# SEPTEMBER 92

Calendar of Events

| M | T | W | T | F |
|---|---|---|---|---|
| | 1 | 2 | 3 **Mac Main Meeting** Penn Lake Library 8800 Penn Ave. So. Bloomington 7:00 PM Subject: Update! Speaker: Hugh Sartag Mike Carlson: 866-3441 | 4 |
| 7 | 8 | 9 | 10 **mini'app'les Board Meeting** Lexington Branch Library University & Lexington Aves. St. Paul, MN, 7:00 p.m. David Laden: 488-6774 | 11 **Programer Workshop/Think-C** 1-4 p.m. Call for location Saturday Sept 12th —> Keven Kassulker, 535-2968 **Software Expo** 11th & 12th —> |
| 14 **Fourth Dimension™ SIG** Lampson & Tew 2700 East 82nd Street, Bloomington, 7:00 p.m., Ian Abel: 920-5520 **Apple II & GS Main Meeting** Washburn Com. Library 7:00 p.m. 5244 Lyndale Ave. So. Mpls. Subject: Optical Scanners Tom Ostertag: 488-9979 | 15 **MacCAD/E SIG** Micro Age Computers, 5909 Baker Rd. Suite 530, Minnetonka, 7:00 p.m., Bill Langer: 937-9240, Daron Applequist: 938-7001 **MircoSoft Works SIG** Highland Br. Library, 7:00 | 16 | 17 **North Shore Mac CIG** Bethlehem Lutheran Church Grand Marais, 7:00 p.m. Jim Ringquist: 387-2234 **File Maker Pro SIG** Highland Park Library 7 p.m. Steve Wilmes 458-1513 | 18 |
| 21 | 22 **Mac Programmer SIG** Murry JHS 2200 Buford St Paul 7:00 PM Gervaise Kimm 379-1836 | 23 **Mac Desktop Publishing SIG** Jefferson El. School, Room 201 25th St. & Hennepin Ave. So. Bob Grant: 827-6294 | 24 **AppleWorks® SIG** Murray Jr. High, 2200 Buford, St. Paul, 6:00 p.m. Topic: Word Processor Module Jim Shields: 434-9836 | 25 |
| 28 **Mac Novice User SIG** Highland Park Library, St. Paul, 7:00 p.m., Tom Lufkin: 698-6523 | 29 | 30 | **Software Expo!** September 11th & 12th at the Science Museum of Minnesota | |

**Notes:**
The deadline for articles is the 1st of the preceding month. If you want your article in November's newsletter, we must have your copy by the 1st of October. We accept advertising and want ads until the 10th of the month.

Coordinators, please call Dick Aura (941-1198) by the 1st to have your meeting listed correctly.

*SIG - Special Interest Group*
*CIG - Community Interest Group*

# mini'app'les

## The Minnesota Apple Computer Users' Group, Inc.
P.O. Box 796, Hopkins, MN 55343

## Board Members:

### Board of Directors

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|---|---|---|
| President | David E. Laden | 488-6774 |
| | 675 West Wheelock Pkwy, | |
| | St. Paul, MN 55117 | |
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| | 2078 Highland Parkway | |
| | St. Paul, MN 55116 | |
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| Software | Greg Carlson | 544-8252 |
| Operations & Resource | Allen Mackler | 424-8889 |
| SIG: Macs | Tom Shaff | 225-1191 |
| SIG: Apples | Tom Gates | 789-1713 |
| Director At-Large | Jason Mooney | 894-3778 |

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|---|---|---|
| Beginners Consultant | Earl Benser | 835-2523 |
| Dakota County | Tom Michals | 452-5667 |
| Shows & Conventions | | |
| Volunteer Coordinator | | |
| Mac Users SIG | Mike Carlson (days) | 866-3441 |
| 4th Dimension SIG | Ian Abel | 824-8602 |
| CAD & Engin. SIG | Bill Langer | 937-9240 |
| DeskTop Pub. SIG | Bob Grant | 827-6142 |
| FileMaker Pro SIG | Steve Wilmes | 458-0838 |
| HyperCard SIG | Peter Fleck | 370-0017 |
| Mac Computer Art. | | |
| & Design SIG | Joy Kopp | 440-5436 |
| Mac Novice SIG | Tom Lufkin | 698-6523 |
| Mac Programming SIG | Gervaise Kimm | 379-1836 |
| MicroSoft Works SIG | Ken Edd | 631-3679 |
| North Shore Mac Users | Jim Ringquist | (218) 387-2234 |
| Apple II Users SIG | Tom Ostertag | 488-9979 |
| Apple IIGS SIG | Mark Evans | 935-7251 |
| AppleWorks® SIG | Jim Shields | 434-9836 |
| Apple II DTP | | |
| Beginner's Basic SIG | Tom Alexander | 698-8633 |
| Languages/Tech SIG | Wesley Johnson | 636-1826 |
| Tech. Adviser (hardware.) | | |

### Software Director's Staff

| | |
|---|---|
| Mac eDOMs: | Jacque Gay, Jim Spencer & Mary Kosowski |
| Apple eDOMs: | Bill Job, Randy Peterson & Tom Gates |
| eDOM Sales: | Mac – Allen Mackler & Mary Kosowski |
| | Apple – Les Anderson |

### Liaison Contacts (Contact with non-mini'app'les SIGs)

| | | |
|---|---|---|
| Medical | Stewart Haight | 644-1838 |
| CP/M | Jim Rosenow | (414) 261-2536 |
| PACER Center | Karen Samuels | 827-2966 |
| TC/PC | Gervaise Kimm | 379-1836 |

*Circulation this issue: 1000*

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**Questions** — Please direct questions to an appropriate board member. Users with technical questions should refer to the Members Helping Members section.

**Membership** — mini'app'les
attn: Membership Coordinator
P.O. Box 796
Hopkins MN 55343

All members receive a subscription to the newsletter and all club benefits. New members receive a package of member lists and software catalogs.

| eDOMs | | At Meetings | Mail Order |
|---|---|---|---|
| **Members:** | 5 1/4" eDOMs | $3.00 | Add $1.00 per disk, $4.00 maximum. |
| | 5 1/4" System | $1.00 | |
| | 3 1/2" Apple/Mac eDOMs | $5.00 | |
| | 3 1/2" System | $3.00 | |
| | 3 1/2" System 7.0 (9 disks) | $15.00 | |
| **Non-Members:** | 5 1/4" eDOMs | $6.00 | |
| | 3 1/2" Apple/Mac eDOMs | $10.00 | |

Make checks payable to: mini'app'les
Mail to Mini'app'les:    Attention: eDOM Sales
P.O. Box 796, Hopkins, MN 55343

**Dealers** — mini'app'les does not endorse specific dealers. The club promotes distribution of information which may help members identify best buys and service. The club itself does not participate in bulk purchases of media, software, hardware and publications. Members may organize such activities on behalf of other members.

**Newsletter Contributions** — Please send contributions directly to the Newsletter Manager, David Undlin, 6670 West 133rd St., Apple Valley, MN 55124 or upload to David on the mini'app'les BBS or DTP Exchange BBSs. You can also reach Dave at 432-0913 (voice & FAX).

**Deadline for material for the next newsletter is the 1st of the month.** An article will be printed when space permits and, if in the opinion of the Newsletter Editor or Manager, it constitutes material suitable for publication.

**Meeting Dates** — Please phone calendar dates and changes to: Dick Aura at 941-1198.

**mini'app'les BBS** — 892-3317, 24 hours: 8 data, 1 stop, 0 parity

**mini'app'les Voice Mail** — 229-6952

**Advertising** —

## Newsletter Publication Staff

| | | |
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| Publications Director | | |
| Newsletter Manager | David Undlin | 432-0913 |
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| Production Manager | | |
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| Contributing Editor | Tom Edwards | 927-6790 |
| Contributing Editor | Steve George | 935-5775 |
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### The Fine Print

## IF YOU ARE MOVING. . .

. . . please let us know six weeks before you move so we can change your address. Thank you.

Copy your newsletter mailing label showing current address in this space:

I.D.#: _____  Exp. Date: _____

Name: _____

Street: _____

City, St., Zip: _____

PRINT YOUR NEW ADDRESS HERE. ✔

Street: _____

City, St., Zip _____

MAIL TO: mini'app'les, P.O. Box 796, Hopkins, MN, 55343

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*Yes . . .*

*I'd like to join!*

Please accept my

**mini'app'les MEMBERSHIP APPLICATION.**

**Please Print or Type:**

1. Name _____

   _____

   Address_____

   City _____ State_____ Zip_____

   Res. phone_____ Bus. _____

   Renew ID#_____ Exp. Date_____

2. **Please enroll me as a mini'app'les member.**

   ☐ Regular [1st year] $20.00
   ☐ Renew [one year] $15.00
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   ☐ Sustaining       $25.00

   ☐ Educational      $50.00
   ☐ Corporate        $100.00
   ☐ Donation $ _____
   (tax deductable)

3. **Please tell us your special interests:**

   **Which personal computer do you use:**

   ☐ Apple II
   ☐ Apple III
   ☐ Apple IIe
   ☐ Apple IIc
   ☐ Apple IIc+
   ☐ Apple IIGS
   ☐ Laser - Other _____
   ☐ Macintosh Plus
   ☐ Macintosh SE
   ☐ Macintosh Classic
   ☐ Macintosh LC
   ☐ Macintosh II
   ☐ Macintosh SE/30
   ☐ Macintosh si
   ☐ Macintosh fx
   ☐ Macintosh IIcx/IIci

   ☐ Macintosh Portable
   ☐ Macintosh Powerbook
   ☐ Macintosh Quadra
   ☐ IBM or IBM clone

   **Areas of Interest:**
   ☐ Business Application
   ☐ Home Application
   ☐ Educational Application
   ☐ Desktop Publishing
   ☐ Other_____

   **Do you own or use:**
   ☐ Printer
   ☐ Laser Printer
   ☐ Modem
   ☐ Scanner
   ☐ Other_____

☐ Referred by: _____

☐ Check if interested in volunteer opportunities.
  Special Areas: _____

☐ Check if you do not wish to receive non-club promotional mailings.

You'll receive your new member's kit in 3 to 6 weeks.
Make checks payable & mail to:

**mini'app'les
P.O. Box 796
Hopkins, MN 55343**

| | | | |
|---|---|---|---|
| Macintosh Main Meeting. | Thur., Oct. 1 | Augsburg Park Library, 7100 Nicollet Ave | Note 4 |
| Board Meeting | Thur., Oct. 8 | Lexington Branch Library, St. Paul | Note 1 (members welcome) |
| Programers Wk. Shp. | Sat., Oct. 10 | Van CLeve Pk. Bld. 15th Ave. & Como | Note 21 (New SIG!) |
| Apple II & GS Main Meeting | Mon., Oct. 12 | Washburn Library, 5244 Lyndale Ave South | Note 11 |
| Fourth Dimension SIG | Mon., Oct. 12 | 2700 East 82nd Street | Note 2 |
| FileMaker Pro SIG | Thur., Oct. 15 | Highland Park Library, St. Paul | Note 20 (New SIG!) |
| North Shore CIG | Thur., Oct. 15 | Bethlehem Lutheran Church, Grand Marais | Note 15 |
| Micro Soft Works SIG | Tues., Oct. 20 | Highland Br. Library, St. Paul | Note 10 |
| AppleWorks®SIG | Thur., Oct. 22 | Murray Jr. High, 2200 Buford, St. Paul | Note 10 |
| Mac Novice SIG | Mon., Oct. 26 | Highland Park Library, St Paul | Note 9 |
| MacCAD/E SIG | Tues., Oct. 27 | Micro Age Computers 5909 Blake Rd., Mtka. | Note 8 & 19 |
| Macintosh Programmer | Tues., Oct. 27 | Murray Jr. High, 2200 Buford, St. Paul | Note 18 |
| Mac Desktop Publishing | Wed., Oct. 28 | Jefferson El Sch Rm 201, 25th & Henn. | Note 3 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1. Dave Laden | 488-6774 | 7. Joy Kopp | 440-5436 | 12. Mark Evans | 377-9000 | 19. Daron Applequist | 938-7001 |
| 2. Ian Abel | 920-5520 | 8. Bill Langer | 937-9240 | 15. Jim Ringquist | (218) 387-2234 | 20. Steve Wilmes | 458-1513 |
| 3. Bob Grant | 827-6294 | 9. Tom Lufkin | 698-6523 | 16. Tom Michals | 452-5667 | 21. Kevin Kassulker | 535-2968 |
| 4. Mike Carlson | 866-3441 | 10. Jim Shields | 434-9836 | 17. John Hackbarth | (715) 246-6561 | 22. Tom Gates | 789-1713 |
| 5. Peter Fleck | 370-0017 | 11. Tom Ostertag | 488-9979 | 18. Gervaise Kimm | 379-1836 | | |

Coordinators – Please Call Dick Aura (941-1198) by the 1st of the month preceding the issue month to have your meeting listed correctly.

# Members Helping Members

Need Help? Have a question the manual doesn't answer? Members Helping Members is a group of volunteers who have generously agreed to help. They are just a phone call away. Please: only call if you are a Member, own the software in question and during appropriate times.

| Macintosh | Key | | | | | | |
|---|---|---|---|---|---|---|---|
| Adobe Illustrator | 21 | PostScript | 8 | Quicken | 25 | Prosel | 2 |
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If you would like to be a "Members Helping Members" volunteer, please leave your name & phone number on our BBS or leave a voice-mail message at 229-6952.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1. Steve Wilmes | 450-7448 | E | 9. Peter Fleck | 370-0017 | DEW | 16. Arnie Kroll | 433-3517 | E |
| 2. Tom Ostertag | 488-9979 | E | 10. Randy Dop | 452-0425 | EW | 17. Michael Foote | 507-645-6710 | DEW |
| 3. Tom Gates | 789-1713 | EW | 11. Ed Spitler | 432-0103 | D | 18. Richard Becker | 870-0659 | EW |
| 4. Tom Edwards | 927-6790 | E | 12. Bob Rosenberg | 377-4300 | EW | 20. Steve Peterson | 922-9219 | EW |
| 5. Earl Benser | 835-2523 | EW | | 340-0234 | D | 21. Jodi Roste | 933-1698 | EW |
| 6. Dan Buchler | 435-3075 | E | 13. John Hackbarth | 715-246-6561 | D | 22. Nancy McClure | 724-1172 | D |
| 7. Ann Bell | 422-1115 | E | 14. Jim Horswill | 379-7624 | DEW | 23. James C. Fullwood | 454-7610 | EW |
| 8. Fritz Lott | 377-3032 | E | 15. Tom Michals | 452-5667 | DEW | 25. Rand Sibet | 560-8103 | EW |

D-days (generally 9 a.m. to 5 p.m.), E-evenings (generally 5 p.m. to 9 p.m.), W-weekends (generally 1 p.m. to 9 p.m.).
In any case, call at reasonable hours and ask if this is a convenient time for them. We appreciate your cooperation.

# New SIGs Requested

*in the wind*

by Tom
Gates

There have been a number of requests to get some new Apple II SIG's started.

Here's a quick list of requested topics ...

## 1- Back II Basics

This SIG would deal with all Apple II owners that have general or specific questions on the use of their computers. Numerous people picking up Apple II plus, //e, //c and GS computers from sources such as school and state auctions, business equipment surplus stores (i.e., PPL Shop, Endless Electronics - to name a couple). Will cover all the basic questions people have and may be afraid to ask at other meetings as we talk about the newest and neatest stuff that they have no idea about.

## 2- Apple II Desktop Publishing

Desktop Publishing on the Apple II and GS. This group was active until about a year ago when some of the principal members gained added home and work responsibilities. Last time this SIG got pretty software specific and folks have been asking more for techniques, sources, etc. While the SIG would use Publish-IT!, Apple-Works, Medley and AppleWorks GS as platforms,

the intent will not be to dwell only on the software.

## 3- Educators SIG

There are a number of educators involved with the group. This would be a SIG by and for these educators to share information, experiences, thoughts on hardware/software being used, compare notes, etc. Suggested that this group would at least meet during school months. Summer months as needed, or vacation may be desired! Group would not be machine specific and cover Apple II and Mac topics and information.

These groups don't appear by magic. It will take a couple people to step forward for each of these SIG's to be coordinators. As SIG Director, I will help in any way I can to help secure steady public meeting locations, get the SIG's recognized through the Board of Directors and co-chair your initial planning meetings where the meeting agendas can be worked out. Then it's just a matter of getting the word into the newsletter and going with the meetings.

Please contact me and let me help get things going for these SIG's

Thanks!

*Tom Gates* 

# Apple II Minutes

Remarkable ... Washburn now has new comfortable(!) chairs, and lots of them. I'm sure that wasn't the reason everyone came, 'cuz no one knew about them, but there was a great deal of interest in telecommunications. The meeting started with introductions, announcements which quickly degraded into questions and answers. The first question was what would our group recommend for a person who wanted to upgrade from an Apple II+ ...

Anyway, after that loaded question, Tom Gates introduced Daryl Johnson. Daryl is the Training Manager for MultiTech Systems, the local manufacturer of modems. He presented a short history of modems and their company and then started talking about different communication devices and technologies. His presentation then extended into the latest, greatest technological breakthroughs in communications speed: modems with error correction and data compression that allow huge amounts of data to be transferred at the

unbelievable rates of 14,400 and 56,700 bits per second. I was amazed at the possibilities for speed of transfer. Daryl also talked about standards such as "Hayes Compatible", proprietary and "De Jure" and then described some of the current sets of standards from Bell and CCITT. If you have any interest in telecommunications you should have been there. If you missed it, you can still get the information as MultiTech is going to be publishing a telecommunications primer, and will be sending it to the people who attended.

When the librarian kicked us out (really!) several of us went to Perkins for goodies (I think I

counted 16 ... ) and had a great time doing the restaurant chair shift as more people came. We talked about everything including the kitchen sink (someone brought a copy of their catalog ... ) and Chester Page's latest version of AppleWriter on the GS. I left early before things really got rolling.

If you missed this one, the next meeting will be on September 14th. Les Anderson will do a demonstration of scanners, both for graphics and Optical Character Recognition. He promised he'd have it ready for the meeting ... Should be very interesting. So we'll see you there.

*Tom Gates*

# Multimedia:
# The Future Isn't What It Used to Be!

*By Roger Wagner -*
*President, Roger Wagner Publishing, Inc.*

*reprinted with permission*

*issues in computing*

**submitted by Tom Gates**

Multimedia seems to mean a lot of different things these days. A lot of people seem to think that as long as there's a CD-ROM disk involved, that must be all there is to it.

I have a surprise for people who think that an electronic encyclopedia is the future of technology: the real promise of multimedia is personal creativity, and being able to share it with others.

Imagine if you could buy Print Shop on CD-ROM, with all the possible birthday cards and names already designed for you. Do you think it would be a success? Suppose you were selling telephones just to listen to pre-recorded "interactive radio". You'd be missing the real value: interpersonal communications.

That's the secret to understanding the real power of multimedia: if lets anyone from young children to retired folks do their own thing on the computer, delighting in the creative process, and being able to share it with others.

In our schools, getting students physically and mentally involved with the subject is an important challenge, and we're now aware that different people have different learning styles: some like the written word, while others prefer visual information, or even sounds. Multimedia is a wonderful medium for this process; it not only lets you use a wide range of information forms, but gives even the most nontechnical person a terrific creative environment.

### The Problem In Our Schools

Nationwide, schools are facing one of the worst budgetary crises ever. At the same time, technology offers the chance to make a real difference in the classroom. One problem is that teachers aren't being supported in learning how to use the technology they've already got. Often, equipment is just bought without providing funds for teacher training and software. This problem is even more frustrating when existing, perfectly capable equipment is replaced with newer computers, out of a vague belief that the new equipment is "in-surance for the future".

Well, as Arthur C. Clarke said, "The future isn't what it used to be." Multimedia is more than just CD-ROM, and the current generations of PCs and Macs are trying to catch up to a technology that the Apple II has supported since the beginning; inexpensive video! (and more!)

### The Apple IIGS

A little more than a year ago, in inCider magazine, I wrote about the Apple IIGS as a multimedia computer, and compared it to the Mac LC. With the new Mac LC II, and the continued arrival of new computer from all companies, you might ask "Have things changed for the Apple IIGS?".

The answer is "yes" - things have only gotten better for the Apple IIGS!

> Nationwide, schools are facing one of the worst budgetary crises ever. At the same time, technology offers the chance to make a real difference in the classroom.

If HyperStudio version 2.1 and the Apple IIGS offered the best multimedia platform of the time, the arrival of HyperStudio version 3.1 only takes the machine to a point unequaled by any other alternative in hardware or software. The new version of HyperStudio has better support of live video sources, more effective use of memory for stack and sounds, and an improved method to the program operation that delivers more power, and yet is actually easier to use than the previous version. With the new Multimedia Recording Kit, it's a snap to record student reports on a VCR!

If you have an Apple IIGS computer, don't overlook how this machine can deliver the maximum value for your multimedia dollar. In particular, it makes a lot more sense to spend a hundred dollars per machine to equip an Apple IIGS with HyperStudio, and be able to do everything you first imagined with those machines and more, than to spend several thousand dollars simply replacing one machine with another.

### The Apple IIGS vs. Mac LC Computer Lab

As an illuminating exercise, let's look at the difference between setting up a computer lab with 20 Apple IIGS computers, vs. 20 Mac LCs:

The education price on a GS is $1250, the Mac price is about $1600. The difference of $350 per

system times 20 computers would be $7000. That money could buy:

| | |
|---|---|
| Teacher Training: | $1500.00* |
| 2 Apple IIGS computers | $2500.00** |
| 2 Hand Scanners | $440.00*** |
| 1 Video Overlay Card | $420.00 |
| 1 Video Digitizer | $210.00 |
| 1 Laser Disk Player | $750.00 |
| HyperStudio network | $1200.00 |
| Total: | $7020.00 |

* 10 teachers' substitute funding for 1-day workshop
** $1250 each for 2 additional workstations
*** $220 each x 2

Once the computers are in place, you would want to display a computer screen for the entire class. With the GS, this can be done with a classroom monitor with a simple cable. On the Mac, classroom display will cost $1000 (B&W LCD panels) to

$3000+ (color projection systems). For this amount, you could have had even more teacher training along with additional workstations in the room, plus a video camera if needed, additional VCRs, MIDI keyboards ($100 ea) and interfaces ($150 ea), and a Canon XapShot ($500 ea).

Interactive video on the Mac is done by showing the video on a second monitor. This is an option on the GS as well, but with the Video Overlay Card ($420), live, full-quality, full-screen video can be displayed right on the computer screen, and even labeled, enhanced with scrolling credits and animation overlaid right on the video image. All this can then go on the classroom monitor. When recorded on a video tape, the entire presentation can be taken home by the students, which is both a great community relations tool, and a powerful motivator.

On the Mac, the Video Spigot ($450) and QuickTime (requiring a sizable amount of hard disk storage and system memory) substitute for true video, because true video overlay on the Mac (and this means a Mac II, not the LC) can run many thousands of dollars.

I've heard people talk about wanting to provide students with the most powerful and capable tools possible. Imagine that I held in my hand the high-quality pens that an architect or graphic artist uses, along with the most expensive drawing paper and the professional tools of their trade.

I might have "more powerful and capable" materials, but does that mean that they are the most appropriate for an elementary school classroom? The best computer for the school office to manage

class scheduling, ADA reporting, etc., is not necessarily the best computer for an 8th grader working on a science report or creative writing.

Desktop publishing uses technology to duplicate the means of communication used for the last 500 years; printed books and pages; in a sense, these are the medium of a classroom without electricity. Multimedia represents the communication mode of the present and future. It realizes the multiple sensory (and learning) modes of television, with the presence of a live teacher in the classroom and active student involvement, in both cooperative and independent learning situations.

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When a computer is available that provides a better solution than the Apple IIGS, we'll be the first to tell you about it

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By the way, just because the GS is great at multimedia doesn't mean that it can't do desktop publishing. GraphicWriter III is an excellent tool, along with the well-known AppleWorks GS, and both can print to a LaserWriter.

In general, many of the same peripherals that can be used with the Mac also work with the GS: hard disks, laserdisc, MIDI keyboards and interface, modems, keyboards, disk drives and more.

In the end, I don't believe there is a "best" computer for everyone and everything. There is only a good optimal choice for a particular set of personal requirements. Purchasing a GS today won't promise that future machines might not offer some advantage, but neither will purchasing a Mac or any other "current" computer. Last years Mac LC (68020 based) has already been discontinued, and replace by the 68030 version (the LC II), and software that

requires the 68030 may not run on the previous machine.

Today's black-and-white PowerBook may soon be replace by color models, and the "PowerPC", where the Mac system is just emulated by the Apple-logo computer. Regardless, service and replacement parts are guaranteed for all machines for many years after any discontinuance. That "clock" started ticking for Mac SEs and the old LC some time ago. The GS is till being made! The point is decide on your actual classroom needs, and use the equipment that makes the most sense.

Ultimately, my company will provide HyperStudio on a number of platforms, and this article isn't intended to "convince" you to blindly buy GS machines. The best machine for you use will have to be based on the sum total of your own needs and opinions. I can say that as of today, I would rather have my own children in a school that invested in training the teachers to really use the equipment they had.

As a taxpayer, I would rather see money spent on magnifying existing investments, rather than replacing one unused box with another.

When a computer is available that provides a better solution than the Apple IIGS, we'll be the first to tell you about it. That's part of our commitment to being your source of accurate information on multimedia.

In the meantime, we'll continue to add to HyperStudio on the Apple IIGS, and won't pull any punches in giving you an honest view of all your computing alternatives.

In the end, my excitement is for the personal creativity and expression that multimedia offers, and we'll work to make that experience the best it can be on any computer.

*submitted by Tom Gates*

# KansasFest 1992:

## What a Long Strange Trip it's Been

*a personal account*

**submitted by Steve George**

The Apple II Developer's Conference and the Apple Central Expo took place recently in Kansas City, and it was THE place to be. Known affectionately as KansasFest, I've just returned from 4 days of meetings and classes and lots of late night sessions. From what I saw at KansasFest, my faith in the future of the Apple II is once again restored.

Tim Swihart of Apple Computer Inc was this year's main speaker from Apple. He had some good news for us and he had some bad news for us. The bad news is that the former Apple II Business Unit has been renamed as the "Continuing Engineering" group, and it has only six employees. Fortunately, those 6 employees are as enthusiastic about the Apple II as any other Apple II fanatic I've ever met, and they have some future plans for enhancements to System 6.0.

According to Swihart, System 6.0.1 will be released at the same time the Apple II EtherNet Card is released. That card is nearing beta testing stage, and if no major problems are found, should be released within the next several months. In addition to containing some bug fixes, System 6.0.1 will contain an MS-DOS FST. Written by Greg Branche, who incidentally is not a member of the Continuing Engineering Group, the initial release of this new FST will be "read only". Future versions may have the ability for IIGS owners to save data onto MS-DOS formatted disks, but until then, IIGS owners will have the ability to load data files directly from MS-DOS disks. Unfortunately, there are some severe limitations. The FST will only work with 5.25" disks that are inserted in an Applied Engineering Transdrive (that's the drive that comes with the PCTransporter), with 3.5" high density disks that are inserted in the 3.5" SuperDrive connected to a SuperDrive interface card, or with a Syquest removable cartridge. So, many IIGS owners will not be able to read MS-DOS disks without purchasing additional hardware. Swihart also told us that the Finder in System 6.0.1 will support keyboard navigation.

Swihart stated that the plans his group has are for continued support of current Apple II and

IIGS owners. He offered an interesting profile of the currently installed Apple II base of customers, and backed up his claims with facts and figures. He said that Apple has sold nearly 1 million Apple IIGS'es, with 2/3rds of them being ROM01 machines, and 1/3 being ROM3 machines. He reiterated that the vast majority of those IIGS'es are located at schools, and that many of them have only 512K of RAM, and are therefore really only being used as fast IIe's. He also stated that "the hottest selling Apple II" is the IIe card for the Mac LC II.

Most people attending KansasFest didn't really expect to hear great news from Apple, and I for one was relieved that the news wasn't worse. In response to a direct question by yours truly, Swihart confirmed that the IIGS is still "in production". For me, I really was relieved and somewhat excited to see the incredible level of commitment from those Apple employees who were there.

> It's clear to me that there really is an Apple II Community composed of people who share a love for, and a commitment to, the Apple II computer.

During the several days of KansasFest there were numerous panel discussions where Apple II developers taught their colleagues. Personally, I found that many of the sessions were much more technical than in previous years, and not being a computer programmer, found myself actually skipping several sessions.

The real news, however, was made in the hallways and in the dorms. Everyone in attendance was there to have a good time, and I'm sure a good time was had by all. There were lots of late night sessions, with many programmers showing off their latest work. After the 2 days of sessions, there was an AppleFest-like show, and several new products were introduced, and many works-in-progress were previewed.

Since I just got home, I haven't had a chance to test out all the new software I got, but in the meanwhile, let's look at some of the products that were introduced.

The new RAM-GS from Sequential Systems is a 4 megabyte RAM card that cost me only $129 at the show. Vendors at trade shows often give attendees lower prices, and I believe that the mail order price for this new card will be in the $150

range. It uses a new type of memory chip called Zip. Developed by Mitsubishi, these Zip RAM chips just never caught on in the Mac or IBM world, and Sequential Systems was able to purchase thousands of them for very little money. The RAM board comes with a 2 year replacement warranty. It is available from LRO and Quality Computers. Check the latest inCider for exact pricing information.

Bill Heineman, of Interplay, was showing off an incredible new game, Out of This World. I've never seen anything quite like it before. It's a joystick controlled fast action arcade game, but the graphics are more like an animated cartoon than a computer game. Burger Bill, as all his friends call him, was taking orders but said that it would still be a few more weeks before the game is completed. I can barely wait.

There's a new desktop program, Universe Master, that does many of the same things as ProSel-16, but sports a standard GS/OS desktop interface with pull down menus. Developed by D. Proni, the same programmer who wrote SignatureGS, I have high hopes that Universe Master will work as advertised. I realize that many novice users are intimidated by ProSel, and I hope to be able to offer an effective alternative.

Procyon, the company that developed GNO, was showing off Switch It. For anyone who is familiar with the old Mac program Switcher, Switch It works just like it. With sufficient memory, you can actually suspend your work with one program, run another program, and then return to your original program and pick up right where you left off. Switch It places a small arrow in the menu bar, and by clicking on the arrow, you can run another program. It was pretty impressive, but needed some more work. Although it is not strictly multi-tasking, it's the next best thing, and I hope that Procyon can pull it off.

Lunar Productions introduced Foundation, a Resource Editor. Using it, you can actually change the wording found in pull down menus, or can rearrange the items in those menus. Although still under development, Foundation will eventually contain an Icon editor for System 6 icons, and a sound editor for System 6's rSound sound files.

Lots of new shareware and freeware programs were also introduced at KansasFest. The 2 that impressed me the most were Eyes and Ears by Chris McKinsey. Eyes will display just about every type of graphic or word processing file with the double click of the mouse button. You can click on a Teach, ASCII, AppleWorks or AppleWorksGS file, and Eyes will display it, almost instantly. Same with all currently supported graphic types. Ears plays digitized sound files and music files, just by double clicking on a sound or

music file. Ears works with raw binary sound files, rSound files and HyperStudio sound files. Likewise, it plays back SoundSmith songs, NoiseTracker songs and synthLAB songs. I was so impressed with both of these new Finder Extensions that I paid Chris his shareware fee on the spot. Chris also gave me a demo version of his upcoming game, Time Lord.

I was lucky enough to get a sneak preview of the soon to be updated graphic conversion utility, Super Convert. Jason Harper will provide a niftier user interface, and will offer support for larger size graphics, such as 1024 x 768 graphics found on MS-DOS systems. I was very impressed.

I was also thrilled to be able to spend some time with the 7 Australians who traveled halfway around the world to attend. In addition to Richard Bennett, the programmer who created Seven Hills' Express print spooler, it seems as if all the officers of the Sydney Apple II User Group were there.

There was also a gentleman from Germany in attendance, and just as I was leaving, I heard that he was offering his home-built SCSI Interface card for $170. Initial reports seem to indicate that it is 40% faster than the RAMFast. Hopefully, more details will be forthcoming.

KansasFest was as much a social event as it was a computer conference. There was a huge contingent of people there who are involved with GEnie's Apple II area, and it was fun to meet some of them for the first time. There were people in attendance who were 8 years old, and people who were 80. At one point, a very old man approached me, he must have been real close to 80, and asked me if I had any details about the soon-to-be-released UltraMacros v4.0. I ended up introducing him to Randy

Brandt, the author of UltraMacros, so he could get all the details from the programmer.

I was surprised at the diversity of the age groups represented, and there were a lot of shareware programmers there who were high school students. There were many college aged students, and even a few people that were my age. It's clear to me that there really is an Apple II Community composed of people who share a love for, and a commitment to, the Apple II computer. Who knows? Maybe some of the 8 year olds will be leading seminars at next year's KansasFest.

Fortunately, West Coast Apple II users won't have to wait a whole year for a large Apple II computer show, as there's one planned for San Francisco in April, 1993. Dubbed Apple Expo West, it will be produced by Bob Berkowitz, the same man who ran the past 2 Apple Central Expos (the real name of the weekend show at Kansasfest). I can barely wait. Berkowitz will also be involved in the Apple Expo East to be held in Boston from October 2-4, 1992.

Everyone I spoke to who attended KansasFest had a great time. We got to laugh at the Roger Wagner Roast, and got to hear Roger himself laugh about the bugs in HyperStudio. We got to witness Steve Disbrow, publisher of GS+ Magazine, put on an absurd skit and sing "I'm a programmer; I code all night and I sleep all day" complete with a chorus of very well known Apple II celebrities. We even got to hear Matt Deatherage, of Apple's Developer Tech Support, play the piano and "sing" a song. In between all that fun, some of us even managed to get an hour or two of sleep each night.

For me, KansasFest was the high point of the year.

*Submitted by Steve George*

# Mini'app'les Bylaws

## (as of 8 June 1992)

### A. NAME OF ORGANIZATION

The name of the organization is Minnesota Apple Computer Users' Group, Inc. hereafter called "Mini'app'les".

### B. PURPOSE

The purpose of the organization is to promote the dissemination of information concerning the use of Apple Computers and products related thereto, and to share the knowledge of members at large concerning their talents and information pertaining to computers in general.

### C. MEMBERSHIP

1. Members of Mini'app'les are required to pay annual dues, which will be due on the anniversary of the month they joined.

2. The actual amount of dues will be set by the board. An application fee may be charged at the discretion of the board.

3. Annual dues must be received by anniversary date or membership shall be terminated.

4. Membership rights will be extended to the immediate household upon receipt of dues from the household.

5. Each membership shall have the right to cast one vote.

6. Membership will not be denied because of race, creed, color, sex, or national origin.

7. Members are expected to abide by these bylaws.

8. Benefits of membership shall include:

   A subscription to the Mini'app'les newsletter.

   Eligibility to purchase Mini'app'les software.

   Eligibility to participate in Mini'app'les sanctioned activities.

### D. LEADERSHIP

1. The officers of Mini'app'les, shall consist of the following positions:

   President

   Past President

   Vice President

   Secretary

   Treasurer

   Publications Director

   Software Director

   Operations and Resources Director

   Interest Group Directors (2)

   Membership Director

These eleven officers are the governing board of the Mini'app'les and all Mini'app'les business will be conducted by this board.

2. Except for the Past President, officers are elected for term of one year. The term runs from May 1 to April 30. The office of Past President will automatically be given to the retiring President. If a President is elected for sequential terms, the incumbent Past President will remain in office. If Past President resigns or relinquishes office, the President shall appoint a Director at Large to complete Past President term and duties.

3. If an officer resigns or relinquishes office, the President shall appoint a replacement in a timely matter subject to board approval.

4. If the President resigns or is unable to perform the duties of the office; the Vice President shall assume those duties.

5. In the absence of the President and Vice President the officers may appoint an acting President.

6. Board members may be removed from office by a two-thirds majority vote of the board. A recall election shall be held within 60 days of presentation of an impeachment petition bearing the verified signatures of at least five percent of the membership.

7. The President, Vice President or Secretary may call a general membership meeting. Membership shall be notified of time, place, and purpose of meeting through the Mini'app'les newsletter or a special mailing.

8. Election of Officers.

   a. Nominations will be made by a nominating committee

   b. Further nominations from members will be accepted at a general membership meeting to be held in February.

   c. The subsequent list of nominees with such statements as they may wish to make pursuant to their candidacy shall appear in the April newsletter.

   d. The election will be by means of a written ballot as published in the April newsletter. Ballots will be accepted at Mini'app'les meetings or by mail. All ballots must be received by April 28th. A simple majority of those voting is necessary for election. Results of this election shall be published in the

newsletter not more than 60 days following the election.

9. Board members must be paid up members of the Mini'app'les. If a board member's membership lapses, they have effectively resigned from the board of directors, and the board shall so notify them and make record in the minutes.

10. No member or membership may hold more than one board position or vote except as noted in bylaws.

## E. LEADERSHIP RESPONSIBILITIES

1. General Duties. The duties of the elected officers are in general to:

   Promote the purpose and membership of Mini'app'les.

   Administer the bylaws of the Mini'app'les.

   Assure the financial well-being of the Mini'app'les.

   Attend and report at each board meeting.

   Carry out decisions of the board in a timely manner.

   Appoint staff and committees as necessary, subject to board approval.

   Communicate to the board the needs of appointed staff and membership in general.

2. Duties of the President. The President will:

   Provide leadership and direction to the general membership and to the board of directors.

   Prepare an agenda for each board meeting.

   Chair Mini'app'les board and general membership meetings at which business is conducted.

   Assign duties to board and staff members.

   Establish goals to be reached during the term in office.

3. Duties of the Vice President. The Vice President will:

   Assist the President with the duties of that office and in the absence of the president, assume the duties of that office.

   Organize the program, facilities and equipment for general membership meetings including meetings for nominations or voting by membership.

   Coordinate participation in events, such as trade shows and seminars.

4. Duties of the Treasurer. The Treasurer will:

   Maintain the Mini'app'les financial records and records of Mini'app'les assets.

   Prepare a written financial report to include income, disbursements, current account balances and assets, at each board meeting.

   This report will be included in the minutes.

   Prepare an annual budget.

   Be cognizant of and act upon requirements of the IRS and Minnesota State Department of Revenue in a timely and efficient manner.

   Administer the collection of all moneys due the Mini'app'les.

   Establish and maintain bank accounts in the name of the Mini'app'les.

   Deposit all moneys in the Mini'app'les bank account(s) in a timely and efficient manner.

   Pay all bills and demands as authorized by the board.

5. Duties of the Secretary. The Secretary will:

   Record in a permanent form the minutes of all board and general membership meetings at which business is conducted.

   Record the results of elections.

   Archive and maintain all Mini'app'les records other than those kept by the Treasurer.

   Keep a Mini'app'les calendar.

   Assist the President and Vice President in correspondence as required.

6. Duties of the Past President. The Past President will:

   Provide continuity in the leadership of the Mini'app'les.

   Assist the President with the duties of that office.

   Provide historical references for decision making process.

7. Duties of the Publications Director. The Publications Director will:

   Oversee publication of the newsletter.

   Appoint with consent of the board:
   Newsletter Editor and assistants
   Advertising Coordinator

8. Duties of the Software Director.

   The Software Director will:

   Oversee all software publication efforts.

   Coordinate acquisition and duplication of software.

   Appoint with consent of the board:
   Software Editor(s)
   Software Sales Coordinator(s)

9. Duties of the Operations and Resource Director. The Operations and Resource Director will:

   Oversee all matters related to operations and resources of the Mini'app'les and its members.

   Coordinate the use of equipment owned by Mini'app'les.

Maintain a consultant and information network for the Mini'app'les.

Appoint with consent of the board:

Hardware and Software Advisor(s)

Bibliographer

Hardware Coordinator(s)

BBS Coordinator

10. Membership Director. The Membership Director will:

Oversee the maintenance and processing of membership records and materials

Promote membership

11. Duties of the Interest Group Directors.

The Interest Group Directors will:

Oversee all matters related to the development and maintenance of Special Interest and Community Interest groups

Encourage and assist in the formation of new interest groups

Act as spokesperson to the board for group representatives

## F. FINANCIAL

1. The Mini'app'les will maintain an account(s) at a local financial institution. Such accounts shall bear interest as the law allows.

2. The Signatories on the account(s) shall be:

President

Vice President

Treasurer

3. One signature will be required to disburse funds from the account(s).

4. The authorization of expenditures will be accomplished by the board approving an annual budget that covers the Mini'app'les budget year. The budget

year shall run from August 1 to July 31. Those expenditures not budgeted items, or budgeted items which exceed the budgeted amount by more than $25.00 will require majority approval of the board.

5. Proper verification of expenditures will be required before the funds will be disbursed.

6. In the event of dissolution of the corporation, the entire net assets remaining after payment of any or all liabilities and obligations of the corporation shall be disbursed in a manner agreeable to a majority of the board members at a specially convened open board meeting and consistent with IRS and State regulations. Notice of this meeting shall be made known to all Mini'app'les members through the newsletter or a special mailing 30 days in advance of the meeting.

7. A Surety Bond shall be obtained, naming the above signatories as principals.

## G. BOARD MEETINGS

1. The business of the Mini'app'les will be conducted at board meetings, except for general membership meetings or voting by the general membership.

2. The Board of Directors shall meet at least every other month at a place and time designated by the Mini'app'les president.

3. A quorum shall consist of a simple majority of the officers holding office and no business shall be transacted if a quorum is not present.

4. Notice of board meetings shall appear in the Mini'app'les newsletter 30

days in advance of all regularly scheduled board meetings.

5. In emergency situations, officers may agree to meet at any time, but all business transacted will be subject to reconsideration at the next regularly scheduled board meeting. Minutes of the emergency meetings shall be made publicly available in the next issue of the Mini'app'les newsletter and/or at the request of any member.

6. The board of directors may designate three or more of its members to constitute an executive committee. To the extent determined by the board, the executive committee has the authority of the board in the management of the business of Mini'app'les. The executive committee shall act only in the interval between board meetings and at all times shall be subject to the control and direction of the board. Any activity shall be reported to board at next meeting.

7. Minutes of the board meetings will be published in the Mini'app'les newsletter not later than 60 days following that meeting.

8. All meeting of the board will be open to the general membership of the Mini'app'les.

9. All members are encouraged to bring issues to the board. This shall be done by submitting agenda items in writing to the president in advance of the board meeting.

10. Decisions will be made by a simple majority of the board members present, the President voting only in the case of a tie.

11. At least once per year, the board will examine these bylaws for needed changes following the procedure set forth in section H.

## H. BYLAWS

1. Requests for changes in the bylaws will be made in the Mini'app'les newsletter at least four months prior to the election of officers.

2. The board will act on this request and on other items pursuant to changes in the bylaws at a board meeting at least three months prior to the election of officers.

3. Changes to the bylaws suggested by the board will be published in the Mini'app'les newsletter at least two months prior to the election of ratification.

4. The ratification will be by means of a written ballot as published in the Mini'app'les newsletter. Ballots will be accepted at Mini'app'les meetings or by mail. All ballots must be received by the 28th of the month in

which vote is taken. A two-thirds majority of those voting is necessary for ratification of the changes to bylaws.

5.  Changes to these bylaws become effective the first day of month following publication of notice of ratification in the newsletter. Such notice shall appear not more than 60 days after the closing date for receiving ballots.

I.  MISCELLANEOUS

1.  Mini'app'les will support the copyright laws.

2.  In the event of meeting cancellation, the officers will make every effort to contact the local members through the media or other means as appropriate.

3.  All Books and Records to be audited not less than once per year by a committee of members, not including officers, appointed by board.

4.  All applicable Federal and Minnesota laws and statues apply and supersede where bylaws do not comply with said laws and statutes.

# Good News/Bad News

*mostly good*

**by Joe Kohn**

The bad news first. My upcoming Shareware Solutions column for September, 1992 (which no one has seen yet) has some information that is already obsolete. That column is about Apple II word processing.

The good news is that one of the programs I mention, not in terms of it being freeware or shareware but mentioned to give a historical perspective, has just been re-released as Freeware.

AppleWriter v2.1, by Paul Lutus, has just become Freeware. Thanks to the "Lost Classics Project" started by Tim Tobin, the librarian on GEnie's Apple II area, Mr Lutus was convinced to let that first-generation Apple II word processing program become freeware. Just like Mr Lutus's FreeWriter word processor, it is copyrighted freeware; it may be given away but not sold.

Had I known that this would happen (I'm just as pleasantly shocked as you are) I would have written about AppleWriter very differently. After all, it was the first word processing program I bought back in my 64K II+ days, and I feel that it now deserves a second look.

Mr Tobin is embarking on a project to get many more formerly commercially available products re-released as freeware or shareware. To be honest, I'm utterly amazed that he was able to get AppleWriter re-released, and I want to help him in his project any way I can.

If *you* own a copyright to an Apple II program that is no longer being sold, and you'd like to donate that software program to the Apple II community, please feel free to contact me via E-mail, or to contact Mr Tobin directly as A2.TIM on GEnie.

This is a great day indeed! Thanks to Mr Tobin and to Mr Lutus.

Apple II Forever!!

*Joe Kohn*

# Derived Functions

*Programmer's Notebook*

*Submitted by Steve George*

*by Paul Finkes*
*Applequerque Computer Club*

Applesoft Basic as well as most other programming languages provide only a limited number of mathematical functions in a standard library. These built-in functions normally include the ABSolute value, SiGN, INTeger, SQuareRoot, SINe, COSine, TANgent, ArcTaNgent, EXPonential function using the base e, LOGarithms also in base e, and a RaNDom number generator. Some languages also include a number of additional extensions to the built-in library functions. Unfortunately, there are a large number of other mathematical functions which are frequently needed for complex scientific programs, but are not part of the standard or extended library.

This article is intended as a handy reference. The functions given here are seldom required, but if they are needed, a significant amount of time could be saved by using this reference rather than spending the effort to research them.

Computer reference manuals or a number of other recognized math handbooks could be used to generate or derive these additional mathematical functions or to provide standard values such as PI or e. However, these formulas are not always in a form easily incorporated into a computer program, and the standard numeric values can be extremely long and subject to typographical error when being entered in a program. The programmer can guarantee accuracy and save time in entering a value by deriving the value instead.

A typical example for using a derived value is for the value PI. This could be entered in your program as PI = 3.14, but if a higher degree of accuracy was desired up to the limits available to your programming language you could instead derive the value of PI using PI = 4.0 * ATN(1). (The new more accurate value of the irrational number PI can be seen by entering PRINT 4 * ATN(1) at your Applesoft ] prompt.) Converting between Degrees and the Radian measure used by the Applesoft trigonometry functions is now possible to the limits of Applesoft accuracy using DEG = 180 * RAD / PI or RAD = DEG * PI / 180. An accurate value of PI is also essential in accurately computing the area of a circle; AREA = PI * RADIUS ^ 2, the volume of a cylindrical cone; VOLUME = HEIGHT * PI * RADIUS ^ 2 / 3, or the volume of a sphere; VOLUME = PI * RADIUS ^ 3 * 4 / 3.

Programmers frequently have need for Modulo 2, 4, 8, 16, or 32 arithmetic. The A MOD B function can be derived using MOD(a) = INT((a/B -INT(a/B) * B + .05) * SGN(a/B). This function can be set up

as a user defined function, or if several different bases are required, this derived function could be set up as a subroutine.

The LOG function used by Applesoft is commonly called the Natural LOG function or LOG base e. (The irrational number e can be shown by using PRINT EXP(1) at your Applesoft ] prompt.) The more familiar LOG base 10 which most of us learned in our high school math classes can be derived by defining an Applesoft function DEF FN DLG(x) = LOG(x) / LOG(10). The engineering value for power-in-watts in Decibels could now be computed using DBW = 10 * DLG(power).

The complete set of trigonometry functions from your high school math classes can also be derived using straight forward Applesoft functions. The SECANT function is SEC(x) = 1 / COS(x); the COSECANT is CSC(x) = 1 / SIN(x); and the COTANGENT is COT(x) = 1 / TAN(x). The inverse functions are somewhat more complicated to derive, but thanks to the ATN, SQR, and SGN Applesoft functions not impossible. The inverse trig functions are ARCSIN(x) = ATN(x/SQR(-x*x+1)); ARCCOS(x) = -ATN(x/SQR(-x*x+1)) + PI/2; ARCSEC(x) = ATN(SQR(x*x-1)) + (SGN(x)-1) * PI/2; and ARCCSC(x) = ATN(1/SQR(x*x-1)) + (SGN(x)-1) * PI/2; ARCCOT(x) = -ATN(X) + PI/2.

The final set of derived functions to be considered here are the hyperbolic and inverse hyperbolic functions which find use in various engineering applications. The hyperbolic sine is SINH(x) = (EXP(x)-EXP(-x))/2; the hyperbolic cosine is COSH(x) = (EXP(x)+EXP(-x))/2; the hyperbolic tangent is TANH(x) = -EXP(-x)/(EXP(x)+EXP(-x))*2+1; the hyperbolic secant SECH(x) = 2/(EXP(x)+EXP(-x)); the hyperbolic cosecant is CSCH(x) = 2/(EXP(x)-EXP(-x)); and the hyperbolic cotangent is COTH(x) = EXP(-x)/(EXP(x)-EXP(-x))*2+1. The inverse hyperbolic functions are ARCSINH(x) = LOG(x+SQR(x*x+1)); ARCCOSH(x) = LOG(x+SQR(x*x-1)); ARCTANH(x) = LOG((1+x)/(1-x))/2; ARCSECH(x) = LOG((SQR(-x*x+1)+1)/x; ARCCSCH(x) = LOG(SGN(x)*SQR(x*x+1)+1)/x; and ARCCOTH(x) = LOG((x+1)/(x-1))/2.

As is always the case when complicated math formulas are presented, the one doing the presentation must uphold tradition and say "The proof for the derived equation is intuitively obvious to the most casual observer, and the proof is left to the student!"

*ACES*

*Submitted by Steve George* &

# Chatting with
# Matt Deatherage

*interview*

Submitted by
Tom Gates

*The following is a selected article from the Online Apple II newsletter from GEnie - GEnieLamp - Volume #1, Issue #4. (July 1992) This is an interview with Matt Deatherage - an employee with Apple Computer. If you've ever gone through any of the Apple II Tech Notes, you're sure to have seen his name.*

GL: Matt, you've been working at Apple a long time. How did you first become involved with the Apple II? How did you come to get your job at Apple?

MD: It's a strange story — I'm the only person at Apple I ever knew who this happened to, so I hesitate to mention it lest anyone else "aspire" to it …

I was a "certified" Apple Developer back in 1987. In those days, Apple used to try to support everyone who wanted to be a developer, for free, as long as you could show you were working towards releasing a for-sale product within two years. (Trying to help everyone was a tremendous drain and burned a lot of people out, which is part of why it was changed in 1989 to the current Partners and Associates program — those programs not only have fees to help with the tremendous cost of supporting developers, they also reduce the number of developers who get direct code-level support from Apple so the engineers can work on more one-to-many tools like Technical Notes and Sample Code. But I digress … )

Apple held their only "Apple IIgs College" in spring of 1987, and because I was a certified developer I was invited to attend (3 days, $500, airfare and hotel were your own responsibility). I was in college, but I figured it would be a really good way to get started programming for the IIgs, which at the time was a lot more than I understood. The documentation I had was alpha or pre-beta, and even that was hard to get — there was nothing explaining how anything worked or what you were supposed to do, and the Apple IIgs College promised to help explain some of that. So I wheedled with my parents, and they loaned me the money for airfare, hotel and college admission.

At the college, I met a lot of people who worked at Apple in Developer Technical Support — Jim Merritt, Rilla Reynolds, Pete McDonald — and many Apple IIgs engineers like Steve Glass, Fern

> My motto comes from my friend Robert Thurman, and remains "Eat lots of toast." Words to live by.

Bachman, Jay Schaffer, Dan Oliver, Cheryl Ewy and many more. It was a great college and I learned a lot, and went home to try to start applying it to programs while still going to school and keeping my GPA up enough to maintain my scholarships.

Later in 1987, I became disenchanted with college and industrial engineering (my major) — I was taking a lot of classes that didn't really interest me, and thought I needed a break. One of my best friends was doing a "co-op study" with NASA — he'd be at the University of Oklahoma for one semester, then he'd go to Johnson Space Center in Houston for one semester and work there for one hour of credit. He enjoyed it a lot.

When I read in "Open-Apple" (now "A2-Central", by the way) a notice from Jim Merritt that Developer Technical Support could use more engineers, I wrote him on AppleLink (I was a developer, and one of the four people in the world who could make the Apple II AppleLink software work on my machine) and asked him if I might co-op study at Apple. Jim had already left DTS for engineering, but Rilla Reynolds (who was acting manager) worked with me, took my resume and got it through Apple's College Relations department, and several weeks later I had an offer to be an Apple intern from March 14th through July 29th, 1988. I withdrew from classes, packed up about half my stuff and moved out to Silicon Valley.

While I was here, I started on revising all the Apple II Technical Notes, I wrote a few at the beginning, answered Emails (which wasn't exactly something we had planned for me to do) and generally made myself useful, and it was at a time when the Apple II portion of DTS was getting back up to strength. When I first asked about being an intern, there were only three Apple II engineers there — Rilla, Pete McDonald and Glen Baxter, and Pete was the only one with significant desktop experience. Within about six months in 1988, Rilla brought in me, Dan Strand, Jim Mensch, Keith Rollin and Eric Soldan. Jim Luther and Llew Roberts came in early 1989.

Anyway, Apple was pleased with the work I did and in June offered me a permanent job as a DTS engineer, which I accepted. The rest is more or less history. My parents helped me move the rest

# HyperBytes
## Making your Scripting More Productive

*HyperCard tips*

by Tom Edwards

Been paying attention to all your handlers of late? How's your scripting coming along? Building stacks that help you organize your information? I'll bet that you're finding out that HyperCard is an answer looking for a problem, aren't you.

Building stacks is one of my recreational uses of the computer. Some of my stacks do useful things. Others are just a way to exercise the old gray matter ... to help prevent it from turning to mush. (Well, how about from it getting any mushier?)

**Fiddle and Faddle ...**

A couple of recent stacks that I fiddled with fall into the latter category ... just diversions to offer some respite from the tasks of the day. One stack was the repository for the catalog of the "AMUG" CD. A listing of 7912 files. I never did figure out exactly what I wanted to do with the list. I did search on a word or two, as my son expressed an interest in how to construct adventure games. There were a couple of adventure games in the list, but no tutorials on how to build them.

The other stack had some point to it. Once again, the inspiration came from my son, this time as he played with the creatures created by one of the "Sim-" games. Seems that he didn't think the graphics were quite up to par. Using ResEdit, he was able to find and edit the graphics to his liking. This involved a self-taught excursion in how to work with the "hex" counting system of the Mac, which is based on 16 units rather than the more familiar 10. Not only that, but he had to figure out the relationship between the strings of program code and the "on-off" pixels that make up the graphic.

To say the least, I was impressed with his initiative, inventiveness and success.

Part of his efforts involved a "grid" to draw the graphic. He used it to help him figure out the string of characters to place in the program that would become the graphic. As I looked at his efforts, I saw a chance for a HyperCard stack to help in the process. Soon, I had a stack that gave him a grid of boxes (each actually a button), 16 wide by 16 high. He could use the mouse to "draw" his graphic in a kind of "fat bits" mode to turn the hilighting on or off. It was then a matter of interpreting the graphic into the "on" and "off" code of the computer and then to hex code for the program.

Did it work? Yep, but by the time I finished, he had most of what he needed done by hand. When I would show him a version of the stack, he'd say "neat, but I'd like to see it do ... " and go on to describe some bell or whistle that I'd have to go back and script into the stack. With each new innovation, there was also the question of speed. Placing 256 buttons (16x16) on a card can be very time consuming.

As the stack now stands, it does the job and is acceptable in speed. (The biggest speed up came from locking the screen while the buttons are added or their hilighting erased.) After drawing a graphic, the stack figures out the appropriate string of information and even draws a 4x4 matrix of the graphic in actual size. He can then copy the string of information, move to ResEdit and paste it into the program (isn't MultiFinder great?).

**Start using HyperCard ...**

Do you remember Jason Parker's "Global Stack" article? He described the way to add one or more stacks of utilitarian handlers into the message path for HyperCard. This gives access to more HyperCard handlers than will fit into the script of an individual stack (limit 30,000 characters or so) and to avoid the need to paste copies of your favorite handlers into every stack that you create.

I continue to use the idea, and have added the necessary lines to the "on startup" handler of my home stack so

A card from the stack that converts graphics into program code.

| Name | Charlie | Binary | String |
|------|---------|--------|--------|
| | | 0000011111100000 | 07E0 |
| | | 0000111111110000 | 0FF0 |
| | | 0001111111111000 | 1FF8 |
| | | 0011100011111100 | 38FC |
| | | 0011000000011100 | 301C |
| | | 0011011001101100 | 366C |
| | | 0010000000000100 | 2004 |
| | | 0010001000100100 | 2244 |
| | | 0010000000000100 | 2004 |
| | | 0001000110001000 | 1188 |
| | | 0001010000010000 | 1428 |
| | | 0001001110010000 | 13C8 |
| | | 0000100000010000 | 0810 |
| | | 0000010000100000 | 0420 |
| | | 0000001111000000 | 03C0 |
| | | 0000000000000000 | 0000 |

Click me to analyze graphic.
Option-Click to erase graphic.

(Use Cmd-point to hilite buttons.)

that my custom handlers are always available. (If this is a puzzle to you, the key is the command "start using stack" followed by the names of the stacks to be used.) Naturally, if you build a stack that relies on one of the handlers, you need to see that the appropriate handler(s) somehow accompany your stack if you move it to another system.

I've included a few of my universal handlers here. You may find them useful for your own scripting efforts. By typing the key word of the handler into the message box, the handler does my bidding. Briefly, the handlers do the following:

- "on cds" puts the number of cards in the current stack into the message box. I often find that I want to know how many cards there are ... usually to decide if I want to clean out a stack by removing cards or just create a new stack to try something different.

- "on cd" puts the number of the current card into the message box.

- "on nb" creates a new button without having to mouse through the menus. If there is not an existing button to copy, you get a "shadow" button similar to the standard new button from HyperCard. (I just don't like the "Round Rectangle" style. Add it to your list of oxymorons!) If there is an existing button, it makes a copy of the last button and pastes it in a slightly offset position from the button that was copied. The button typically goes into the background level. You can change that to the card level if you hold down the "Shift" key as you press the "Return" or "Enter" keys to activate your typed message.

- "on nf" does much the same as "on nb", except it creates fields. The newly added field is placed directly below an existing field (if there was one), rather than offset. This helps in building a list-type card or background. The "Shift" key flags the activity to the card instead of the background.

Take care with the button and field creator handlers. I have not put in any "smarts" to check where the object is being placed on the card or background. It is possible that you could paste the object off the visible portion of the screen, leading to a confusing situation where it appears that the handler did nothing. You could lose track of fields or buttons or end up with wasted objects that are hard to eliminate from your stack.

As usual, there are always improvements that are possible. Just writing about the handlers here gave me another idea for the "cds" and "cd" handlers. The last script here ("on nm") squeezes the two ideas into one. It places a message in the box that tells me which card I'm on and how many cards there are in all. By going just to my

"Global Stack" and making the change there, I now have access to this improved handler anytime that I'm working in one of my HyperCard stacks.

More bytes later ...

---

## Typical results from using the "nf" and "nb" handlers.



The first field was sized and placed after being created by the "nf" handler.

These fields were placed by additional "nf" commands.

After resizing a "last field", new fields appear with the new size and relate to the new position.

Buttons created by the "nb" handler are offset so you can easily spot them.

---
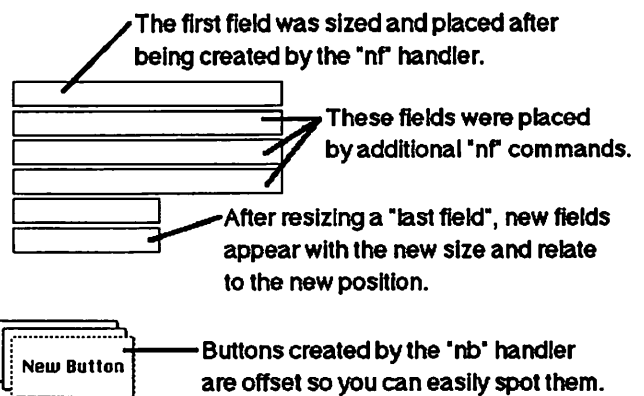
```
on cds
    put the number of cds
end cds
on cd
    put the number of this cd
end cd
on nf
    if the shiftKey is down then -- we work on the card level
        set the editbkgnd to false
        if the number of cd flds > 0 then
            put the loc of last cd fld into location
            put the height of last cd fld into high
            select last cd fld
            domenu "Copy Field"
            domenu "Paste Field"
            set the loc of last cd fld to (item 1 of location), (item 2 of
location)+3+high
        else
            domenu "New Field"
            set the style of last cd fld to "Rectangle"
        end if
    else -- we work on the background level
        set the editbkgnd to true
        if the number of bg flds > 0 then
            put the loc of last bg fld into location
            put the height of last bg fld into high
            select last bg fld
            domenu "Copy Field"
            domenu "Paste Field"
            set the loc of last bg fld to (item 1 of location),(item 2 of
```

# Excel 4.0 for the Mac

*a software review*

submitted by Peter Fleck

*by Howard Hansen*

A new version of Excel already? I thought they just came out with one a few months ago! Microsoft has taken about 13 months to move from Excel 3 to 4 on the Mac side. Almost everyone I've talked to about the new version has wondered if Excel 4 is a major upgrade and if they should buy it. Well, it is, and if you use Excel a lot, you probably should send Bill Gates some more money.

With this upgrade, we see the fruits of two major forces at work at Microsoft. Most importantly, they've started to get some legitimate (read Lotus) competition on both the Macintosh and Windows platforms. In addition, Microsoft started having a tougher time figuring out new features to add to Excel. The upgrades now focus on usability, rather than adding a new feature that most folks don't want and will never use.

The focus from above does not mean that Microsoft hasn't added new features for the ubiquitous head-to-head comparisons you see in the magazines. Hundreds of new functions (statisticians will rejoice) combine with new reporting and analysis tools.

> Microsoft started having a tough time figuring out new features to add to Excel. The upgrades now focus on usability.

Due to the short turnaround for this upgrade, Microsoft has lowered the price from the now-standard $129 to $99. The price will go up to $129 in September.

In this first part of the review, I will discuss the day-to-day "user" features which Microsoft added to Excel 4. I've found I use these features most and they make me more efficient.

## Installation

First a few words on installing and running this behemoth. The "Golden Master" beta I got of Excel 4 (which has just shipped, according to Microsoft) came on seven 800K disks. (Excel 3 shipped on three disks.) If you do a full installation, it takes up 11 MB on your hard drive. Microsoft seems to have fed it steroids over the past year.

You don't have to give up 11 MB on your drive to take advantage of Excel 4, but you probably will lose about 7 or 8 MB if you want the help system and new macro libraries installed.

The installation follows the standard "Insert disk 1, 2, ... " model. While I haven't tried it, a button appears which allows you to install the installation files on your network. This should save you from having to flip floppies hundreds of times.

After you insert each disk, an information screen comes up which tells you that you should fill out your registration card RIGHT NOW, and gives you short descriptions of some of the new features that you should check out. I found the screens an informative addition to the standard progress bar.

## Running Excel

Out of the box, Excel asks for 1.5 MB RAM, but can run with as little as 1 MB. To run smoothly with medium-sized worksheets, I've found that it needs at least 2.5 MB. Just as with charity, give as much as you can spare, remembering especially that the add-in extras in 4.0 all take up some RAM.

The program certainly takes up more disk and RAM space and seems to run just a little bit slower on identical tasks in identical situations. However, using Excel 4 pays off in little ways. Once I got used to the new features like Autofill, Shortcut menus, Autoformat, the Chart Wizard, and Toolbars, I completed work much faster with the new version. I've worked with the beta of Excel 4 at my office and Excel 3 at all of my client sites for about three months now and feel much less efficient working with Excel 3. The new version lets me do simple and repetitive things much faster and with a lot less effort.

## Autofill

When I started Excel 4 for the first time, I immediately noticed a little black square in the bottom right corner of the active cell. Anyone who's used any graphics program on the Mac would recognize it as a dragging handle. Microsoft calls this the Autofill handle. When you drag it with the mouse, it fills the information in the current cell or range of cells horizontally or vertically into adjacent cells. Before, to fill a formula or value down into a range of cells, you had to select the cells, then choose Fill Down. With the Autofill feature, you can do it in one step — select the first cell, then drag the Autofill handle down. Bang, instant fill.

Autofill can do either a dumb fill or a smart fill. If you drag the fill handle across to fill a totals formula across a row, Excel performs a dumb fill. If your cell has an entry which Excel recognizes, it will do a smart fill. Smart fills have the potential to save more typing than just about anything I can imagine. Type "January" in a cell, then drag the Autofill handle across. In the reference area on the formula bar, you'll see the months of the year ticking along as you drag from one column to the next: "February", "March", etc. When you let go of the mouse button, Excel fills the month names across the columns automatically.

Excel recognizes days of the week, quarters, dates, and almost any pattern you throw it. For instance, if you type "1st Quarter", then drag the fill handle, Excel fills in "2nd Quarter", "3rd Quarter", "4th Quarter", then "1st Quarter" again. If you typed "1st Product" instead, Excel would act similarly, but would enter "5th Product" in the fifth place.

By selecting more than one cell and then dragging the fill handle, Excel will reproduce patterns as best it can (and it usually does very well). For instance, selecting cells containing "Mon" and "Wed", then dragging the fill handle results in: "Fri", "Sun", "Tue", "Thu", etc. It skips a day each time. If you select a series of numbers: 1, 6, dragging the fill handle gets you: 11, 16, 21, 26, etc.

Excel always assumes a linear series for Autofill, so 2, 4, 8 gets you 10, 12 not 16, 32. If you select more than two cells which don't have a linear progression when you Autofill, Excel creates a linear regression and fills in extrapolated values. For instance, if you select 1, 6, 13 and drag the Autofill handle, Excel fills the values 17, 22.5, 28, 33.5.

Autofill also recognizes mixed patterns. To create a standard 17 column table (12 months, 4 quarters, 1 total), simply type "Jan" and Autofill "Feb" and "Mar" across. Then type "Q1" in the next column. Put in your category labels down the side, then use Autosum and Autofill to put the totals and sub-totals in. Now select "Jan" through "Q1" and down through the totals. Drag the Autofill handle 12 columns to the right, and Excel will automatically put the right labels on the columns for the entire year and fill the subtotal and total formulas automatically. Cool stuff!

I would like to have the ability to make the Autofill temporarily "dumb". I've found myself entering dated transactions into a database and wanting it just to fill the same date down, rather than incrementing by one day - the default. I would also like to create my own Autofill patterns so I could enter the first item in the product line and have Excel know my business enough to fill in the rest.

## Autoformat

If you use Excel a lot, you've probably spend at least half of your worksheet-creation time formatting the darned things. Autoformat gives you the convenience and efficiency of one-step formatting.

With Autoformat, you simply click somewhere in the middle of the table of data you want formatted, then click the Autoformat tool. Excel selects the entire table, formats the labels, data, and totals with appropriate formats.

Microsoft has chosen 14 different Autoformats. The categories include: Classic, Financial, Colorful, List, and 3-D Effects. Unfortunately, Microsoft seems to value color and glitz over substance in these choices. For those of us who print our worksheets on black-and-white printers, you can only read about half of the formats easily when you print them. Since I expect impeccable printouts, I can only recommend two of the Autoformats: Classic 1 and Financial 1. Complain as I may, this feature has saved me a bunch of time.

## Drag-and-Drop Editing

The current selection in Excel now has a (somewhat heavier than before) border around it which allows you to drag the selection anywhere you want on the worksheet. When you point at the edge of your selection, the mouse pointer will change from the standard heavy cross to an arrow. When you see this arrow, you can drag the selection around by its edges.

Simply dragging a range of cells mirrors the cut and paste commands. Dragging with the option key held down does what you might expect — it duplicates the selection in the drag destination. Holding the shift key down when you drag performs a cut and insert paste. Shift-option dragging mirrors a copy and insert paste.

While I use this a lot, I've found it all too easy to drag cells around inadvertently. New users especially might have problems and find cells in the wrong places. Luckily, you can turn drag-and-drop off from the Workspace dialog box.

### Shortcut Menus, or why I have PC-envy

With its myriad features, Excel can overwhelm you with choices. To partially alleviate this problem, Microsoft has added shortcut menus, which give you only the most used commands for your current situation. When you hold down the command and option keys and click the mouse, Excel brings up a pop-up shortcut menu right next to your mouse pointer. Select a range of cells, command-option click, and Excel allows you to instantly cut, copy, paste, clear, delete, or insert, as well as change number, alignment, font, border, or patterns formatting. This saves the trouble of mousing all the way up to the menu bar, finding the right option and choosing it. (I find our ever-increasing computer laziness quite wonderful!)

For most things, I favor the keyboard or the toolbar over the shortcut menus. I do use them a lot for displaying toolbars and with workbooks (more on those later). The main detriment to using them comes from the keyboard and mouse combination, which usually seems harder than doing it the old-fashioned way.

Why do I have PC envy? If you've used a PC mouse, you know that they have more than one button - either two or three. What did those other buttons do? Not much ... until now. With Windows Excel 4.0, clicking the right mouse button brings up the shortcut menu — no command-option for PC users.

### Toolbars

Microsoft added a toolbar just

below the menu bar in version 3.0. This toolbar contains a number of icons and a drop-down menu that allow you issue commands with a click of the mouse instead of a trip to a menu and a dialog box. While this made certain tasks easier to perform, 3.0's toolbar has many limitations.

In implementing toolbars for version 4.0, Microsoft seems to have taken every feature from every palette program in existence and put them all into Excel, which now contains a "well" of 160-odd tools (not "buttons"!). When you click the Customize button (not "tool") in the Toolbars dialog box, Excel presents you with an array of tools. As with Format Number and Paste Function, this dialog box shows you tools grouped by category and function. To add the oval tool to your standard toolbar, simply choose the Drawing tools category, then drag the oval tool into position on the toolbar. Nothing to it. To remove a tool from a toolbar, simply drag it off.

To move a toolbar, simply drag it. In Excel 3, the single toolbar has to sit at the top of the screen. Now tool bars can go anywhere. If you drag them into the middle of the screen, they turn into floating palettes like those in PageMaker or HyperCard. You can resize the floating toolbars to make them tall or wide. Drag the toolbar to any edge of the screen and Excel re-orients it and "docks" it flush with the edge of the screen. The standard toolbar uses this feature — you see it docked at the top of the screen, although you can drag it anywhere!

You can attach a macro to any tool on a toolbar. If you do, the macro will override the original function of the tool. Excel comes with a score of tools with faces, but no function attached — you just tell it what macro to run. You can create a tool face in your favorite graphics program and paste it onto any tool face, custom or otherwise.

Excel comes with nine pre-defined toolbars, including: Standard, Formatting, Utility, Chart, Drawing, Excel 3.0, and Macro. You can change the tools on each bar, and if you do Excel remembers the changes from session to session. If you've totally destroyed a built-in toolbar, you can click the Reset button and it returns to its original state.

(I find this outrageous! A spreadsheet without a painting program!)

Microsoft has left out only two major toolbar features in Excel 4. First, they didn't include a painting program, so you can't directly edit the bit map of the tool face within Excel. (I find this outrageous! A spreadsheet without a painting program!) Second, you can't save toolbars separately — Excel creates a file called Excel Toolbars inside the System Folder. This file includes information on all of your toolbars. If you put together one cool toolbar and sent your toolbars file off to a coworker, when she replaces her toolbars file with yours, she loses all of her own toolbar modifications — bummer. I have one other complaint with toolbars — screen real estate. My once-expansive 13˝ monitor shrinks to a size I can barely use if I have more than one toolbar docked. I don't expect Microsoft will recommend a 16˝ monitor on the back of the Excel box, but it's gotten to the point where I might.

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If you've used a PC mouse, you know that they have more than one button - either two or three. What did those other buttons do? Not much … until now.

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### The Chart Wizard

With Excel 3, Microsoft added the ability to place worksheets directly onto charts. This added a new level of complexity, because you had to go into a different mode to edit the chart. Excel 4 retains that need for a charting mode, but by creating the Chart Wizard, Microsoft made it a lot more likely that you'll never use it.

To chart data with the Chart Wizard, you simply select the titles and data you want charted, click on the Chart Wizard tool, then drag a rectangle on the worksheet indicating where you want the chart to go. Now the Wizard comes into play; it comes up to ask you a series of questions — almost everything you need to create a chart. Five screens appear in sequence, asking you about the data range you selected, which cells correspond to categories and which to data points, what type of chart you want, whether to add a legend or title, etc. The final two screens present you with a small picture of what your chart will look like. The Charting Wizard takes into account the fact that you might make mistakes, allowing you to move backwards to change your choices.

In the love it or hate it department, whenever you click on a chart, the charting toolbar appears docked at the bottom of the screen. While this makes changing your chart simple, I often find it visually annoying, especially on smaller-screen Macs, since Excel often has to resize the worksheet window when it displays the toolbar. Nonetheless, I've found it wonderful to change the chart type with just a click.

### Coming attractions

Next issue I'll cover some of the new Excel's less-glitzy features. While you might not use these each time you launch Excel, many of them will make your life significantly easier. I'll also list a series of those "little touches that mean so much," which you'll love about Excel 4.

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*submitted by Peter Fleck*

# Quickie Works

**hardware news**

submitted by
Steve
George

*From CACHE*

With many thousands of Quickie hand scanners in operation around the world, it seems appropriate to 'open one up' and describe how it works. Reading this article won't result in making you a better operator of a Quickie scanner, but it strip some of the mystery away as far as what happens between the time you press the Start button and when you see the resulting scan on the screen.

The general principle of the scanner is that a strip of light is shone from the light emitting diode (LED) bar on the scanner head onto the original being scanned. The light illuminates the original, and that which is reflected comes right back into the scanner head and bounces off a small strip of mirror that is in the scanner head, just above the light bar.

As the scanner head is rolled along over the original, a series of gears attached to the wide roller of the scanner head causes a small encoder wheel to rotate. The encoder wheel, which looks like a wagon wheel with many spokes, interrupts another light beam rapidly, one that's generated separately within the scanner head, 'slicing' the reflected light into a series of 4-inch wide but very short strips. In other words, the light that comes into the scanner head from the original image is looked at by the scanner heads' electronics in series of rapid, discrete 'blinks'.

Each of these strips of light is focused down from its original 4-inch width to only a fraction of that by a lens, and then onto a 'charge coupled device' (CCD) detector. The CCD detector accepts the light coming into it and divides it up into either 1600, 1200, 800, or 400 individual pieces or dots (across the width of the strip of light coming in)—the number of pieces depends on the setting you've chosen for the Dots Per Inch switch: 300 dots per inch times 4 inches wide = 1200 dots, for instance. The CCD detector then measures the intensity of each of the light dots and reports those values to the electronic logic circuits in the scanner head.

These logic circuits take the individual light intensity values and select the closest of only 64 values for each. This process is known as quantizing, and it's necessary since the light intensity information must eventually be handled by a computer ... and computers only like to work with discrete values.

If the scanner head's Letter/Photo switch is in the letter position, the only values that the logic circuits will assign are 0 and 1, corresponding to either a dot of light or no dot. If the switch is in one of the three Photo positions, though, the logic circuits create a 'matrix' of values, with each entry in the matrix taking on any value of the 64 possible.

All this light intensity information is sent out to the Quickie interface card, which is designed to accept it and configure it in a way that the IIgs can understand. For instance, since a IIgs can accept only 8 bits of data at a time, the Quickie card makes sure that the data coming from the scanner head are sent in packets of 8 bits (no more, no less) each.

The final link in the chain is the Quickie software, which interprets the scanner data relayed by the interface card. If the scanner head's switch is in the Letter position, it's pretty simple: a 0 from the scanner head signifies a black dot on the screen, and a 1 signifies a white dot.

If the switch is in one of the Photo positions, though, the Quickie software has to do two things: interpret the information that's been sent out in matrix form and then decide which of the only 16 levels of grey the IIgs can display should be used for each dot on the screen.

## ACES

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*Submitted by Steve George*

of my stuff out here and I never went back to school. Technically I'm still somewhere in the middle of my junior year.

I say this is all excessively weird because I was hired for my job (as an intern) completely electronically — I never interviewed for it at all. Rilla had met me at the IIgs College and hired me as an intern based completely on our phone and electronic conversations. I have *never* seen this kind of thing happen at Apple except — I've never known anyone Apple hired but never interviewed except me.

GL: Apple Computer was founded by two professional pranksters, Steve Wozniak and Steve Jobs. Can you share with us any of the humorous pranks that you've instigated or witnessed at Apple?

MD: Pranks are a way of life in some groups, and in other groups they rarely happen at all. In DTS they're a way of life. Right now, Neil Day (Macintosh Technical Notes and Sample Code engineer) is on vacation after celebrating a birthday last week. To celebrate, while he's been gone, his friendly coworkers have filled his office with about two inches of sand.

I personally will not be having any more birthdays at Apple.

GL: Is there any achievement that you're particularly proud of?

MD: I've been lucky to achieve many things in my life so far — academically, musically and professionally — that it's hard to pick out one thing that I'm exceptionally proud of. I try not to start on something if I don't think I'll be proud of it when it's done — especially things that have my name on them.

I guess professionally I'm kind of proud of the one-to-many tools I've been able to release, including a whole slew of Technical Notes, a few magazine articles and some sample code.

It's nice to be able to work on things that can help lots of people, and one-to-many tools are like that. It's also nice that Apple has a fairly-free distribution policy for Technical Notes and Sample Code (you can redistribute them, but not modify or sell them) — that means a lot of what I've worked on is available in A2Pro's libraries where anyone can have it for the cost of the download.

GL: Who do you consider your mentors?

MD: I've learned much from a lot of people, and in a lot of cases we've learned a lot together. I've been particularly pleased at all the discoveries Dave Lyons, Andy Nicholas and I have made together and how we've been able to make use of them in the system software or in other places. It's a lot like A2Pro's bulletin board — more often than not, everyone discovers things together.

The first person I really learned about computer programming from, though, has to be the late Dr. Richard Andree of the University of Oklahoma. Dr. Andree and his wife (also Dr. Andree) were expert cryptoanalysts during World War II, and after the war they returned to mathematics and computing. They founded Mu Alpha Theta (M A Th), the national high school and junior college mathematics club. They held a summer camp for mathematically gifted students every summer for 25 years to teach them about computer programming and how common sense and logical thinking makes programming easier, and that's where I learned a lot of the programming foundation I've used for years since then.

Dr. Richard Andree passed away a few years ago, but Mu Alpha Theta and thousands of kids everywhere benefit every day from the work he did.

GL: Do you have any favorite mottoes or proverbs?

MD: My motto comes from my friend Robert Thurman, and remains "Eat lots of toast." Words to live by.

GL: What do you foresee as being the important developments in personal computers in the next five or ten years?

MD: The most important development will be the continuation and permeation of an idea that's already changed the way people look at computers: computers are tools, not ends in themselves. Real people are interested in using the computer to help them with their figuring out how to make the computer do what they want.

GL: Can you describe what a typical work day for you is like?

MD: No work day is typical.

We have an Email meeting at 10:00 AM every
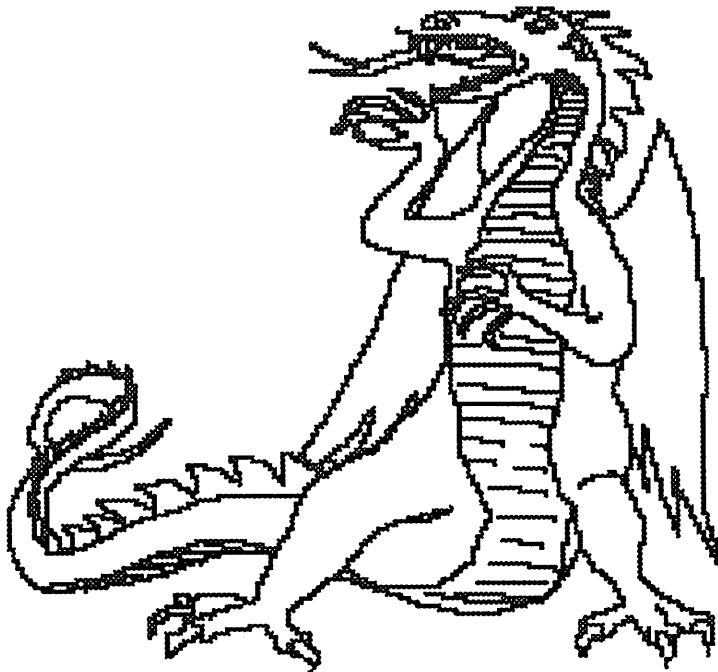
morning, where we discuss the Emails that need our attention that day. We talk about the problems and decide who will be responsible for researching and answering each one, then we go and do our stuff.

During a day, we'll answer Emails, work on Technical Notes or Sample Code, review documentation to make sure it's accurate, work on upcoming projects to make sure developers' needs are met in the product, and learning future technologies. We also throw things at each other and eat.

Sometimes it takes a lot more than 8 hours per day; sometimes I work all night because I get started on something and want to finish. I especially tend to do this on Sunday nights/ Monday mornings, then come home and sleep Monday afternoon and evening and start again Tuesday morning. But sitting through Monday morning meetings after being awake for 22 hours is usually not fun.

*GL*: In the Apple II world, Steve Wozniak is a legendary figure.

Was the Woz still working at Apple when you started working there? Any stories or anecdotes about working with the Woz?

*MD*: "Woz" is short for "Wozniak." He's not "The Woz" anymore than you're "the Tom" or "the Phil." You're thinking of "The Wiz", which was a musical.

Woz is still an Apple Fellow, so he draws salary and officially works for Apple, but he doesn't have any duties that I know of. I've met him several times but I've never actively worked with him.

*GL*: Obviously your official presence will be a big draw in A2Pro. Do you have any changes or improvements planned for A2Pro you would like to share with us??

*MD*: Our revised/revamped A2Pro staff (me, Steve Gunn, Jim Murphy, Jeff Holcombe and Greg DaCosta) are going to stir up some trouble. Right after starting we announced new programming contests and con-

ferences, and with new Apple II university courses later this summer and more contests, people who like to program shouldn't have any trouble staying busy.

*GL*: What advice do you have for people considering writing software for the Apple II — new to programing and experienced.

*MD*: Too much to list here — come to A2Pro and find out!

*Selection from the GEnieLamp Online newsletter - July 1992*

*© Copyright 1992 T/TalkNET OnLine Publishing, GEnie, and the GEnie Computing RoundTables. To sign up for GEnie service, call (with modem) 1-800-638-8369. Upon connection type HHH. Wait for the U#= prompt. Type: XTX99368,GENIE and hit RETURN. The system will then prompt you for your information.*

*Submitted by Tom Gates* 

*HyperBytes — continued from page 17*

```
location)+3+high
    else
        domenu "New Field"
        set the style of last bg fld to "Rectangle"
    end if
  end if
end nf
on nb
  if the shiftKey is down then -- we work on the card level
    set the editbkgnd to false
    if the number of cd btns > 0 then
        put the loc of last cd btn into location
        select last cd btn
        domenu "Copy Button"
        domenu "Paste Button"
        set the loc of last cd btn to (item 1 of
location)+5,(item 2 of location)+5
    else
        domenu "New Button"
        set the style of last cd btn to "Shadow"
    end if
```

```
  else -- we work on the background level
    set the editbkgnd to true
    if the number of bg btns > 0 then
        put the loc of last bg btn into location
        select last bg btn
        domenu "Copy Button"
        domenu "Paste Button"
        set the loc of last bg btn to (item 1 of location)+5,(item 2 of location)+5
    else
        domenu "New Button"
        set the style of last bg btn to "Shadow"
    end if
  end if
end nb
on nm -- modified to improve on "on cd" and "on cds" handlers
    put "This is card "&the number of this cd&" of "&the number of cds&" cards."
end nm
```

*Tom Edwards*

# Disinfectant 2.9 Released

*important*

*news*

submitted by
Peter Fleck

*by Mark H. Anbinder — TidBITS Contributing Editor*

John Norstad of Northwestern University has released version 2.9 of his free anti-virus utility, Disinfectant. Version 2.9 detects the T4 virus, two strains of which were discovered in several locations around the world late last month.

The T4 virus can interfere with the booting process, either causing crashes during startup or preventing system extensions from loading properly. It masquerades as Disinfectant when attempting to infect files, in an apparent attempt to get around the "suspicious activity monitor" type of anti-virus utility. If you see a warning that "Disinfectant" is attempting to modify a file, and you are not using Disinfectant, it is a good indication that the T4 virus may be attacking your system.

Unfortunately, applications that have been infected with the T4 virus can not be repaired, so it is necessary to delete and replace any infected applications. Previously, Disinfectant had been able to repair virtually any infection. Some anti-virus authors prefer to recommend that users always replace, rather than repair, any infected files, but Norstad feels that it's more realistic to offer users the option of repairing files rather than expecting them to religiously replace applications. In this case, though, the option is not available.

The virus was embedded in two versions, 2.0 and 2.1, of the game GoMoku, which was distributed widely via online services, Internet FTP archives, and the comp.binaries.mac Usenet group. Users who have these versions of GoMoku should discard them and use Disinfectant 2.9, or another anti-virus utility released since the beginning of July, to scan all of their disks. The games were apparently distributed under a false name; the person whose name appears in the program's about box was completely uninvolved with the virus, and that name should not be used when referring to the virus.

Norstad took the opportunity in his release announcement to mention that three Cornell University students have been indicted on an assortment of felony and misdemeanor counts, including first-degree computer tampering, in connection with the release of the MBDF virus this spring. They are presently awaiting trial. Norstad hopes that this news will remind potential virus writers that computer viruses are taken seriously, and that writing them and releasing them is a crime that can, should, and will be punished under the law.

*There have not been any reports of the T4 virus in the Twin Cities area or Minnesota (as far as we know). The newest version of Disinfectant should be available from Mini'app'les by the time you read this. You can trade in your old version.*

*submitted by Peter Fleck*

# Only one spreadsheet is all 1-2-3 and all Macintosh. Right down to the core.

**Be manipulative—** Command your worksheet with direct manipulation of all data, graphs, drawn objects and scanned images.

**Unified Work Environment—**The menu never changes and all information resides in one file.

**In-cell vs. Excel—**Enter data or formulas directly into a cell, bypassing the console. Sounds simple because it is.

**Publish and Subscribe—** Change your data and the changes will be automatically updated across the network.

*"1-2-3 for Macintosh...stands apart from its competition...
by providing three-dimensional worksheet capabilities and the ability for users
to perform in-cell editing."*
—PC WEEK, DECEMBER 16, 1991

One look and Apple Chairman and CEO John Sculley called it "a spectacular product"* You see, this isn't just another version of a Lotus® 1-2-3® spreadsheet. It's a program that really grabs hold of the full power of Macintosh®.

Its friendly Mac® interface makes working with data, text and graphics fast and easy. Plus, you'll have features that push the capabilities of System 7 to the limit. Like Publish and Subscribe, Apple® Events, Data Access Manager and Balloon Help™. 1-2-3 for Macintosh is compatible

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with other versions of 1-2-3 and even reads and writes Microsoft® Excel files. So you can switch to 1-2-3 and never look back. What's more, with one press of the slash key, the 1-2-3 Classic® menu appears on the screen—great news for those of you coming from the DOS world.

See why the world's best-selling spreadsheet is the world's best choice for Macintosh. Visit your favorite dealer for a free working model or call **1-800-TRADEUP, ext. 6465.**\*\* Excel users, be sure to ask about our special upgrade offer.
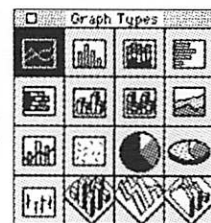
*Select from hundreds of graph variations, then directly manipulate and customize them to your liking.*
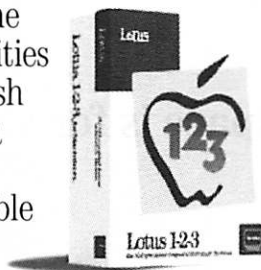
# Introducing 1-2-3 for Macintosh

**Lotus**

# Classified Ads*

## Help Wanted

### EVANGELISTS

Be the next Guy Kawasaki by helping the Mini'app'les user group and the Science Museum of Minnesota with the Software Expo, Sept. 11 & 12.

The Expo will take place in the atrium just outside the Science Museum. We're hoping to have 10 to 20 Macs with all kinds of software. It's a chance for the public to learn about computers and what they can do and to make some decisions about the kind of software they need for a home or business computer. For the museum, it's an opportunity to push their computer classes. For the user group, a chance to sell memberships. FOR YOU, it's a chance to have some fun and promote our favorite computing platform!

**WE NEED:** — Presenters/ Experts — There will be software presentations in the Science Museum auditorium — 45 minutes, using a IIsi and an overhead. This would just be an overview of a program. We would like TWO hours of your time though so you could spend time on the main floor as the expert for that program.

If you don't want to do a formal presentation, then just spend time on the floor with your favorite program and let us refer folks to you with questions.

Programs to cover: Excel, Word, WordPerfect, Page-Maker, Freehand, Illustrator, Power Point, Persuasion, FoxBase, Lotus 1-2-3.

We're also open to almost any program demo idea such as a shareware or game review, or comparing 2 word processors etc. I know I've skipped some programs above (like FM Pro) but I think we have them covered.

**ALSO NEEDED:** Plain old volunteers to answer questions, sell memberships, etc.

**MAC EQUIPMENT** — mostly computers but anything might be needed — there will be security at night.

**THE COMPETITION:** The Twin City PC user group will also be assembled and pushing their platform.

**NON-COMMERCIAL:** This is a non-commercial event to promote the Macintosh, the Science Museum, and Mini'app'les not to sell software or services.

**YOU DO NOT** have to be a Mini'app'les member to participate.

For more info or to sign up, contact: Peter Fleck at 370-0017

## For Sale

### Excell 3.0

New! Manuals are in plastic wrap. Includes all rights to ownership. Call Peter at 220-0202 days, 430-0316 eves.

### 1970 Chev

1970 Chev Impala 2-Door Hardtop. 350 Engine runs but needs work. Body fair. This was a North Dakota car until about three years ago (little rust). $400 or B.O. Call 507-263-3715 for details.

### Mac SE

Mac SE, 40MB HD, 2.5MB RAM, Std. keyboard. Ask for Barb, 827-2782.

### Apple IIGS

1.5 megs RAM, color monitor, 3.5" and 5.25" drives, Kensington fan, mouse, keyboard & software: $750.

Apple IIGS RAM card with 756K: $65.00.

Apple IIGS Applied Ingenuity stereo card: $20.

Ask for Dave at 432-0913

### ImageWriter Printer

Apple ImageWriter II (color) printer with new printhead and two new color ribbons: $240.00. Apple, 800K 3.5" drive: $120.00. Dave: 432-0913.

### Weights/Table

120 pounds of cement-filled plastic weights with bar, collars, etc. Padded table with mechanism for leg-workouts. $60. Ask for Dave at 432-0913.

### Mattress

Twin size, firm mattress, used 3 months. $85.00. Ask for Dave at 432-0913.

### Dorm Bed

Elevated platform bed, 60" high on stilts, painted white, regular twin mattress. $120.00. Ask for Dave at 432-0913.

## Wanted

### Member Help

Science Museum Software Expo coordination meetings. All are invited to attend. Looking for ideas and help for the upcoming Software Expo.

Contact: Tom Gates - evenings 789-1713, voicemail 229-6952 (24 hrs), BBS 892-3317 (24 hrs).

## Notices

* You can leave your ad by calling Dave at 432-0913, our BBS at 892-3317 or our Voice Mail phone number at 229-6952. You may also mail your ad to our Post Office box. Ads are due by the 10th of the month.

*Our staff reserves the right to make changes for completeness, clarity, appropriateness and length.*

## This space is for sale!

# Now You Can Have Your Black And White. And Color, Too.
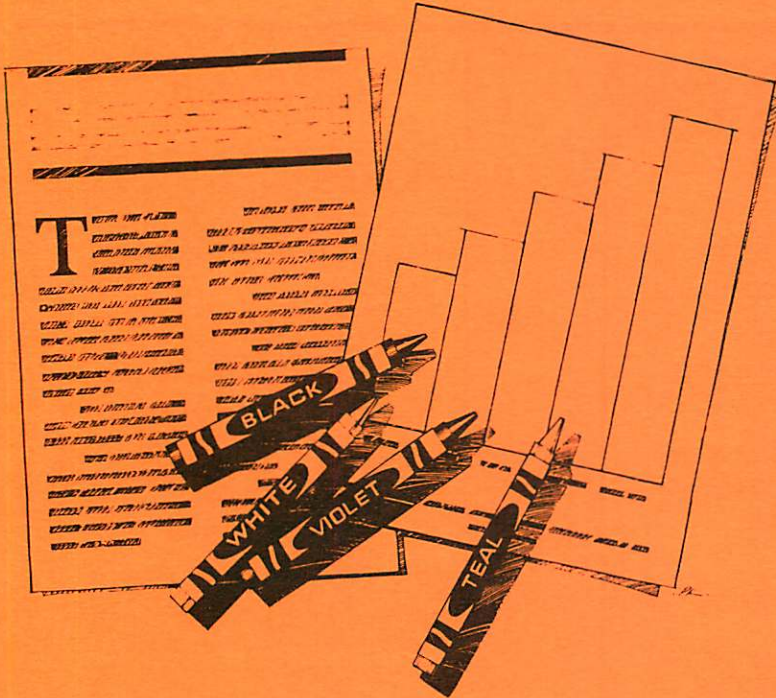
**HP DeskWriter printer $399**

**HP DeskWriter C printer $750**

*cash price*
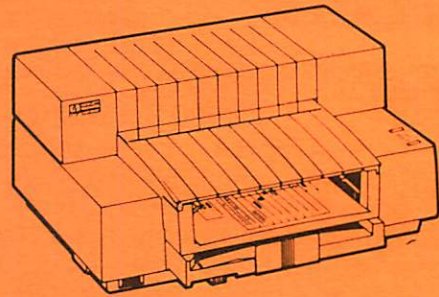
- Affordable 300-dpi laser-quality printing
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  with the HP DeskWriter C
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