

— The DataBus —

Monthly Newsletter of

The Dayton Microcomputer Association

Volume XII (New Series) Nº 4 (April 2022)



Gary COY:

The Chrome “Flex” Operating System

—Contents—

About DMA	2
April Meeting	3
March Trustees’ Minutes	4
Solid-State Drives: What’s New?	8
Single Board Computer SIG	9
DMA Calendar	10
History of DMA	14
Membership Form (New and Renewals)	15

SAVE A TREE (or at least a branch)! If you prefer to print your DATABUS rather than read it directly from a monitor, don’t print page 15 unless you wish to become a member or renew your membership.



Post Office Box 4005
Dayton, Ohio 45401
(937) 777-DMA1
(777-3621)

Visit us at:

DMA1.org

Your 2021/22 Officers:

President

Gary COY

Vice-President

Edwin DAVIDSON

Secretary

Glady CAMPION

Treasurer

Pat FLYNN

*Officers need not be
Trustees.*

Trustees:

Glady CAMPION
Edwin DAVIDSON
Patrick FLYNN
Peter HESS
Chester HOWES
Ken PHELPS
Dave SCHWAB
Ed SKUYA
Gary TURNER

Webmasters:

Mark CAMDEN
& Brent KERLIN

Webmaster Emeritus:
Dave LUNDY, †4/13/20

ESTABLISHED IN 1976, DMA is a group of Dayton-area professionals and enthusiasts in the field of computing and digital information technology. General Membership Meetings are usually held on the last Tuesday of each month. DMA has a number of Special Interest Groups (SIGs) in areas ranging from digital investing and genealogy to the Linux operating system. Each SIG meets according to its own schedule. DMA is a member of the Association of Personal Computer Users' Groups (APCUG) and the Affiliated Societies' Council (ASC). Click on any of the logos—including our own (top left)—to go to that organization's Web site.



Submissions ...

THE DATABUS welcomes compliments, complaints, suggestions, and especially articles. We can accept articles in ASCII, or as attachments in plain text, Microsoft Word, Open or Libre Office Writer, or, yes, even in WordStar (a word-processing program that goes back to about 1980!). Send articles to:

Editor@DMA1.org

All articles are subject to editing for spelling, grammar, usage, and space. Retain a copy of your work, as THE DATABUS cannot be responsible for loss. When articles are of roughly equal quality and importance, those by paid-up DMA members receive preference.

ALL REGISTERED TRADEMARKS, for example: the DMA Arrow, APCUG, Samsung, WordFence, YouTube, or ZOOM, are the property of their respective owners. However, the Registered Trade Mark symbols (® or ™) have been omitted for better readability. The Editor occasionally inserts comments into articles. Such comments are sometimes preceded by the phrase: "EDITOR'S NOTE," are often in square brackets [like these], and are always in sans-serif type, like these paragraphs.

THE DATABUS is written and published by volunteers. We do not give professional advice on hardware, software, or network installation, repair, security, or troubleshooting. If you need expert assistance or repair for your digital device or network, please seek the advice or services of a qualified professional.

April Meeting: 7:00 P.M., Tuesday, the 26TH
No Driving—No Charge*

* This is a “hybrid” meeting: via ZOOM, but also in person. Come at 6 P.M. if you wish to join us in person for dinner at T. J. Chump’s Restaurant in suburban Huber Heights, next door to the Meijer’s Supermarket. Click *here* for a map. The restaurant has free parking. It is also accessible via RTA bus routes 18 and 19, but there is a short walk from the bus stop in the Meijer’s department store parking lot to the restaurant.

Gary COY:

The Chrome “Flex” Operating System

OCTOBER 2025 SPELLS THE END OF SUPPORT FOR THE WINDOWS 10 OPERATING SYSTEM (OS). Many of the computers we are currently using cannot be upgraded to Windows 11. Google has been developing an easy work-around, a way to continue using those PC and MAC machines. In February, Google introduced a new version of its Chrome Operating System, a trial version called Chrome OS Flex. This is a “cloud-first” OS that is free to download and either try or install on almost any PC or Mac. It is well worth taking a look. The stable release is expected some time before July.

Gary Coy is the current President of DMA, a Trustee, and frequent presenter. He is also VP of the NASAC user group. Gary has over twenty years’ experience in the electronic and computer industry. He currently works for the Speedway Corporation as a customer service claims specialist. Gary serves as a volunteer and part-time EMT. He offers computer tech support through his own company, “Gary’s Computers”.

Our meeting starts at 7:00 P.M. DMA members will receive an invitation by e-mail for ZOOM. Others may request an invitation by using:

<http://www.dma1.org/contact-us/>

... TDB

Minutes are normally published almost two months late, because the Minutes for, say, the March Board meeting must be approved by the Trustees at the *following month's* meeting — in this case, early April. The corrected and approved March Minutes would thus appear in the April DATABUS (this issue), published toward the end of the month.

Trustees' meetings are usually on the *first Monday of each month*, except when that day is a legal holiday, for example: Labor Day in September. During the epidemic, Trustees began meeting via ZOOM. This was so successful that they have decided to continue the practice indefinitely. Meetings begin at 7 P.M. and are open to all DMA members. Request ZOOM credentials (that's a fancy way of saying "an invitation") from Secretary GLADY CAMPION at Tuesday's General Membership meeting.

DMA Board of Trustees – Meeting of Monday, March 7, 2022

CALL TO ORDER

The meeting was called to order at 7:02 P.M. by Gary Coy, via ZOOM.

Trustees present: Gladly Campion, Gary Coy, Edwin Davidson, Peter Hess, Ken Phelps, Dave Schwab, Ed Skuya, and Gary Turner. **Excused:** Chester Howes. **Guests:** Mark Camden, Pat Flynn, Mike Stock, Suzette de Guzman, Roy Smith.

OFFICERS' REPORTS

President – Gary Coy

Our February meeting was a collection of videos on Cryptocurrency and Blockchain. The videos played well over Zoom, but there were problems producing enough sound volume for those listening at TJ Chumps.

Vice President – Edwin Davidson

The Single Board Computers (SBC) SIG and the Network SIG both met in February.

Secretary – Pat Flynn, Gladly Campion

Gladly presented minutes for the February board meeting. Dave Schwab moved the minutes be accepted. Ed Skuya seconded and the motion passed with Gladly abstaining.

Treasurer – Gladly Campion, Pat Flynn

Pat presented a report for February.

COMMITTEE REPORTS

Audit – Gladly Campion

In progress

Fund Raising – Peter Hess

Peter sent a letter to APCUG about the Computer Museum.

He requested an e-mail alias for APCUG-rep@dma1.org.



—Notice—

Because of confidentiality concerns (for example, hackers could readily discover in what financial institutions DMA holds its assets), Treasurer's Reports are not published. However, the current Treasurer's Report is available to any DMA member on request.

(Continued on page 5)

(MARCH MINUTES—Continued from page 4)

Peter is asking for crowd funding for the museum. There are 3 or 4 crowd funding tools available.

Marketing – Peter Hess, Edwin Davidson, Pat Flynn, Debra McFall, Catherine Devlin

Peter posted details of our general meeting to Meetup.

Membership – Gladys Campion

At the current time, we have 46 Regular, 4 Associate, 0 Student, and 5 Lifetime members for a total of 55. Attendance for February was 25, with 11 in person at TJ Chumps.

Kathleen Kannik won the Aukey KM-G12 backlit mechanical keyboard. Roy Smith snagged the Google Home Mini. Ed Skuya picked up a Wenger Beta 14 laptop sleeve.

Net Administration Team – Ken Phelps, Gary Turner, Pat Flynn, Brent Kerlin, Mark Camden

Mark explained the updates to the “Contact Us” page and changes to info@dma1.org to improve message handling.

Programs – OPEN!

Thanks to Gary Coy for acting as MC for the videos on Cryptocurrency and Blockchain for the February meeting.

There was a suggestion for a future meeting on The Tarnished Side of Cryptocurrency.

Evolv Technology was suggested as a topic. They provide touchless security. Evolv Express spots concealed weapons and other threats using digital sensors and AI. Evolvtechnology.com Other suggestions include “Pandemic Technologies” and “How to handle DMA shell accounts”

We still hope to schedule talks on MetroNet fiber internet and possibly Generac.

Trustees also suggested talks about installing Linux on a Google Chromebook, or running Linux on the Windows subsystem for Linux (WSL), or even installing Windows on a Linux Virtual Machine.

Publications – Martin Arbagi

THE DATABUS was posted for February.

UNFINISHED BUSINESS

Wright State Archives – Martin Arbagi, Gladys Campion

Still in progress

Next Board Meeting

Next Board Meeting will be 7:00 P.M. on Monday, April 4, 2022. We shall continue to use ZOOM.

List of DMA accounts – Gladys Campion

Still in progress

Computer Museum – Peter Hess

Edwin talked to us about Wright-Dunbar.org, a nonprofit for managing the West Third Street Historic District.

Suzette and Roy are offering 1500-2000 square feet of office space on Taywood Road for a very generous rate. They are also donating three desks and a few pieces of office machinery. Peter is inviting the Computer Museum Team to tour a possible building location to compile and fully document all of our present museum exhibits from temporary storage in about six members’ homes. The van donated by Suzette and Roy does run. Peter is working to have the title switched to DMA. Peter asked that Suzette and Roy be added to the e-mail alias for the team planning the Computer Museum.

Peter is also asking for a Computer Museum page to be added to our Web site.

(Continued on page 6)

(MARCH TRUSTEES' MINUTES—Continued from page 5)

He is also asking for a second, smaller banner for the Computer Museum.

Stephen Frey has arranged to do a presentation about the museum for the Barn Gang at the Dayton Engineers' Club on March 29. He is also working on a presentation in May at the Air Force Museum.

DMA Phone Number – Debra McFall

Pat Flynn is running into problems trying to port the DMA phone number to Number Barn. He will continue troubleshooting the process.

VOLUNTEER OF THE MONTH/QUARTER/YEAR

Mark Camden was nominated for Volunteer of the Month for his work on understanding the workings of Dreamhost.

ADJOURNMENT

Edwin Davidson moved to adjourn at 9:34 P.M. Dave Schwab seconded and the motion passed with no one abstaining.

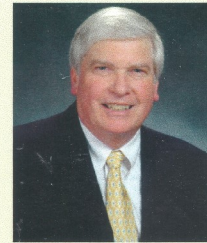
*Respectfully Submitted,
Glady Champion,
... Secretary*

Help DMA by using Amazon's SMILE program!

AMAZON, the Internet's largest retailer (if you haven't noticed, Amazon isn't just for books any more!) has a "Smile" feature whereby Amazon donates a percentage of almost any purchase you make to a selected nonprofit organization. There is *no* extra cost to you. Click [here](#) to learn more or [here](#) to go directly to the sign-up page. Be sure to put DMA down as the beneficiary of your purchases.

Wayne Fourman
May Financial Group, Inc.
Financial Planning Services

425 Memorial Drive
P.O. Box 320
Greenville, OH 45331
Phone (937) 548-5035
www.waynefourman.com



*Registered Representative
Since 1983*

Advisory Services are provided through Creative Financial Designs, Inc. a Registered Investment Advisor, and Securities are offered through cfd Investments, Inc. a Registered Broker/Dealer, Member FINRA & SIPC. May Financial Group, Inc. is not affiliated with cfd companies



**Patronize Our
Member-Advertisers!**



GARY'S COMPUTERS
Computer repairs,
upgrades, & custom builds.
Home networking.

GARY COY
Computer Technician

4946 Peacock Road
Springfield, Ohio 45502
937-360-1464
gcoy@woh.rr.com
In-home services available

Travel Through Time On Indiana's Most Scenic Railroad
WHITewater VALLEY RAILROAD



765-825-2054
www.whitewatervalleyrr.org

Solid State Drives – What’s New

By Tom BURT, Vice-President
Sun City Summerlin Computer Club
<https://www.scscc.club>
tomburt89134 (at) cox.net

Solid State Drives (SSDs) have been around for quite a while. However, prices have come down while capacities and performance have gone up. As a result, adding an SSD to an existing system has gone from being a luxury to a practical way to increase the performance of a desktop or laptop significantly.

SSD capacities have grown from 32 GB to 64GB ten years ago to 256 GB, 512 GB, and 1 TB today. So if you’re flush with cash, you can even get a 2 TB SSD.

A majority of SSDs are sold as 2.5-inch drives with a SATA controller and power supply. These drives look to PC hardware and software just like a regular hard disk drive. Most SATA SSDs are rated as SATA III, which can deliver data between the drive and the motherboard at 6 billion bits per second.

Sequential read/write speeds are now up in the range of 500 Megabytes per second for top-line SATA III drives. In addition, for random I/O, high-end drives are rated at up to 100,000 input/output operations per second. This makes SATA SSDs about three times faster than hard disk drives.

Two new SSD PCIE card form factors have begun to supplant the SATA format in the past five years. One is a small card that combines flash memory chips and a SATA controller. It plugs into a special M.2 socket on the motherboard. To the PC’s CPU, it appears as a secondary SATA controller. These cards are recognizable because they have two notches (B+M) in the connector end. Performance is comparable to a 2.5 inch SSD, but the card takes up much less space and uses less power. As a result, these are now popular in laptop PCs.

The second new form factor is called NVME (Non-volatile Memory Express). An NVME SSD does not include a SATA controller; it is directly connected to the PCIe data bus of the motherboard via a simple memory controller interface. The NVME SSD card also plugs into an M.2 socket on the motherboard. The NVME SSD card only has a single notch (M only) in the connector end.

For more details on the M.2 slot, see the following: <https://www.howtogeek.com/320421/what-is-the-m.2-expansion-slot/>

Top-line NVME SSDs like the Samsung 980 Pro above can read data at up to 7000 megabytes (56 gigabits) per second if installed on a motherboard supporting PCIe 4.0. This is about 12 times faster than a SATA hard drive. The 1TB 980 Pro unit retails for about \$200. A mid-range unit like the 1TB Samsung 970EVO retails for about \$140 and can read at up to 3500 megabytes (28 gigabits) per second.

The significant performance difference in SSDs is that they can instantly access a block of data anywhere in the drive’s memory. By contrast, a hard disk drive must position the read/write heads to the correct track and then wait for the desired block to rotate under the heads. This access time can take up to 10 milliseconds or more – easily 5,000 times longer than the



(Continued on page 12)

Single Board Computer Special Interest Group

By Dave SCHWAB, KE8DOC

THE JOINT DAYTON MICROCOMPUTER ASSOCIATION and Dayton Amateur Radio Association Single Board Computer SIG met at the DARA B-road facility on April 9TH. The project of the day was to install the Build-a-Pi software from KM4ACK. Build-a-Pi is a menu based installer for a large number of popular amateur radio software packages.

We had problems with the first install due to changes in European Union Cyber Law. As we were using a newly installed download of the Raspberry operating system which can not have a default user and password. The Build-a Pi script uses the Raspberry OS default user home path (/home/pi) to install the software. The Linux based Raspberry OS builds a home directory with the user name. So if you use a user name other than the old default (Pi) the Build-a-Pi install will error. After making a new user named Pi everyone was able to install Build-a-Pi.

An e-mail from Jason KM4ACK stated that he is aware of the problem. It will take some time to modify the Build-a-Pi script.




The Single Board Computer SIG will not have a May meeting. Just too hectic the week before Hamvention.

EDITOR'S NOTE: Much — some would say *most* — of DMA's activities are in its Special Interest Groups, or SIGs. We'd like to see more reports like this one from individual SIGs. ... TDB

DMA Calendar of Events, 17 April through 21 May 2022.

(Click anywhere on the calendar for the fully updated version at our Web site.)

DMA Events for Apr 17 – May 21, 2022

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Apr 17	Apr 18 <i>World Amateur Radio Day</i> 	Apr 19	Apr 20	Apr 21 Linux SIG 7:00pm 348 Russ Eng Wright State Univ. Colonel Glenn Hwy Beavercreek	Apr 22 <i>Earth day</i> ← Python Self-Study 2:00pm, Online PyFri Discord See http://d8ndl.org	Apr 23 
Apr 24	Apr 25	Apr 26 MAIN MEETING 7:00pm Online -AND- TJ Chumps 7050 Executive Blvd Huber Heights	Apr 27	Apr 28	Apr 29 Python Self-Study 2:00pm, Online PyFri Discord See http://d8ndl.org	Apr 30
May 1	May 2 DMA Trustees 7:00pm Online	May 3	May 4	May 5 INFOSEC Genealogy SIG 6:30pm Online gen-sig@dma1.org	May 6 STIR TREK Python Self-Study 2:00pm, Online PyFri Discord See http://d8ndl.org	May 7 Classic Computers 3:00pm By phone
May 8 	May 9 Network SIG 6:00pm Conf Rm Wlmngtn-Stroop Lib 3980 Wilmington Pike Dayton	May 10 Investment SIG 7:00pm Online investment-sig @dma1.org	May 11 Dayton Dynamic Languages 7:00pm Innovation Hub / online http://d8ndl.org	May 12 NASAC 6:00pm Hustead Fire Dept. 6215 Springfield- Xenia Springfield	May 13 Python Self-Study 2:00pm, Online PyFri Discord See http://d8ndl.org	May 14 SBC SIG 2:00pm DARA Clubhouse 6619 Bellefontaine Huber Heights
May 15	May 16	May 17	May 18	May 19 Linux SIG 7:00pm 348 Russ Eng Wright State Univ. Colonel Glenn Hwy Beavercreek	May 20 HAMVENTION Python Self-Study 2:00pm, Online PyFri Discord See http://d8ndl.org	May 21 HAMVENTION Classic Computers 3:00pm By phone

Have a business card? Are you a DMA member?

ANY PAID-UP MEMBER of the Dayton Microcomputer Association is entitled to a *free* business card-sized advertisement in THE DATABUS. Send a good-quality image (600 dpi or better) to Editor@DMA1.org, or give your business card to **Martin Arbagi**, the Editor, at any DMA meeting. We can embed a link to your Web site (if you have one) within the image of your card. Under weird IRS regulations, your Web site may not include discount coupons for DMA members, although discount offers may be included in the advertisement *itself*.

Help DMA by using Amazon's SMILE program!

AMAZON, the Internet's largest retailer (if you haven't noticed, Amazon isn't just for books any more!) has a "Smile" feature whereby Amazon donates a percentage of almost any purchase you make to a nonprofit organization that you select. There is *no* extra cost to you. Click [here](#) to learn more or [here](#) to go directly to the sign-up page. Be sure to put DMA down as the beneficiary of your purchases.

(SSD DRIVES—Continued from page 8)

SSD. In addition, the newer NVME SSD cards can transfer data 6 to 12 times faster than a SATA drive can.

Upgrading a PC to use an SSD can take either of two routes: adding the SSD to an existing desktop PC while keeping the PC's original hard drive installed; the second is to replace the PC's hard drive with an SSD. For a laptop, the second approach is the only practical one; there isn't room in the laptop for two drives. However, the first approach may be more satisfactory for desktops since it combines high performance while not forsaking high storage capacity. For example, you can use the SSD to store the operating system, applications, and very frequently accessed data files and then use the much larger hard disk drive to store all your other documents: photos, music, videos, and such.

Most new motherboards come with at least one M.2 connector, so adding an NVME or SATA M.2 SSD is possible if you're building a PC desktop tower. In the image at the right, there are screw holes for three different lengths of M.2 card. 80 millimeters (the one with the screw and the red arrow pointing to it) is the commonest. For commercially-made brand-name desktops, you may have to go with a 2.5 inch SATA III drive connecting via a SATA cable to one of the SATA ports on the PC's motherboard. In a laptop, that will also likely be the case; you will replace the laptop's hard drive with a 2.5 inch SATA SSD. However, for a desktop without an M.2 connector, you can also buy a PCIe to M.2 adapter card that has an M.2 connector on the card and plugs into a PCIe slot on the motherboard. These adapters cost \$10 to \$15.



For a tutorial on installing an M.2 SSD, see the following:

<https://www.techradar.com/how-to/how-to-install-an-m2-nvmesata-ssd-on-your-pc>.

In upgrading to an SSD, you will need to consider whether to reinstall your operating system (Windows, Mac OS, possibly Linux) and applications from scratch or attempt to copy (clone) your existing system to the SSD. If you wish to copy your current hard drive's system, you will need an imaging or cloning tool such as Acronis True Image, Casper, or Macrium Reflect. The challenge is to get the size of your operating system's hard disk partition to be no larger than the size of your new SSD. There are many complications related to this, and details are beyond the scope of this article. However, you might want to stop by our Tuesday Hardware / Software Repair SIG and get some advice before diving into an SSD upgrade.

If you're now convinced, an SSD is the way to go, what's the best size and make to buy? Lower-end SATA drives are often on sale for about 12 cents per gigabyte. These drives are OK but may not be as fast as the top-end drives. Higher-end drives are selling for about 20 cents per gigabyte. The Samsung EVO series drives get very high ratings and have some of the best performance specs at very good prices.

Other brands are good also but read the recent reviews carefully. A few years ago, some vendors got good initial reviews on their solid-state drives and then switched to cheaper, slower memory chips. Check the usual on-line stores (Amazon.com, NewEgg.com, TigerDirect.com) and watch for sales. A 500 GB drive is very attractive at current prices, and you will most likely not run into capacity problems.

... TDB

ABOUT THE DAYTON MICROCOMPUTER ASSOCIATION, Inc. (DMA)

By PETER HESS, DMA President, 2018-2020

ABOUT FORTY-SIX YEARS AGO, a small group of computer enthusiasts from the Dayton, Ohio area gathered around a kitchen table looking at, and playing with, an early personal computer called the Altair 680 that one of them had purchased. This computer had been featured earlier on the cover of January 1975 issue of *Popular Electronics* magazine. Paul Allen had shown the same article about Altair to Bill Gates, and they wrote software together for that computer. Still later — and still together — Allen and Gates founded the Microsoft Corporation.



the
Pop-
zine.
the
the
later,
er.
to-
Gates

Shortly thereafter, those Dayton-area computer enthusiasts joined with many others to form THE DAYTON MICROCOMPUTER ASSOCIATION (DMA), now one of the oldest (if not *the* oldest) continuously operating computer user groups in the world. Typically, computer user groups, and the newer iteration, technology user groups, are volunteer-run operations. The DMA is an all-volunteer led, organized, and run 501(c)(3) non-profit organization.

Now, there are hundreds of computer (or technology) user groups in the world, all of which continue to foster improved communication between technological equipment and software publishers, and users of their products. User groups (both computer and technology) provide an environment where more experienced technology users introduce additional and advanced techniques to novices.

DMA offers both monthly General Membership Meetings, which cover new and innovative topics including a wide range of generic technological topics, and its Special Interest Groups (SIGs) which address concerns about specific technology interests. There are eight different SIGs sponsored by the DMA, covering such topics as the Linux operating system, various programming languages such as Python, the use of technology to investigate genealogy, and digital aids to investing. Neither SIG members nor attendees at DMA General Meetings need be members of the parent organization, though they are encouraged to join so DMA can continue providing its services to the public.

Annual dues for DMA membership, which have not been raised for decades, are \$25 for Regular Members, and \$12.50 for Family/Associate Members (someone living at the same address as a Regular Member). Nonvoting Student Memberships are *free* to students through age 22. Door prizes at General Meetings, picnics, banquets, and other DMA events, and both product and service discounts are available to all DMA members.

... TDB

Dayton Microcomputer Association Membership Form

Today's date ____/____/____

NEW Please credit the DMA member who recruited me: _____
 RENEW Contact information below is new Y N

TYPE OF MEMBERSHIP

REGULAR
 Name _____ Home / Work (____) ____ - ____
 Email _____ Mobile Phone (____) ____ - ____

ASSOCIATE Family Associate membership is for a family member living at the same address as a Regular member. Name of Regular member: _____
 Name _____ Home / Work (____) ____ - ____
 Email _____ Mobile Phone (____) ____ - ____

STUDENT Free Student membership is available to those under 22 years of age, enrolled full-time in a program of higher education. Name of School: _____
 Name _____ Home / Work (____) ____ - ____
 Email _____ Mobile Phone (____) ____ - ____

Home Address _____
 City _____ State ____ Zip _____

INTERCHANGE

Skills & interests you might share with DMA _____
 What you hope DMA will provide _____

SHELL ACCOUNT A shell account on the DMA web server provides file storage, hosting of a personal non-commercial website, @dma1.org email alias (forwarding address), all for a one-time fee of \$10. A username must be 8 alpha characters. The usual default is last name and first initial, no caps or punctuation. DMA reserves the right of final decision on all usernames: 1st choice _____ 2nd choice _____

DUES AND FEES

Regular membership	\$25.00 x <input type="checkbox"/> 1yr <input type="checkbox"/> 2yr <input type="checkbox"/> 3yr	\$ _____
Family Associate membership	\$12.50 x <input type="checkbox"/> 1yr <input type="checkbox"/> 2yr <input type="checkbox"/> 3yr	\$ _____
Student membership	FREE	\$ 0.00
One-time setup fee for Shell account	\$10.00	\$ _____
Total		\$ _____

**Note: \$10.00 fee will be charged for any returned checks*

Make your check payable to: **Dayton Microcomputer Association, Inc**
 Mail check and application to: **PO Box 4005**
Dayton OH 45401-4005
 Or use Paypal to send your payment to: **membership@dma1.org**

DMA use only

Member# _____ Exp ____/____ [] Cash [] Check# _____ [] Paypal Proc by _____
 Member# _____ Exp ____/____ [] Cash [] Check# _____ [] Paypal Proc by _____
 Member# _____ Exp ____/____ [] Cash [] Check# _____ [] Paypal Proc by _____