

<p><b>OTTAWA</b>  <b>IBM P.C.</b>  <b>USERS' GROUP</b></p>	<p><b>NEWSLETTER</b></p>
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October 15th, 1985 - Issue 85(5)

EXECUTIVE

Position	Name	Res. Phone	Bus. Phone
President/Chairman	Harry Gross	733-7989	N/A
Past-President	Mike Luckham	832-3829	592-6500 x2034
Treasurer/Membership	Anne Moxley	592-4933	230-9096
Software Librarian	Mike Schupan	820-0293	N/A
Assistant Libr. #1	Michel Lemire	568-8429	993-5033
Assistant Libr. #2	Chris Taylor	727-5453	995-4987
Newsletter Editor	Gord Hopkins	828-3834	726-3590
Club Secretary	Eric Clyde	749-2387	993-3291
Publicity Officer	John Praybytek	231-4318	N/A
Meeting Facilities	Stu Moxley	592-4933	N/A

\*\*\*\*\* MEETING DATES \*\*\*\*\*

\* NEXT MEETING DATES ARE: Wednesday, Oct. 30th & Nov. 27th at 8:00 p.m. \*

\*

\* MEETING LOCATION IS: NRC AUDITORIUM, 100 Sussex Drive \*

\* (Gothic Building opposite Ottawa City Hall - Parking in Rear) \*

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We are nearing the end of our club year and you may find Mike Luckham lurking around, during the next meeting, trying to find anyone expressing an interest in running for the club executive. The various positions are listed above and I urge each of you to seriously consider contributing, to the growth and vitality of the club by either nominating someone or having someone nominate you for the year-end elections. If you have any questions concerning the responsibilities of any of the positions, just ask any of the existing executive to fill you in on what is involved.

Once again, thanks are in order to those of you who contributed to this issue of the newsletter. The contents include a book review, a couple of software reviews, and an updated list of the specialty diskettes available through our software library.

As always, I am continually searching for articles, hints, tips, etc. to be included in future issues of the newsletter. If anything comes to mind, please give me a call. I have a modem to capture your thoughts online, or if you prefer, I will also accept submissions in hard-copy form which can be sent to:

Gordon Hopkins  
17-D Forester Crescent  
Nepean, Ontario K2H SY1

## HINDSIGHT

### **Report on the PC Users' Group Meeting, August 28th, 1985 by Eric Clyde**

It was announced that NBC is having to go to cost recovery and may have to start charging for the use of its facilities, which may lead to a fee increase. In future, the club will have to supply its own audio visual equipment.

The program part of the meeting continued dealing with features of DOS, continuing from the previous meeting. Harry Gross dealt with Chkdsk and its various parameters, its uses, and a number of the problems that can be solved (or even arise) through its use. Gord Hopkins talked about the Backup and Restore commands. He recommended running Chkdsk on any floppies to be used for backup purposes. One useful tip was that very large files can be copied onto multiple floppies using Backup. Attendance at the meeting was about 70.

### **Report on the PC Users' Group Meeting, September 25th, 1985 by Eric Clyde**

Gord Hopkins gave a brief report on the activities of the AT Special Interest Group.

Mike Luckham, as Chairman of the Nominating Committee, announced that elections for next year's executive would be held at the November meeting, and that he would be receiving nominations until then.

Most of the members present have modems, so Harry Gross asked for volunteers to serve on a committee to study a bulletin board.

Archie Bowen (Carleton University) talked about expert systems, showing how they had developed and how they are being used. He stated that there are many problems which can only be solved using this approach, and are most suitable when the data is noisy, unreliable or probabilistic, or when the knowledge base is changing very rapidly. One of the early successes was in the medical field.

Mers Kutt (Computers A11 Inc., Toronto) described his company's ALL Card and its MMU. The card can have up to 2MB, has a serial port with four selectable addresses, and a calendar clock identical to the clock on the AT. The MMU can handle 4MB of memory. Attendance at the meeting was about 90.

### Hardware News

NEC has come out with an 8088 replacement chip which has been re-microcoded for greater efficiency. It is completely compatible with the 8088 but uses less clock cycles to get it's work done. The PC trade magazines report 15-25% speed improvement in IBM PC's although higher figures are reported on some tasks.

Since there is no change in clock speed or anything else it is a safe change to make in your PC. A11 you do is pop out the old 8088 chip and replace it with the new one.

The new chips are available in either the regular 4.77 MHz or a faster 8 MHz version. In quantity, the prices are \$32.00 and \$38.00, respectively.

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BASIC SOFTWARE (PUS)  
BERNOULLI  
BLUE CHIP  
BORLAND Sidekick  
TurboPascal, SuperKey

BPI  
BRIGHTBILL Grafix  
BROOEABUND

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CHANG  
CITIZEN Printers  
COHPUSERYE  
COMWAY Colour/Graphic Cards  
CONTINENTAL  
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DAYFIA  
DECISION RESOURCES  
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## DISKETTES

IBM-AT			SSDD 5 1/2"	DSDD 5 1/4"
	XIDEX	10	\$29.99	\$34.99
\$99.00	MEMOREX	10	\$24.95	\$32.95
	AXIOM	10	\$29.95	\$38.95
\$99.00	DYSAN	10	\$32.99	\$41.95
	VERBATIM	10	\$37.50	\$49.50
	MAXELL	10	\$39.50	\$52.50

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## SOFTWARE SIDE OF THE NEWS

The Ottawa IBM Users' Group maintains a library of specialty disks. These are available from the software librarians for a nominal fee. These disks are set up as a separate library due to their specialized nature. Generally they fall into one of the following categories:

- 1) A) "Freeware" diskettes. Freeware is a concept that was devised as a means of distribution for software authors who wanted to avoid the costs of finding a distributor, paying for advertising, and all the attendant hassles. The disks may be copied freely and you are free to use the program without charge. However, the author asks for a contribution if you find the program useful. The charge generally runs from \$20 to \$75. Many of the authors offer a scheme whereby you can collect some money back from copies that you distribute. See the documentation file on disk for complete details.
  - B) General program diskettes. These disks contain a collection of programs that somebody thought went well together. These may be programs all dealing with a language, or a general topic. The title of the disk will usually give a good indication of what you can expect.
- 2) Demonstration diskettes. These are distributed by software writers and are working copies of commercial programs. There will always be one or more essential tasks that you will not be able to perform, such as saving a document. In this way, you can try out the program to see if it meets your needs, but it is not useful as a working program.

## Category 1 Disks ("Freeware" and General Program Disks)

3-D GRAPHICS: Graphics utilities to draw and display 3D objects.

ASSEMBLY LANGUAGE TUTORIAL: Also includes several utilities including trend analysis macros for Lotus 123.

BBS UTILITIES #14: Great adventure game (Castle), full screen list program with 4-way scroll and search, plus RAM disk.

BEST OF GAMES: A collection of some of the best games on current BBSs.

BEST OF UTILITIES: Similar collection of extremely useful utilities.

C - UTILITIES: Collection of C routines for string searches, cross-referencing, and combining files.

CONFIDANT: Encode sensitive data using the national Data Encryption Standard (DES) for high security.

DESK MASTER: Personal Computing Magazine's solution to desk-top management. Includes: Word Processing, List Management, Appointment Calendar, Calculator. In BASIC for easy modification.

DESKMATE: Similar to Desk Master and but much faster, very similar in operation and function to SideKick

\*\*\*\*\*  
 G E N E R I C                      T R A N S F O R M S  
 \*\*\*\*\*

B O R L A N D    I N T E R N A T I O N A L

Turbo Pascal 2.0  
 Turbo Pascal 2.0/ 8087 option  
 Turbo Pascal 3.0  
 Turbo Pascal 3.0/ BCD option  
 Turbo Pascal 3.0/ 8087 option  
 Turbo Pascal 3.0/ BCD and 8087 option

Turbo Toolbox  
 Turbo Tutor

Turbo Graphics  
 Superkey

Sidekick/protected  
 Sidekick/unprotected

Q U A I D    S O F T W A R E

CopyWrite

ZeroDisk

Disk Explorer

Also: GTx Loan Planner v2.0, Microsoft QuickBasic, Gem Desktop, etc.

For Prices call 733-7989 or write:

Generic Transforms  
 824 Fleming Ave.  
 Ottawa, Ontario K1G 2Z2

DESKTOP 1 & 2: Pair of LOTUS 1-2-3 macro diskettes which implement some of the functions of a manager's desktop. LOTUS 1-2-3 is required to use these disks.

EPISTAT 3.0: A general purpose collection of statistical routines to analyze your data.

EXTENDED BATCH: A PC-DOS utility that will give your batch processing new power and capabilities.

FILE EXPRESS 2.95: (2 disks) A database package.

FILTERS: Get rid of those tabs, carriage returns, or whatever; count words, and generate screens for dBase II.

GENEALOGY 2.0: Follow your family ties and discover your roots.

I.B. MAGAZETTE: Electronic magazine on your favorite computer.

KERMIT: A file transfer protocol for PC to main frame. May also be used PC to PC.

LADYBUG: User-supported version of LOGO, a popular graphics oriented language useful for teaching computer concepts to kids.

LETTUCE A-B-C: (3 disks) A database of magazine articles from 1982 on. The magazines included are: PC World, Byte, PC Magazine, Personal Computer Age, PC Technical Journal, & Softalk.

LOTUS ACCOUNTING SPREADSHEETS: A collection of Lotus 123 spread-sheets for accounting, including a number of financial statements routinely required by Canadian banks for borrowers.

MVP FORTH: (2 disks) Now you can have the FORTH language on your PC.

PASCAL TOOLS (3 DISKS): 3 disks full of useful routines and filters for Pascal programmers, including editor/formatter.

PC-FILE III Version 3: The latest update to the popular public domain database program.

PC-MUSICIAN: Create a symphony or jingle by writing directly on a musical staff, using notes and rests.

PC PICTURE GRAPHICS: Design graphics screens with an extensive library of pre-defined symbols, 5 text fonts and more!

PC PROFESSOR: Tired of reading books on how to use BASIC? Let your computer show you the way!

PC-TALK III: One of the best communications programs for your PC at one of the best prices around.

PC-WRITE 2.5: A "Freeware" word processor to rival \$300+ commercial packages. Now with "mail-merge"!

RATBAS: A RATIONAL BASIC preprocessor to make your BASIC programs more structured and easier to maintain.

RBBS-PC Version CPC12.2: A full-blown Remote Bulletin Board System from the Capital PC User's Group. Up-loading, down-loading, and messaging with 65,000 possible levels of security.

SIMTERM: Terminal simulation of an HP-like terminal to a UNIX system.

SPRITE: Create sprites (graphics characters made from sets of pixels) for use in your graphics and animation programs.

STEEL: (4 disks) A collection of 3 programs; database, spread-sheet, and expert system. Each on a single disk. A separate disk contains the documentation for all 3 programs.

ULTRA-UTILITIES: A great collection of programs to enhance the operation of your system.

#### Category 2 Disks (Demonstration Disks)

BETTER BASIC: Summit Software's solution to IBM's BASIC problems.

CLOUT: (2 disks) A Natural Language interface program to query the contents of an R:BASE database. Talk in your language, not the computer's! (See also the R:BASE Demo program)

CORNERSTONE: The database package from INFOCOM. Designed with nonprogrammer in mind. A "press the spacebar" demo.

EXSYS: (2 disks) EXpert SYStem development. You too can develop an expert system. Several sample systems including how to pick the right PC system for you!

GOLDEN GATE: Main frame to PC interface program that includes integrated features.

HARVARD PROJECT MANAGER: PERT & GANTT charting at its best for projects on time every time.

IUS: Demonstration of the IUS accounting package.

KDS: (2 disks) An expert development system with lots of bells and whistles. The demo shows an expert system approach to troubleshooting an electronic film inspection machino\_\_

MICROSOFT WORD: Try it before you buy it!

R:BASE 4000: Demonstration disk of the R:BASE Database Management Program. (Also see the CLOUT Demo program.)

R:BASE 5000 w/ APPLICATION EXPRESS: (3 disks) The latest database package from Microrim. NOTE: Requires 320K RAM.

STAFFWARE: Automate office procedures. Have messages automatically generated and circulated to appropriate people. Automatically fill-in-the-blanks for letters, proposals etc.

SUPERSCRIPT: Enhance WordStar with on-screen symbols, foreign alphabets and more.

XY-WRITE II +: Another word processor you can "Test Drive".

#### SUBMITTED ARTICLES

##### **COMPUTE!'s Mapping the IBM-PC and PC-JR (BOOK REVIEW)**

by John Ings

Attention all assembly language programmers and system hackers! Have I got a book for you! Here at last is the IBM-PC equivalent of Underneath Apple DOS. A detailed list of all the little nooks and crannies in memory where the MS-DOS people hid their vectors and flags. A map of all the buffer areas and reserved spaces where thou shalt not trespass, including the reasons why, in case you dare to ignore the no swimming - no hunting signs.

The book is entitled COMPUTE!'s Mapping the IBM-PC and PC-JR by Russ Davies and bears the ISBN # 0-942386-92-2. I found my copy at the Classic Book Shop in the Rideau Mall but it was the only copy they had. Hopefully they will bring in a few more because, while the market for this sort of book is limited, those who do need it really appreciate it.

A brief rundown of the book's contents follows:

1. A chapter on memory organization and management, supplemented by a 43 page appendix listing all the vectors, buffers, flag bytes, environment areas, drivers, data areas, entry points, functions and what have you. Different usages by plain vanilla PC's, AT's and JR's are noted. Listings of programs, mostly short affairs in BASIC that can be used as tools to pry further secrets out of the operating system are included.

2. A chapter on the mysteries of the IBM keyboard, including a rundown on how to make ANSI.SYS behave itself..

3. A chapter on Music and Sound.

4. A chapter on Video including how to program your own character set. Includes a list of all the ROM Bios video support entry point addresses.

5. A complete Port Map with a detailed explanation of the different port usages among XT's AT 's and what have you.

6. A list of all BASIC's tokens in numerical order.

Also a rundown on where BASIC keeps all it's buffers, pointers and suchlike.

Throughout the book there are frequent references to the Tech Manual, filling in the details said manual glosses over or plain forgets to mention. In sum this is a book no advanced assembly language programmer can afford to miss!

#### **A ButtonWare Word Processor by Layne Marshal**

Jim Button, creator of PC-File and others, has just announced the release of PC-Type, version 1.0, a general purpose word processing program. PC-Type is written entirely in assembler. It can be customized "to fit your individual needs and taste." You can even rename your customized copies for special purposes.

#### Features:

Instant help panels

Hands-on tutorial program

Full use of IBM PC keyboard

Bold, underline, etc.

Word-wrap (power input) as a user option

Selectable screen colors

Automatic page numbering, multiple headers and footers

Print spooling

Block moves, copys and deletes

Block transforms of case

Customizing by installation program

Column ruler

Normal and hanging indents

Paragraph reformatting on request

Paragraph justification on request

Line centering within margins

Retrieve and save entire or partial documents

Print without saving document

Supports access to DOS shell (and others)

Prints in "batch" mode

Supports documents up to 640K (available memory)

Uses standard ASCII text files

Supports keystroke  
macros  
120-page reference  
manual

Functional  
specifications:

Program files:

A single 41K .EXE file  
Install file  
Tutorial program  
Separate shareable program  
Maximum line length 78 characters  
Requires DOS 2.0 or more, DS drive, 128K RAM

"You'll receive two versions of PC-Type: a sharable (freeware) version, and a licensed version. The shareable version is full-featured but has a 'logo' screen that the user must view, and letters are limited to four pages or less. Neither version is copy protected."

Until 1 November 1985, PC-Type costs \$46.00 US. After that, it will go up to \$59.95 US. You can order by sending the price, plus \$5.00 US for shipping and handling, to:

Jim Button Computer Software  
POB 5786  
Bellevue, Washington 98006

#### **Review of Microsoft C compiler, version 3.00 by Jim Walsh**

This is version 3.00 of the Microsoft C compiler, and is not related to versions 1.xx or 2.xx, which were written by Lattice. Version 3.00 is the MS-DOS implementation of Microsoft's Xenix 3 C compiler.

My initial impressions of this compiler were that it is much more 'solid' and well thought out than the Lattice compiler. This impression has turned out to be very true. Whereas the Lattice compiler does what it is supposed to - compile correctly-written C programs into object code, the Microsoft compiler does much more. The Microsoft compiler's error-checking and handling is much better. The Lattice compiler was very easy to throw for a loop - after encountering one error, it would print endless streams of meaningless error messages, and the first one would often be false. The MS compiler is much better at finding the true error, and goes nuts much less often (but still does on occasion).

The number of compile-time options is staggering - over 30 different options are allowed. Some of these are: defining values for the preprocessor (for conditional compilation), generating 80186 or 80286 instructions, mix-and-match memory model creation (36 possible options), controllable optimization levels (eg. size over speed), and specifying include directory. One very useful feature is the the compiler uses environment variables to specify where to look for various things. For example, the INCLUDE variable tells where to look for include files, LIB tells where to look for libraries, etc. This is VERY useful - you don't have to put everything into your root directory(s).

The compiler supports a number of recent additions to the C language - these are NOT Microsoft extensions, but true additions to the language. One is type-checking for function calls. This is EXTREMELY useful, and should be used by all C programmers. It corrects one of the (formerly) most blatant drawbacks of the C language - complete lack of typechecking. With the typechecking option enabled (done by pre-declaring functions at the start of your program before defining them), the compiler will tell you of type mismatches with your parameters. When I took a (working) program and enabled typechecking on function calls, as well as telling the compiler to warn me about all other type incompatibilities, I was amazed at the long string of warning messages I received. When I went back and looked at my code, it was obvious that I was lucky everything worked - I had some glaring errors, such as declaring function parameters incorrectly, and other such things. C will let you get away with such things - especially when you're using pointers. The problem is that the things it lets you get away with is often poor programming practice, and may not work on other implementations of C. Thus, the inclusion of typechecking in the MS C compiler alone makes it worth switching from Lattice.

The run-time library is MUCH more extensive than that included with Lattice. For the most part, it is Xenix-compatible, although a number of functions are included that are MS-DOS specific, but these are clearly specified. Thus, it is possible to write software that will compile under Xenix with no problems. As I mentioned in an earlier item, the Xenix version of this compiler will produce object code for Xenix or MS-DOS, selectable by a compile-time option. The run-time library is very complete - it contains much more than what is normally included with C compilers (on DOS or Unix). I recently talked to a person who had just written, at great pains, a number of functions that are included with this compiler.

I have not yet run into any bugs or problems with this compiler. I am using release 3.00.14, which is the final pre-release beta version. The production version (which should be available very soon, if not already) is supposed to be identical. My only complaints are: 1) The compiler, along with the linker, libraries, etc. takes up more disk space than the Lattice compiler. With the Lattice compiler and a floppy-based system, I could run everything on two diskettes. With this compiler, I have to put some stuff onto ramdisk in order to alleviate the need for disk-swapping. 2) The compiler is somewhat slower than Lattice. It seems to be about 20% slower, but this could be because I now use typechecking, and have the compiler tell me about all type mismatches.

My general impression with Microsoft C 3.00 is VERY positive - I can't think of one area in which I Prefer the Lattice compiler, which has been commonly recognized as the finest MS-DOS C compiler available. Retail price is about \$695 Cdn. although one can probably obtain the compiler for somewhere in the low or mid 400's if you look around.

LATE NEWS FLASH » » »

The October meeting will feature Bob Huggin from the Globe and Mail discussing online databases - what's there and how to access it. For November, we tentatively have scheduled a presentation by Bern Crush from Perceptron Inc. His talk will be on the use of PCs for remote sensing interpretation.

**That's all for now!!!**

HAPPY COMPUTING

Gordon Hopkins

Editor