layout of the iExplore page

3.4.1 - The header



Figure 3-2 The Header

The header is a small frame containing (from left to right)

- A small button with a question mark. Once pressed, this button causes some help text to appear in the frame reserved for the display of a directory.
- The title "iExplore"
- The name of the user profile logged in
- A trade mark

3.4.2 - Control area 1

This is the frame where iExplore operations are initiated.

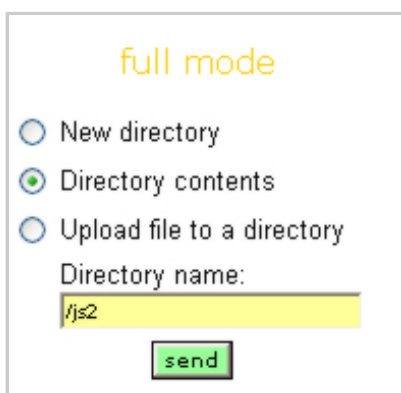


Figure 3-3 Control area 1

This area displays the current mode setting ("full mode" in this case).



From here you may ask to

- **create a new directory:**
 - check the first radio button
 - enter the name of the new directory
 - press the *Send* button.
 - If the directory is created, the second radio button is automatically checked in, so that you can display the contents of the new directory by just pressing the *Send* button.
- **display the contents of a directory:**
 - check the second radio button
 - enter the name of the new directory
 - press the *Send* button.
 - The objects in the directory are listed in the "Directory display area".
- **upload a local file to an IFS directory:**
 - check the third radio button
 - enter the name of the new directory
 - press the *Send* button.
 - A second control dialog will be open in the "Control area 2".

3.4.3 - Directory display area

This area (See Figure 3-4) is used to list the objects "contained" in a given IFS directory. The name of the IFS directory being displayed is shown both on the top of this list and in the input field of "Control Area 1". For each object, the following information is displayed: type, size (byte), last change date and time, owner.

• **Navigation**

- Click on image  to display the contents of the next higher level directory.
- To display the contents of a subdirectory, click on its related image 

• **Display / download stream file**


To display or to download a stream file, just click on the small icon at the left of the object name. Please note that this operation is performed by the HTTP server. The HTTP server, in order to do it, needs appropriate HTTP directive(s). See topic [HTTP server instance](#).






• **Object management**

*Object management functions are available only for the objects owned by the user profile you have logged in with. If you logged in with a class *SECOFR user profile, object management functions are available for any objects.* Object management buttons are available to delete, rename, move and copy objects.

To perform an object management operation:

- check the radio button next to the object
- press the appropriate object management button
- a dialog is then displayed in "Control area 2". See Figures 03-05 to 03-09.

 **Contents of directory /js2**

	Name	Type	Size	Last change	Owner
1.	<input type="radio"/>  blue.gif	*stmf	804	2005-06-19 10:53:08	qpgmr
2.	<input type="radio"/>  ClientGuide	*dir	24.576	2005-06-19 10:53:08	qpgmr
3.	<input type="radio"/>  ClientReference	*dir	40.960	2005-06-19 10:53:09	qpgmr
4.	<input type="radio"/>  downlnow.gif	*stmf	2.087	2005-06-19 10:53:08	qpgmr
5.	<input type="radio"/>  favicon.ico	*stmf	3.774	2005-06-19 10:53:08	qpgmr

To manage an object:

- select it by checking its radio button
- press one of the following buttons:

rename

delete

copy

move

change owner

download

Figure 3-4 Directory display area

Rename object
/js2/download.gif
type *STMF.
New name:

- to rename the objects, press button "rename"
- otherwise press button "forget it"

rename

forget it

Figure 3-5 Renaming object

Delete object
/js2/download.gif
type *STMF.

- to confirm delete, press button "confirm delete"
- to ignore delete, press button "forget it"

confirm delete

forget it

Figure 3-6 Deleting object

Copy object
/js2/download.gif
type *STMF.
Target directory:

- To copy the objects, press button "copy"
- otherwise press button "forget it"

copy

forget it

Move object
/js2/download.gif
type *STMF.
Target directory:

- To move the object, press button "move"
- otherwise press button "forget it"

move

forget it

Change object owner
/js2/download.gif
type *STMF
current owner QPGMR.
New owner:

- To change ownership, press button "change owner"
- otherwise press button "forget it"

change owner

forget it

3.4.4 - Downloading a stream file

The last "object management button" (the one labeled *download*) in [Figure 3.4](#) allows to download any stream file (object type *STMF) to the local disk. Any stream file on the IFS is eligible for such operation, provided that the user profile you logged in when you started iExplore is either the owning user profile or a class *SECOFR user profile.

This is different from displaying a stream file (e.g. an image or a word document) by clicking on the small icon associated to it. In this case, you are asking the HTTP server to access by itself the stream file, but the HTTP server needs an appropriate HTTP directive to be allowed to access it.

The download button, instead, would start a CGI which reads the stream file and sends it to the browser client, thus bypassing HTTP access restrictions.

3.4.5 - Uploading a stream file

iExplore allows to upload via WEB local PC files to the IFS of the HTTP server.

The maximum file size is limited to 16 megabytes minus 64K bytes.

Figure 3-10 Requesting file upload

Figure 3-12 Name of the target file

This is how you perform the upload.

1. In the **Control area 1**
 - o check in the *Upload file to a directory* radio button
 - o type the name of the target IFS directory in the input field
 - o press the *send* button

An "upload" dialog shows up in the **Control area 2**: see [Figure 3-10](#).

2. Use the push button *Browse ...* to select, from your local disk, the file to be uploaded. It will show up in the input field preceding the *Browse ...* button (see [Figure 03-11](#)).

Figure 3-11 Selecting the local file

3. Next, in the input fields labeled *server target file* enter the name that the file should receive when loaded to the IFS directory. If you wish the file to maintain its original name, just click on the green arrow (see [Figure 3-12](#)).
4. Last, press the *send* button (see [Figure 3-12](#)). As a result, the local file is uploaded, with the name you gave it, to the specified IFS target directory.
 - o An alert tells that the upload is in progress; just press the *OK* button
 - o A confirmation of the upload been done shows up in "Control Area 2" (see [Figure 3-13](#))
 - o Meanwhile, the contents of the IFS target directory are displayed in the "Directory display area".

Figure 3-13 Upload was successful

3.5 - The Restricted Mode

Assume that you want the following scenario:

- a few remote users allowed to upload files (e.g. pictures, documents, etc.) to IFS directories individually assigned to them
- a fairly large number of remote users using your WEB applications, through which the uploaded files (e.g. pictures, documents, etc.) can be displayed.

In this scenario, your requirements would be:

1. Each IFS directory, where local files can be uploaded, can be updated just through a given number (e.g. one) of user profiles. Only a given number of people (e.g. two) are authorized to such user profile(s).
2. No other IFS directory, though existing, can be accessed from the iWEB Runtime HTTP instance.

The iExplore Restricted Mode is the solution for such requirements, inasmuch it:

- a. Lets you define directories only within an already existing IFS directory, named **/iwebdir**
- b. Requires you to specify the user profile(s) authorized to perform file upload to a given such directory
- c. Maintains a log of the uploads performed

while the iWEB Runtime HTTP instance is already enabled to access objects in the IFS directory **/iwebdir** and its associated subdirectories.

3.5.1 - Setting the Restricted Mode



Figure 3-14 Setting the Restricted Mode



Figure 3-15 Restricted Mode now set

Use the following procedure to start the setup of the Restricted Mode:

1. Logon to iExplore with a class *SECOFR user profile
2. Click on the yellow saying **Full mode** in "Control area 1" (see [Figure 3.3](#)): a new page is opened in a new window.
Note - Clicking on the yellow sentence displaying the current mode *is the key to change / update settings*.
3. In the "Control area 1" of this new page (see [Figure 3.14](#)), check in radio button "restricted mode" and press the "set mode" button.

As soon as you do that, two things happen:

- a. the parent iExplore window (the one that you are not currently seeing) is set to "restricted mode"
- b. the current window shows up as in [Figure 3.15](#): no "restricted mode" directories available yet.

Time has come to define some IFS "restricted" directories within directory **/iwebdir**.

Press button "new directory" ([Figure 3-15](#)). In "Control area 2" you get a dialog for defining a new **/iwebdir** subdirectory, see [Figure 3-16](#).

Type the name of the subdirectory you want be created ([Figure 3-17](#)) and press the "new directory" button.

The requested iWEB restricted subdirectory of directory **/iwebdir** was just created ([Figure 3-18](#)).



Figure 3-16 Restricted directories still to be defined

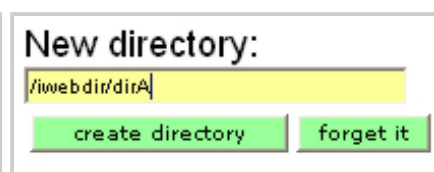


Figure 3-17 A new restricted directory to be created

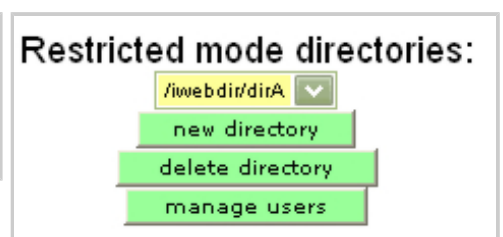


Figure 3-18 A new restricted directory was just created

iExplore settings

Users of directory /iwebdir/dirA

		User	Authorization
1	<input type="radio"/>	ACGMMASTER	none
2	<input type="radio"/>	ACGPTF	none
123	<input type="radio"/>	WFDEMONOP	none
124	<input type="radio"/>	ZACH	none

Figure 3-19 Select the owner of the new IFS directory

iExplore settings

Users of directory /iwebdir/dirA

User	Authorization
ZACH	<input type="radio"/> none <input type="radio"/> read only <input checked="" type="radio"/> read & write

Figure 3-20 Authorization assigned to a user profile

At this time, press the "manage users" push button. You will receive a list of user profiles (Figure 3-19). You should select the user profile allowed to access that subdirectory. Select a user profile and press the "update button".

You will receive a question about the type of access to be granted to that user (Figure 3-20).

Select the appropriate access authority and press the "Update" button. The list of user profiles will show up updated as per Figure 3-21.

You may then select other user profiles, one at a time, and assign access authorities (*read only* or *read & write*).

Note 1 - Access authority can be revoked to a user profile, by selecting access authority *none*.

Note 2 - Access authorities can be accessed or revoked at any time, upon entering the Restricted Mode Settings page as class *SECOFR user.

Note 3 - To display / download via WEB any objects contained in the /iwebdir subdirectories, one must logon with a user profile authorized to access it.

iExplore settings

Users of directory /iwebdir/dirA

		User	Authorization
1	<input type="radio"/>	ACGMMASTER	none
2	<input type="radio"/>	ACGPTF	none
123	<input type="radio"/>	WFDEMONOP	none
124	<input type="radio"/>	ZACH	read & write

Figure 3-21 Authorities to directory just updated

3.5.2 - Operating in Restricted Mode

restricted mode

Directory contents

Upload file to a directory

Directory name:

/iwebdir

Figure 3-22 Control area 1 in Restricted Mode

The following restrictions apply when the Restricted Mode is set:

1. You cannot create IFS directories (to perform this operation, you must have logged on as class *SECOFR user profile and enter the *mode setting* page, see Setting the Restricted Mode)
2. You can still upload local files to an /iwebdir subdirectory, provided that the user profile you logged on with has *read & write* access to it. See Figure 3-22.
3. You can just navigate across the /iwebdir subdirectories. See Figure 3-23.
4. You can still change the owner of an /iwebdir subdirectory, provided that the user profile you logged on is class *SECOFR.

Contents of directory /webdir

	Name	Type	Size	Last change	Owner
1. <input type="radio"/>	 dirA	*dir	4.096	2006-03-27 16.23.11	zach
2. <input type="radio"/>	 genom	*dir	53.248	2006-03-23 16.55.20	pagi

To manage an object:

- select it by checking its radio button
- press one of the following buttons:

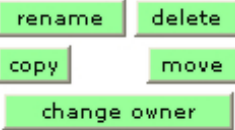


Figure 3-23 List of directories in Restricted Mode