



Pacific Systems Group

Spectrum Writer turns any mainframe data into:

- Comma-delimited ASCII files
- Fixed format ASCII files
- HTML formatted reports



Spectrum Writer is a powerful 4GL report writer and file format utility for mainframes. It makes it *easy* to create custom files. When you need to use your EBCDIC mainframe data on an ASCII platform, use Spectrum Writer to quickly create:

- **Comma-delimited ASCII files** to import directly into any spreadsheet, database, presentation, or word processor program
- **Fixed format ASCII files** for server databases or other specialized applications
- **HTML-formatted Web reports** to view on browsers or send as an e-mail attachments

Let's look at some examples.

How to Make a Comma-Delimited File in 5 Minutes!

You can turn mainframe data into a comma-delimited file with just three control statements:

```
OPTIONS: PC
INPUT: SALES-FILE
COLUMNS: REGION EMTL-NAME SALES-DATE SALES-TIME CUSTOMER AMOUNT TAX
```

The OPTION statement above tells Spectrum Writer that we want to create a standard comma-delimited file for use on a PC.

The INPUT statement above tells Spectrum Writer which of your company's files contains the data needed in your output file. In the example above, we requested a report using data from a "Sales File."

The COLUMNS statement tells Spectrum Writer which fields from that file you want in the output file. Each field named in that statement will appear as one "column" in your PC spreadsheet, database, etc.

Spectrum Writer automatically converts any packed, binary, date or time data as necessary to produce a valid comma-delimited file.

With just these three statements, we have given Spectrum Writer everything it needs to produce a comma-delimited file. Here are a few lines from the comma-delimited file it created:

```
" ", "EMPL", "SALES", "SALES", " ", " ", " ", " "
"REGION", "NAME", "DATE", "TIME", "CUSTOMER", "AMOUNT", "TAX"
" ", " ", " ", " ", " ", " ", " ", " "
"SOUTH", "JOHNSON", "03/12/95", "10:25:00", "ACE ELECTRICAL", "101.38", "6.09"
"WEST", "BAKER", "03/26/95", "12:09:09", "JACKS CAFE", "137.00", "8.22"
...
```

Figure 1 shows a Lotus spreadsheet after importing the above file. It contains the mainframe data we requested, properly laid out into rows and columns. There are even column headings for each column. (After importing it into Lotus, we used Lotus's graphing facility to graph the AMOUNT and TAX columns.)

That's all there is to creating custom comma-delimited files with Spectrum Writer. With a few simple statements we did all of the data selection and reformatting that would otherwise have taken an entire COBOL program to do.

Of course, by adding a few other statements, you can also easily: **select** only certain records from the input file to include in your comma-delimited file; specify how to **sort** the file; add **control breaks and subtotals** to your file; **compute** your own new fields to include in the comma-delimited file.

In this example, the file that Spectrum Writer created on the mainframe was actually a comma-delimited EBCDIC file — not yet ASCII. That allows you to easily work with the file while it is still on the mainframe. (For example, you could browse it on the mainframe to verify the contents and format.) During the download to your PC, use the file transfer program to translate it to ASCII. (Look for a "Translate ASCII" or similar option.) Once on your PC, you will have comma-delimited ASCII file.

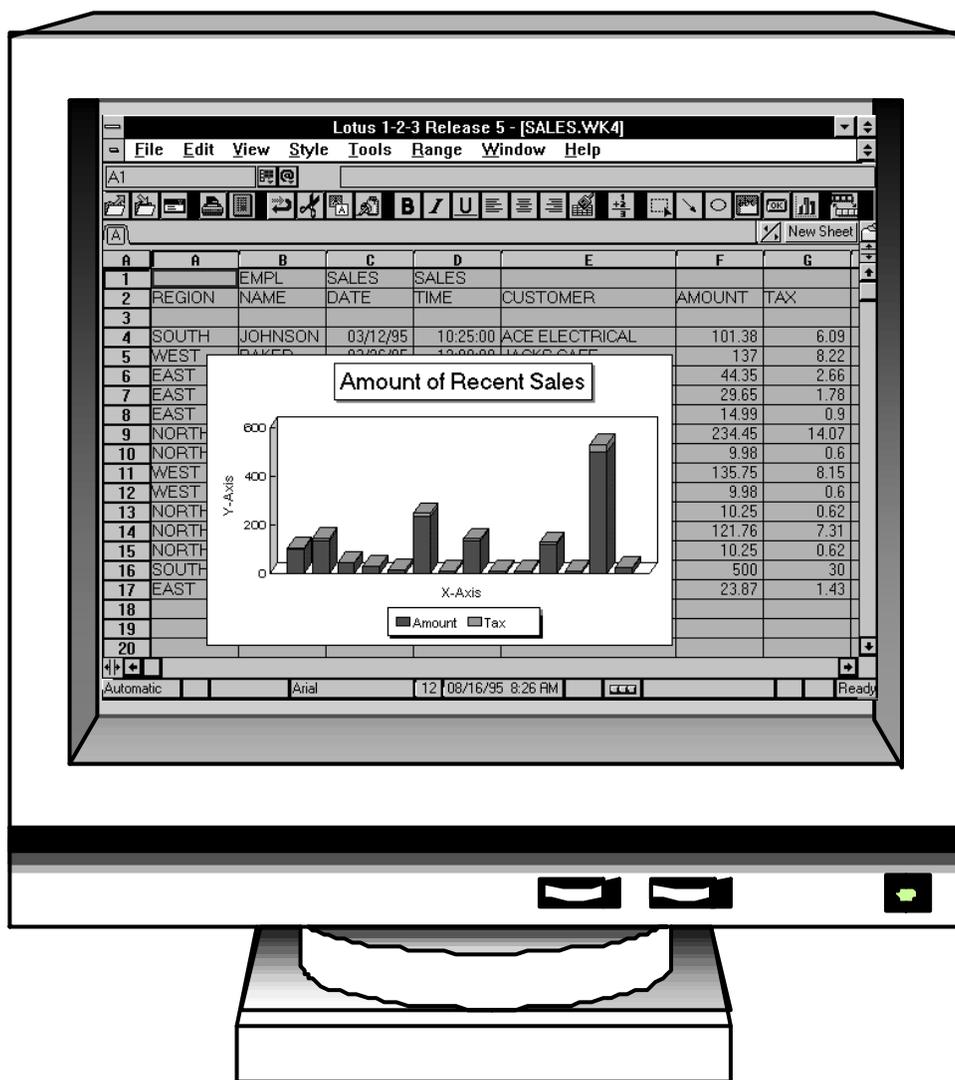


Figure 1. PC spreadsheet after importing Spectrum Writer's comma-delimited ASCII file

Creating a Fixed Format ASCII File

If you prefer, Spectrum Writer can also produce true ASCII files directly on the mainframe. This is useful if you want to build an output record that contains some ASCII text along with some binary (or packed) data. Records with mixed content can't simply be translated as a whole. (The binary fields in the records would also be translated, resulting in "garbage.")

For example, assume that we want to produce an output file containing the same data as in [Figure 1](#). However, this time we want fixed format records rather than a comma-delimited file. We want the character fields to be in ASCII. However, we want the AMOUNT and TAX fields to each be a 4-byte binary integer field in the output file. Here are the Spectrum Writer statements to do that:

```
OPTIONS: MAINFRAME
INPUT:   SALES-FILE
COLUMNS: REGION(ASCII)
          EMPL-NAME(ASCII)
          SALES-DATE(ASCII MM-DD-YYYY)
          SALES-TIME(ASCII HH-MM-SS)
          AMOUNT(BINARY 4)
          TAX(BINARY 4)
```

The MAINFRAME option tells Spectrum Writer that we are producing a mainframe-type file (that is, fixed format).

In the COLUMNS statement, we specify the ASCII option for the fields that we want to write in ASCII character format. For the SALES-DATE and SALES-TIME fields, we also specified the date and time format that we wanted for the output file. All of these fields will now be written in ASCII rather than EBCDIC. The AMOUNT and TAX fields will be written as 4-byte binary integer fields.

[Figure 2](#) shows some records from the resulting ASCII file (in hex format). That's all there is to creating fixed format ASCII files directly on your mainframe with Spectrum Writer!

```
....5...10...15...20...25...30...35...40.
CHAR SOUTHJOHNSON 03/12/199510:25:00 'š a
ZONE 54554444544222332332333333333300290006
NUM 3F548AF8E3FE00003F12F199510A25A00007A0021

....5...10...15...20...25...30...35...40.
CHAR WEST BAKER 03/26/199512:09:09 5" 6
ZONE 5455244445222233233233333333333300380003
NUM 7534021B520000003F26F199512A09A0900540036

....5...10...15...20...25...30...35...40.
CHAR EAST MORRISON 03/29/199515:30:22 S
ZONE 4455244554544223323323333333333300150000
NUM 51340DF2293FE0003F29F199515A30A220013001A

....5...10...15...20...25...30...35...40.
CHAR EAST MORRISON 03/30/199519:05:41 . ²
ZONE 445524455454422332332333333333330009000B
NUM 51340DF2293FE0003F30F199519A05A4100B50002

....5...10...15...20...25...30...35...40.
CHAR EAST SIMPSON 04/01/199508:17:57 0 Z
ZONE 44552544554422233233233333333333000D0005
NUM 5134039D03FE00004F01F199508A17A57005B000A

(additional records not shown)
```

Figure 2. Records from a fixed format ASCII file

Creating Web Reports from Mainframe Data

Spectrum Writer can also create custom reports formatted especially for viewing on Web browsers. You can put such reports on your company's Intranet or Internet site for easy company-wide (or public) viewing. Or, send your report as an e-mail attachment to colleagues. They can automatically view the report right from their e-mail reader. Spectrum Writer is a powerful tool in the move toward paperless delivery of reports.

To turn a regular Spectrum Writer report into a Web report, simply add one statement:

```
OPTION: HTML
```

The above statement tells Spectrum Writer to add HTML formatting codes to your report so that it will display properly on a Web browser. You can then upload the report file to your Web site or attach it to an e-mail message. The report will be viewable on any PC with a Web browser.

For users who know the HTML language, Spectrum Writer also lets you specify your own HTML tags directly within the Web report. By specifying your own HTML tags, you can create very impressive Web reports like the one shown in [Figure 3](#) below.

Writing your own HTML commands lets you take advantage of such powerful Web features as:

- Custom fonts, font sizes, and colors, as well as bold, italic and underlined text.
- Special effects like animation or blinking text
- Logos, graphics, charts and photographs. For example, you can include employee photographs in a personnel directory.
- "Hot links" that help viewers navigate within your report — or which let them jump to external Web pages.

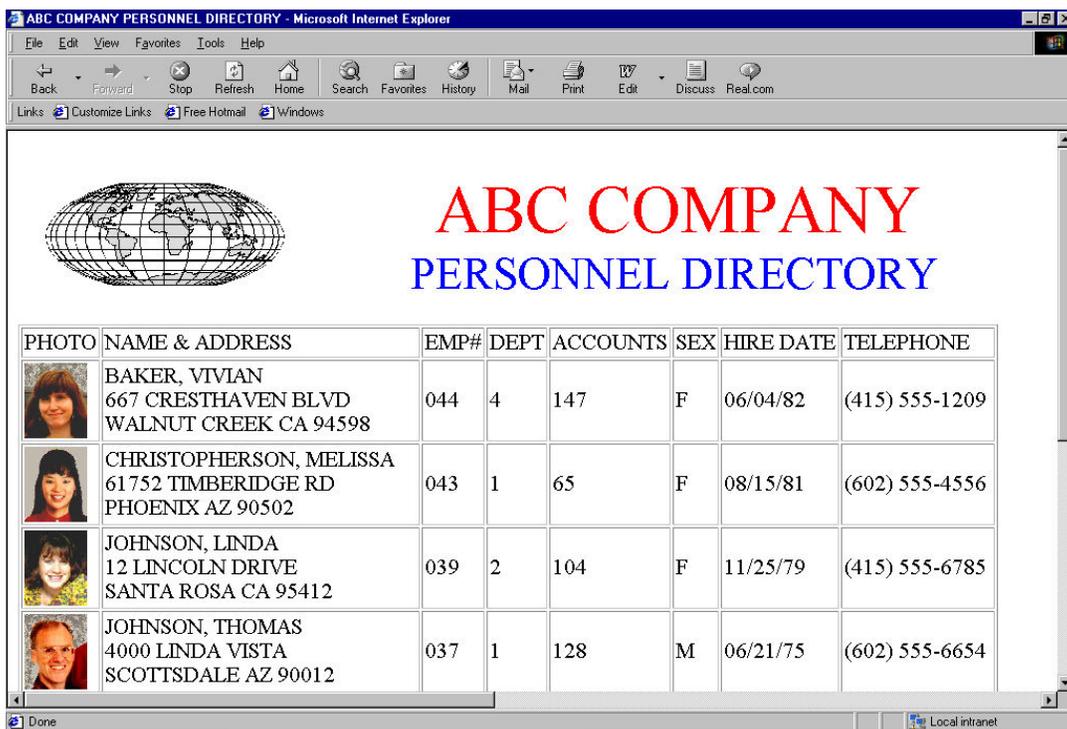


PHOTO	NAME & ADDRESS	EMP#	DEPT	ACCOUNTS	SEX	HIRE DATE	TELEPHONE
	BAKER, VIVIAN 667 CRESTHAVEN BLVD WALNUT CREEK CA 94598	044	4	147	F	06/04/82	(415) 555-1209
	CHRISTOPHERSON, MELISSA 61752 TIMBERIDGE RD PHOENIX AZ 90502	043	1	65	F	08/15/81	(602) 555-4556
	JOHNSON, LINDA 12 LINCOLN DRIVE SANTA ROSA CA 95412	039	2	104	F	11/25/79	(415) 555-6785
	JOHNSON, THOMAS 4000 LINDA VISTA SCOTTSDALE AZ 90012	037	1	128	M	06/21/75	(602) 555-6654

Figure 3. A Web report that uses graphics and tables