BBS (613) 723 7064 Messages (613) 723 1329

Ottawa IBM-PC Users Group

November, 1988 3 Thatcher Street, Ottawa, Ontario, K2G 1S6

Text and graphic improvements

PageMaker 3 offers new enhancements

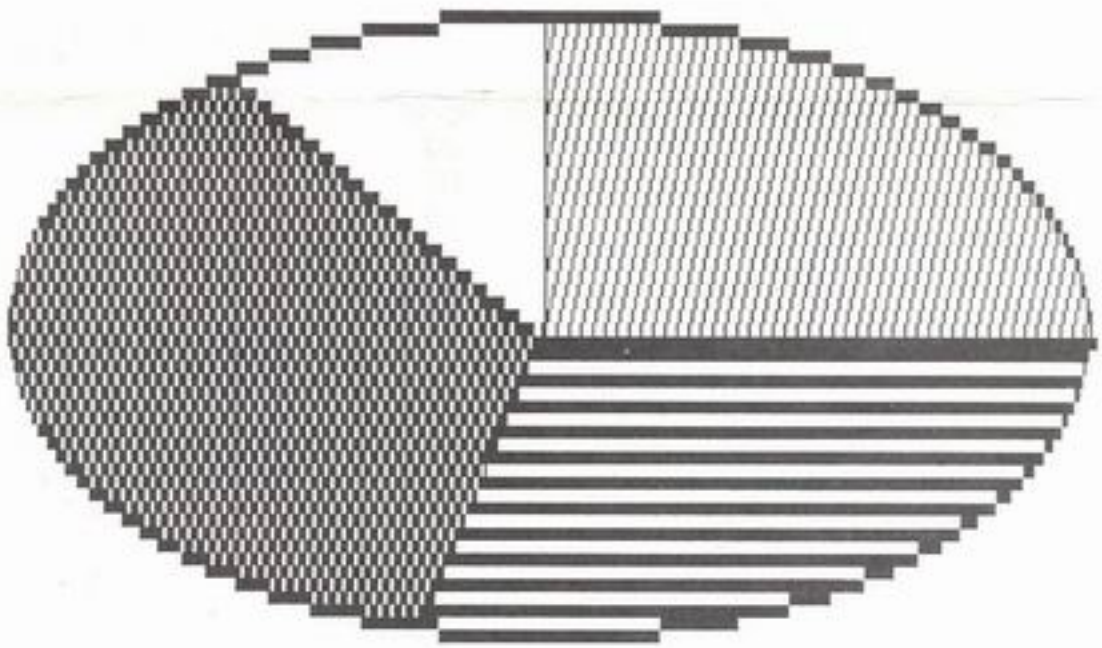
by Mike Roy
OPCUG

Almost unnoticeable but significant changes have been taking place in publishing your club's newsletter. The major change for the newsletter team is the update to PageMaker v. 3.0 for both the Ottawa IBM-PC Users Group and the printer.

The update to version 3 gives the editors a more powerful tool to ease the job of producing the newsletter and to enhance the final product.

Spot color, autoflow, and style sheets are just a few of the enhancements added to this program. The stylesheet allow the user to define a format that can be retrieved for repeated use. For instance, headlines, subheads, body copy and other text can be formatted in a style sheet. The sheet is then recalled and applied to the work and PageMaker applies the requested formats, etc., to the story.

continued on page 2



Inside...

Second of three parts

How character sets are made

by Alex Mommers
Ottawa University

After last month's introduction to character sets and codepages we will now look at how a given video system in your computer puts characters on the screen and what can be done to change or customize the 'plain vanilla' IBM extended ASCII set that normally comes on the video card.

First, let's look at how a video display works. Generally, a display can be told to work in 'text' mode or 'graphics' mode. I will discuss these two modes separately because they make an enormous difference in how text gets put on the screen and what you can do about the character set.

Graphics Mode

Think of the screen as an array of dots, a checkerboard if you like. The number of dots on the screen depends on the given video card: an IBM monochrome or a Hercules type card has 720 dots horizontally and 350 dots vertically, a color card has 640 by 200 dots while an EGA card has 640 by 350 etc. All dots in the display can be turned on or off, and can have a certain intensity or color. A program can inform the video hardware about what it wants to have displayed, by writing

continued on page 3

Desktop publishing - IBM style

PageMaker 3 is slow but powerful

from page 1

Spot colors, as the name suggests, allows the user to create spot colors, such as headline boxes or shadow boxes or graphics, to the publication. PageMaker will also provide separate page printouts (overlays) for each color.

Autoflow is a really handy feature for any layout person. Designed for large stories or documents, autoflow 'flows' the text over successive pages without interruption. With the older version of PageMaker, a jump from one page to another had to be done manually. Autoflow even adds extra pages if the text overflows the original number of pages.

Templates have also been added to PageMaker v.3. PageMaker allows users to create their own templates based on the user's page formats and style sheets. Or users can adapt any one of 20 prepared templates in the PageMaker program.

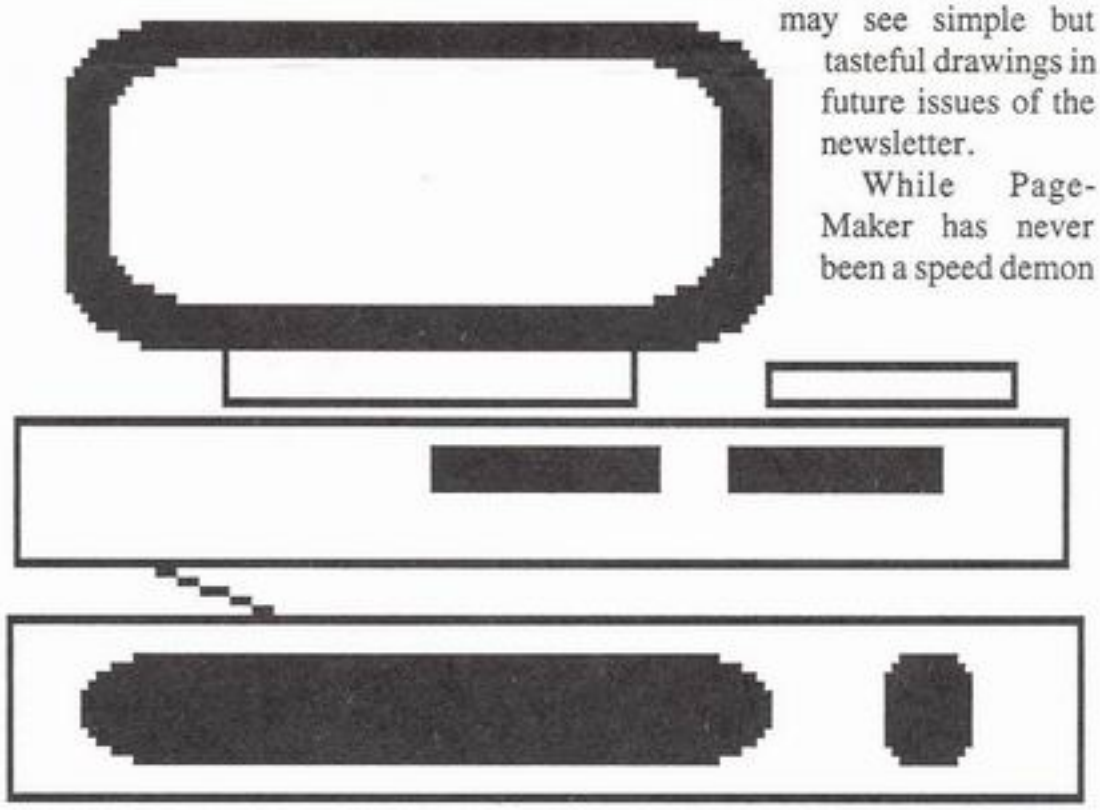
Another enhancement is image control which allows the user to modify the appearance of bit-map illustrations and scanned images with user-defined controls for lightness and darkness, subject and background contrast and the angle and density of line and dot patterns for special effects.

Text wrap is one of the best features for anyone who does a lot of work with graphics. Text wrap eliminates the tedious process of flowing the text around a graphic. Text wrap even provides the user with a control for the amount of white space between the graphic and the text. Under the older version of PageMaker, wrapping text around a graphic was slow as each line had to be done individually.

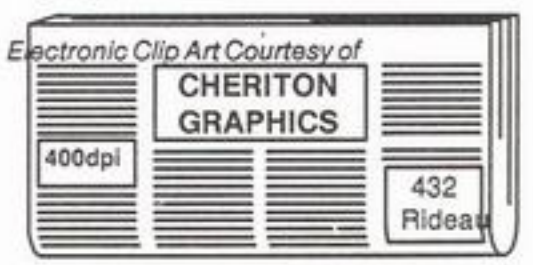
While we are continuing to use Times Roman type, we can now use italic and bold type. Our printer has also expanded his range of types to include: Baskerville and Helvetica in any size from six points to 72 points.

I haven't investigated every new PageMaker feature yet but I can say that version 3 is a welcome addition to the club's newsletter team. Included in the PageMaker package is MicroSoft's 'Windows' program which contains, among other things, a drawing program... 'Paint'. So you may see simple but tasteful drawings in future issues of the newsletter.

While PageMaker has never been a speed demon on an XT clone, the addition of the welcomed new features in this version carries a high price as version 3 is quite slow, some might even say glacial. However, the speed, or rather the lack of speed, is bearable considering the excellent job PageMaker does in helping us create the newsletter.



Graphics and clip-art help to add interest to any publication. This computer, yes, it's a computer, was created in Windows 'Paint' and then imported into PageMaker.



Calendar...

Meetings of the Ottawa IBM-PC Users Group are held on the last Wednesday of the month except in July and December. The meetings are held are available from 7:30 p.m. with the regular meeting beginning at 8 p.m. Free parking is available behind the Gothic Building.

The next regular meeting will be on:

January 25.

Hardware plays important role

Character sets: more than meets the eye

from page 1
the appropriate information to a designated part of memory called the video buffer. The video buffer usually resides on the video card itself. The purpose of the video hardware is to read the video buffer and display the stored information over and over again. Needless to say, if a program wants to display anything it will have to know what kind of video hardware is present so that the program can provide the display information in the right format. A high resolution display needs more information to fully compose a screen than a low resolution display.

Furthermore, if a program wants to display text, it will have to determine the correct dot pattern for a given character, and make sure that the pattern gets displayed in the right place on the screen. This scenario represents a lot of work on behalf of the program; it requires the program to calculate dot patterns, and generally to supply a lot of information just to write 'Hello' on the screen. This mode of operation, in which all individual dots on the screen are accessible, is called the graphics mode of the video card. In this mode the hardware does not supply any functions to relate the data in the video buffer to characters.

Text mode

Displaying text is a lot easier on the software if the video card is told to work in 'text' mode. In this case, you can still think of the screen as a checkerboard but this time the board consists of boxes in which a text character is meant to be displayed. The standard size of this array of characters is 80 characters horizontally and 25 vertically for all video hardware. This does not mean that the difference in resolution for various types of hardware has vanished. A high resolution display will simply have more dots in a character box, and will therefore display a better defined or 'sharper' character.

A program now communicates with the video hardware by writing the ASCII code for the desired character to the location where the character is to be displayed. In a second byte of information, the program can specify the attribute of a screen character box. This byte is used for things like color, intensity, underline, blink, etc. Now, the amount of work for the program is greatly reduced. The program only has to specify two bytes for each character location on the screen, consequently, displaying text is much faster. Of course, there is a price for this convenience. The task of producing characters according to their ASCII code now rests with the video hardware. It uses a table, called a character generator, in which the dot patterns for all characters are stored. Therefore, only those characters can be displayed which are defined in the character generator, and this is normally the IBM extended ASCII set.

Word processors & character sets

Most word processors use the screen in text mode for reasons of efficiency. The exceptions are Microsoft Word (text mode is selected from within the program) and all desktop publishing packages (such as PageMaker). This feature means that these programs must have their own character generator in a so called 'font file' or have it hidden somewhere in the program file. Changing the program's character set becomes a matter of finding the character generator tables, determining what their format is, and changing them to whatever you want. The character sets of these programs are software controlled. Whether the program provides the user with the tools needed to alter the character set is another matter. They usually don't. If the character set of such programs is altered, the changes will not affect any other software: the character set is said to be 'local' to the software.

Programs like WordPerfect use the screen in text mode. If you want to change anything for programs like these, you will have to change the character generator that the video card uses. You will need a new character generator chip or you can sometimes put a new character table somewhere in memory and inform the hardware about the new table.

Changes made to the hardware's character generator will affect all software that uses the video card in text mode.

Solutions for specific hardware

The IBM monochrome display adapter, color graphics adapter and their work-alikes need a new chip. The hercules graphics card, ATI graphics solution and work alikes also have a hardware character generator. The implementation of custom character sets on these cards can take the form of a permanent new set or two sets, selected by a switch on the front panel of the computer. You can thus choose the standard set or your own character set.

The hercules plus and incolor cards, The IBM EGA, VGA and MCGA, the many EGA work-alikes and multimode cards all support a software solution for the character sets you want. The exact implementation will vary with the card, but in general you could change the set from the AUTOEXEC.BAT file or by using a memory resident character set utility program.

If you have DOS 3.3 you may use DOS to implement one of the IBM codepages if you have an EGA card.

Custom character sets are not impossible to implement. The only aspect that makes implementation complicated is the large variety of hardware with a varying amount of 'IBM compatibility'. I have seen EGA cards which will lose the cursor if you change

continued on page 5

High tech: what's the real cost?

True confessions of a 'power user'

by Jackson Hibler
OPCUG

My wife and I are on the trailing edge of personal computing. We didn't want it to be that way back in 1983 when Michelle decided to 'retire' and go freelance. So rather than get a used Micom word processor, we went for a leading edge microcomputer with a 600 by 400 bit-mapped screen, 256K of memory, a superb tactile response keyboard with true Selectric layout, and a dedicated word processing program with a genuinely intuitive user interface. We got an Epson QX-10 and Valdocs!

New, high-power programs put a considerable strain on older 8088 technology...

Back then, the IBM PC was just barely out the factory door. Bit-mapped graphics? That was three years away. Memory? How about 64K. Like the keyboard feel? "Yeah, but the keys are jumbled up into an unbelievable layout."

Now, about word processing, have you heard about a program called Word Wand? Another dealer was about to get a copy of a new program called Volks-something... None of 'em could show italics on screen... except the Epson.

Unfortunately, Valdocs turned out to be a program that only an entomologist could love. And thus began my training in how to solve adventure game puzzles by figuring out how to work around the continuing swarm of bugs that came with each 'upgrade' of that wonderful/horrible program.

I joined the Ottawa CP/M Club (RIP) and the Toronto Epson Users Group (still alive!) and became our household computer enthusiast. Valdocs counted slowly up from 1.4 to 1.9; while the QX-10 proved to be as flawless as Valdocs was not.

I guess it was around about the time that Valdocs introduced the particularly verminous Version 2 that I began to reconsider whether there might not be a better future with the PC. Soon I found myself with a (what else?) Futuretron XT 'clone'. Add a Hercules Card, and another 384K courtesy of AST, and a Princeton amber monitor... and, oh yes, a second motherboard, and then another power supply... and behold, a working system!

Of course I immediately began to search for a good word processor to wean Michelle away from Valdocs. I presented Multimate, Framework, and various incarnations of Word Perfect: "No, nope and eenh." Uh, how about Wordstar? "Oh, I remember that one--everything is Control-K this and that: won't touch it!" Then how about.? "Look, the Valdocs +III Editor is pretty bug free now, right? The Epson's purring away with a heck of a lot less trouble than that thing you're nursing along, right? Sure, we keep my business records with Lucid 3D on it, but I don't need that lousy mixed-up keyboard. Gimme a break, eh?"

Leading the pack with state-of-the-art technology is often beyond the means of most hobbiests.

So we bought a spare QX-10 last year 'for parts'. Epson may have abandoned the QX machines... but Michelle hasn't. And she did get a PC machine to use when she travels: A Toshiba 1000. And what does she use for word processing on it? SLED! "Its good enough, intuitive enough. How much of a word processor do you need on the road, anyway." Gee, I don't know...

What I do know, is that in five years we have slid from the leading edge all the way back to the trailing edge. And it wasn't because we wanted to land here, it's just that it has become practical to be here. The bugs are dead or isolated; the equipment works; and we understand how to use the programs we've settled upon... If there are a lot of trailing-edge PC users like us... and I think there are... then the industry has got a problem.

Here's an example from our club's experience: The OPCUG owns a copy of Aldus Pagemaker and Mike Roy has been using Version 1.0A to lay out this newsletter on his trusty steam-powered 8088 machine. The program runs... er, no; walks... well, okay, plods under Windows. It's a bit slow, but manageable. Not fun, but manageable. Recently Version 3 arrived to Mike's initial delight. More ability? You bet. But it isn't slow any more... it's glacial! So is Mike going to invest in a new machine... a 386 perhaps? Tough choice! And for now, the answer is 'No'. The OPCUG can't afford to buy Mike an Inboard 386, either... so its back to the trailing edge! (Version 1.0A still works...)

I wonder how many times this same situation is coming up across the country? New software has a bit more power, but requires a quantum jump in hardware. How much are we willing to spend for incremental improvements which require bloated memory, processing power and budgets? Could it be that the reason it is getting so hard to

See 'True... page 6

Bulletin board changes name

The 'Bureau' has become the 'Cooler'

IBM-PC Users Group (OPCUG) members who cut their bulletin board teeth on 'The Bureau' will be pleased to learn that The Bureau is still in business.

Bruce Miller, The Bureau's SysOp (System Operator) has announced that The Bureau will continue operating but under a new name... 'The Water Cooler'. Miller said The Water Cooler will be a message-based system instead of a files-based system as was The Bureau.

"I have recently become the co-ordinator for the Ottawa East Hub of the Ottawa Net 163 and I'm also an Echo-Mail relay point," Miller added. "This means that the system is now carrying 116 message areas covering everything from medicine to science fiction; from Apple II and the Macintosh to ZModem."

Miller was instrumental in establishing the OPCUG's first, and highly successful, bulletin board, The Bureau, and operated that BBS before the OPCUG's new board, the PUB, was established this year.

"The Bureau was a successful BBS; it was the best example that a volunteer effort is the sum of everyone's involvement," Miller said. "It was your involvement, messages, uploads, participation in the echoes, etc. that made it so successful."

See 'Cooler... page 6

Character sets can be customized

from page 3

the character set, even though this operation is a completely legitimate BIOS call.

Next month I will discuss the subject of character sets on printers, and I will introduce you to Ron Droste who has written some software tools to design and print downloadable characters.

I have the information needed to implement all IBM codepages for all of the above cards. For club members only I am willing to convert any of the above cards at cost (around $10). All others can call me for details. For those that do not want any of the standard codepages, I have written some software tools for myself to edit the contents of character generators. If you want more information, want to design some exotic things or have something specific in mind, please call me at 744 1417.

WINDOWS ANSI CHARACTER SET

Characters generated by standard keys:

abcdefghijklmnopqrstuvwxyz
ABCDEFGHIJKLMNOPQRSTUVWXYZ
`1234567890-=\~!@#$%^&*()_+|
[];',./ {}:"<>?

Alt + 0 + nnn	code	char.	code	char.	code	char.
145	'	146	'	161	¡	
162	¢	163	£	164	¤	
165	¥	166	¦	167	§	
168	(	169	©	170	ª	
171	«	172	¬	173	—	
174	®	175	¯	176	°	
177	±	178	²	179	³	
180	´	181	µ	182	¶	
183	·	184	¸	185	¹	
186	º	187	»	188	¼	
189	½	190	¾	191	¿	
192	À	193	Á	194	Â	
195	Ã	196	Ä	197	Å	
198	Æ	199	Ç	200	È	

1988 IBM-PC Club Executive

President	Harry Gross	733 7989
Past President	Anne Moxley	592 4933
Treasurer	Mike Luckham	832 3829
Secretary	Eric Clyde	749 2387
Membership Chairman	Claude Jarry	521 3366
Meeting Facilities	Stu Moxley	592 4933
Publicity	Gord Hopkins	828 3834
Software Librarian	Chris Taylor	723 1329
Software Assistant	John Ings	
Newsletter Editor	Andre Cyr	561 5207
Newsletter Team	Ted Havrot	733 2710
	Jackson Hibler	523 3781
	Mike Luckham	832 3829
	Marc Riou	733 2092
	Mike Roy	744 0047
BBS Sysop	Bruce Miller	745 1151
Bulk Purchasing	Terry Mahoney	226 2615

Special Interest Groups

PCjr		
Enable	Bob Laidlaw	995 3708
PC/AT	Gord Hopkins	828 3834
Packages	Eric Clyde	749 2387
Whole Bit TV Show	Sandy Shaw	733 5088

True confessions of a power user

The price of power may be too high...

from page 4

encourage many of us to be 'power users' is the simple fact that many of us just don't need it? And even when we do, we can`t afford it?

Gus Venditto pointed out two projections at our September meeting that made me look again: "Microsoft itself says it will take four years to bring parity between OS/2 and DOS usage." and... "During the next four years the release of new programs under DOS should drop to one quarter of present levels."

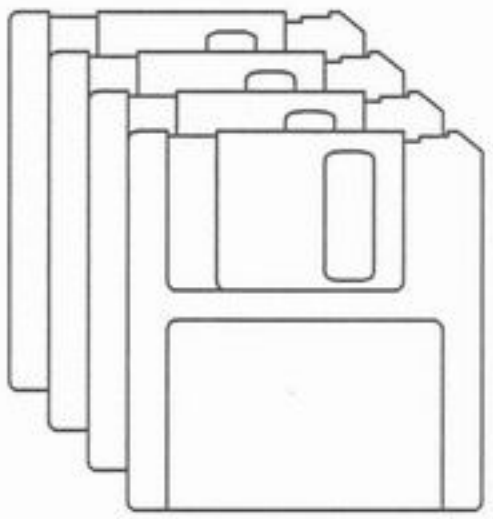
If the output of new programs for DOS will be one quarter of present levels in four years and the programs available for OS/2 will just then be reaching that same level... well, even if we're looking at apples and oranges here, that's only half the present basket!

Ezra Shapiro, who writes the Applications Plus column in the November issue of BYTE, says on page 127: "If you follow the trade press, you'll have noticed that month by month the minimum requirements for a system that can run OS/2 go up as the projections for market share go down."

Two weeks ago I saw an ad in the Globe and Mail that had IBM offering a PS/2 Model 30... 286! That's right, an old-bus AT in the new PS/2 line! And Lo! Here comes PC-DOS 4.0! Is IBM 'just covering all the bases', or running for the dugout?

Okay, so the pace of software development has begun to lag for DOS machines as bloated programs run up against the 640K RAM barrier. But that same bloat has run up against the budget barrier with the larger machines. Perhaps this barrier will spawn innovation in another direction: efficiency! You know, there are some pretty amazing programs that get a lot out of a tightly coded 64K in CP/M. (It took three years for someone to come up with as good a file handler for the PC as NEWSWEEP2 was in CP/M.) Maybe we haven't quite seen the best end of DOS software development yet. After all, Ventura Publisher runs quickly and well under GEM on an XT class machine... just better programming, I guess...

Meanwhile, a lot of us will keep on computing on the trailing edge. We're certainly interested in what's new, but we would like to see it work with what we've got!



ENABLE meeting planned

Enable/OA, the latest release of Enable (Office Automation) will be discussed at the Enable User Group's next meeting at PC Nova in the Amtek Building, 9 Slack Road (at Slack and Merivale Roads). The meeting, scheduled for Tuesday, Nov. 29, begins at 7:30 p.m.

Enable/OA includes 150 enhancements including: multitasking under MS/DOS, OS/2, Xenix and Intel-based Unix systems. Word Perfect support, 3-D spreadsheets and graphics including color 'perspectives' and hypertext on-line documentation are also included.

More features

Enable continues to offer users more and more features in the office environment and contains software for wordprocessing, spreadsheets, databases, graphics and telecommunications. Enable's software environment is tied to Enable's application development tools which include: menus, macros, programming language, host language interface and network support.

Enable/OA is projecting additional office automation features to include: a SQL database interface and E-mail.

Anyone interested in Enable and its many features is welcome to attend. For more information, contact: Bob Laidlaw or Tony Gow at (613) 995 3708 or Darlene Murphy at (613) 728 1831.

The Cooler BBS

from page 5

Miller plans to continue to operate The Water Cooler at the 745 8015 telephone number. Users will be asked for a $15 contribution to offset operating expenses and Miller hopes to limit membership to about 100 users.

"This would enable me to make the 'human caller' side completely private, that is, contributing users only," he said. "Limiting the membership to 100 would create a smaller BBS than the former Bureau but a BBS that is much easier to access and operate."