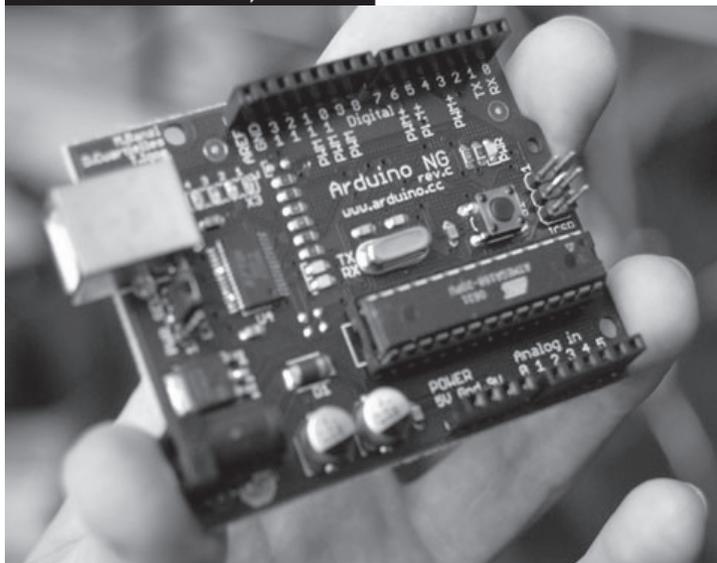




The Databus

Newsletter of the Dayton Microcomputer Association®
Volume II (New Series), Issue 10

October 2011



**ARDUINO:
Gateway to Open
Source Hardware
Tuesday, October 25
7:00 P.M., 4801
Springfield Street
All DMA General Meetings
are free and open to the
public — bring a friend!**

OPEN SOURCE is making the leap from software to hardware. From tractors to furniture, from steam engines to electronics, open source hardware is growing by leaps and bounds. Nowhere is this more true than in the world of embedded systems, such as the Arduino prototyping board. Projects like the Arduino are leading the way on the path toward defining what is open source hardware and what people can do with it.

This presentation introduces the open source hardware movement from the perspective of the Arduino. It will cover questions such as: What is the Arduino and where did it come from? What do we mean when we say the Arduino is “open source?” What can you do with the Arduino? and Where can you learn more?

J Simmons (no dot) is the founder and president of Mach 30, a non-profit dedicated to the development of open source spaceflight hardware. As a Dayton Area Graduate Studies Institute Fellow, J spends his days studying Space Systems Engineering at the Air Force Institute of Technology (AFIT), and his nights leading a revolution in space systems development. J’s vision for Mach 30 combines his years working and volunteering for non-profits and his experiences using open source software tools in small business.

Contents:

Inside DMA	... 3
Holiday Dinner	... 3
August Board Minutes	... 4
September Board Minutes	... 6
Apple’s Hidden Anti-Virus Program	... 9
Disk Drives for Beginners	... 5

The Dayton Microcomputer Association[®], Inc.

Post Office Box 4005
Dayton, Ohio 45401



ESTABLISHED IN 1976, DMA is a group of Dayton–area professionals and hobbyists in the field of computing and information technology. General membership meetings are usually on the last Tuesday of each month. DMA has a number of Special Interest Groups (SIGs) in areas ranging from digital photography and genealogy to the Linux operating system. Each SIG meets according to its own schedule. DMA is a member of APCUG and ASC. (Click on any of the logos — including our own — to go to that organization’s Home Page.)

Officers and Board of Trustees

Vacant!

President

Gary TURNER

Vice-President

Martin ARBAGI

Treasurer

Glady CAMPION*

Secretary

Jim DALLEY

Ken PHELPS

Wynn ROLLERT

Gary TURNER

Dave LUNDY*

Webmaster

* Not a Trustee



Submissions ...

THE DATABUS welcomes compliments, complaints, suggestions, and especially articles. We can accept articles in ASCII, or as attachments in Microsoft Word or Works, Open Office Writer, Word Perfect, or even WordStar! No PDF files, please. Send e-mails to:

Editor@DMA.org

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

All registered trademarks, for example, Blu-Ray, DMA, IBM, or iPhone, are the property of their respective owners. However, for better readability, the Registered Trade Mark symbols (®) have been omitted. The Editor occasionally inserts comments into articles. Such comments are always in square brackets [like this].



**The Miami Valley Educational Service Center —
Regional Division
4801 Springfield Street,
about a mile west of the
Air Force Museum — site
of our October
meeting. Parking is free.
Click [here](#) for a map.**

Save the Date!



Holiday Party

Wednesday, December 14

Holiday Inn North, Englewood 45322

Just off exit 29 on I-70. Click here for a map.

\$21.00 per person

Roast Sirloin of Beef

Chicken Supreme

Roasted Potatoes

Green Beans

Garden Salad

Cake

More details in our November issue!

Minutes of the Meeting of the Board of Trustees of the Dayton Micro-computer Association[®], inc., 1 August 2011

CALL TO ORDER

The meeting was called to order at 7:07 by Glady Campion, President.

Trustees Present

Glady Campion, Jim Dalley, Ken Phelps, Grant Root, Gary Turner

Trustees Absent

Wynn Rollert

Officers Who Are Not Trustees Present

Martin Arbagi

Visitors

George Keen

OFFICERS' REPORTS

President (Glady CAMPION):

No Report

Vice-President (Grant ROOT) :

About 50 people attended the last Dayton Oracle event. The Oracle Special Interest Group (SIG) plans quarterly meetings. One will be some time in the fall. Another will be in January 2012, when Tom Kyte returns as featured speaker. There will be a spring meeting in Wilmington, Ohio.

Secretary (Martin ARBAGI):

Jim Dalley moved approval of the corrected July Minutes. Gary Turner seconded. Motion passed.

Treasurer (Nancy CHRISTOLEAR):

Nancy presented the monthly financial report. Dayton Diode is no longer in arrears, being fully paid up. Dave Lundy has submitted a bill for reimbursement for the post office box in Beaver Creek. There was some discussion as to whether this box is needed in view of the current financial situation. Gary Turner moved that we reimburse Dave \$23 for six months' rental, but also keep track of usage. Nancy Chistolear seconded. Passed.

COMMITTEE REPORTS

Audit:

No report.

Membership (Glady CAMPION):

We have 121 Regular Members, 5 Associate Members, 3 Student Members, and 2 Life Members. There were 32 attendees at our June Meeting, and we made \$24 from the 50/50 raffle.

Net Administration (Gary TURNER):

The Linux SIG has a revised Web page.

Nominations (Jim DALLEY):

Martin Arbagi, Jim Ullom, and Ken Phelps have presented themselves as nominees for vacant seats on the Board. Ken warned that he may be out of town quite a bit, thus

Continued on the next page.

possibly missing some 'Trustees' meetings. Martin reminded everyone of the DMA Ethics Form. However, Grant Root consulted the By-Laws, and found that strictly speaking, signing the Ethics Form is not required.

Martin suggested two DMA members as potential Trustee candidates.

Programs (Glady CAMPION, in the absence of Jim Ullom):

Jim's schedule of speakers: Steve Frye will demonstrate a 3-D printer in August, and Ken McDaniel will speak on the use of computers in mass transit in September. Jim Dalley noted that J Simmons can repeat his Arduino presentation.

Publications (Martin ARBAGI):

The Databus came out last month.

OLD BUSINESS

Picnic (Martin ARBAGI):

All plans are on schedule and tickets are for sale. Martin will buy food and supplies. It was not much of a chore last year. He will comparison shop. 27 tickets have been sold thus far. Gary Turner will try to make every SIG meeting this month to sell tickets.

APCUG (Glady CAMPION):

Glady Campion, Jim Ullom, and Gary Turner represented DMA. Bob Vance organized the event. There were more than 100 attendees, and plenty of good sessions. John Daniels was there. Glady has a program for those interested.

PYOhio

Catherine Devlin, Gary Turner, Glady Campion, and Jim March attended. DMA had a table display. Gary Turner thanked Glady for "waving the DMA flag" at the event. Glady had a brochure for those interested.

DARA

Gary Turner has contacted the Dayton Amateur Radio Association on the DMA Amateur Radio SIG, which has been on summer hiatus.

NEW BUSINESS

Annual Meeting

We shall have our annual meeting in September. The last couple of Annual Meetings have been perfunctory. Glady wants all officers and all committee chairmen to give a short annual report.

LinuxFest

Will be held on 11 September at the Columbus Convention Center. The Ohio Linuxfest is a "free and open software expo." (See Web site.) The organizers haven't contacted Gary Turner yet about a DMA table. Should we support one? The Linux SIG will man it.

Miami Valley Computing Society 2011 meeting

This event will be held on Wednesday, 28 September. Cost is \$25. There was some discussion as to whether or not we wanted to reserve a table and contribute a door prize. Jim Dalley moved that we appropriate \$50 for a display table and door prize. Gary Turner seconded. Passed.

- Martin ARBAGI: No comment.
- Jim DALLEY: No comment.
- Dave LUNDY: No comment.
- Ken PHELPS: No comment.
- Gary TURNER: Everyone should find a person or two to bring to the picnic.

ADJOURNMENT

Jim Dalley moved adjournment at 8:42 P.M. Gary Turner seconded. Passed unanimously.
Respectfully Submitted,

Martin Arbagi, Secretary

Minutes of the Meeting of the Board of Trustees of the Dayton Microcomputer Association[®], inc., 12 September 2011

CALL TO ORDER

The meeting was called to order at 7:06 by Glady Campion, President.

Trustees Present

Glady Campion, Nancy Christolear, Wynn Rollert , Grant Root,

Trustees Absent

Jim Dalley, Ken Phelps (Excused), Gary Turner(Excused)

Officers Absent

Martin Arbagi (excused)

Visitors

George Keen

OFFICERS' REPORTS

President (Glady CAMPION):

No Report

Vice-President (Grant ROOT):

No report.

Secretary (Martin Arbagi absent):

Grant Root moved for approval of the July minutes as corrected. Nancy Christolear seconded. Motion passed.

Treasurer (Nancy CHRISTOLEAR):

Nancy presented the monthly financial report.

COMMITTEE REPORTS

Audit:

No report.

Funding:

No report.

Membership (Glady CAMPION):

We have 124 Regular members, 5 Associate members, 3 Student members, and 2 Life members. There were 45 attendees at our August Meeting, and we made \$36 from the 50/50 raffle.

Net Administration (Gary TURNER):

Grant is concerned that the Linux SIG mailing list has stopped working.

Nominations (Jim Dalley absent):

Martin Arbagi, Jim Ullom, and Ken Phelps are the current nominees for seats on the Board of Trustees. Since the number of nominees equals the positions up for election, our Bylaws allow a vote to be taken by general consent.

Programs (Glady CAMPION, in the absence of Jim Ullom):

Ken McDaniel will speak this month on the use of computers in mass transit.

Publications (Martin Arbagi absent):

The Databus came out last month.

OLD BUSINESS

Picnic (Martin Arbagi absent):

We had perfect weather this year and the food was great as usual. Power at the picnic site was very much appreciated. A suggestion was made that information be provided about the availability of wi-fi at the picnic. It was also requested that some activities be planned for the afternoon. Grant suggested we keep written notes on how the picnic is planned and keep them either in a folder or a wiki.

Ohio LinuxFest

LinuxFest was held September 9–11, at the Columbus Convention Center. Gary Turner and several members of the Linux SIG attended. Everyone enjoyed the show.

MVCS Fall Joint meeting

This event will be Wednesday, September 28, at the Ponitz Center at Sinclair. Bill Kilgallon of Lexis Nexis will speak on “State Sponsored Malware: The Advanced Persistent Threat”. Glady will handle the DMA display table and \$25 gift certificate being given as a door prize. There is still time to reserve a seat.

Tax Problems

Martin is still working with the IRS to clear some tax problems remaining from several years ago.

Annual Meeting

Our annual meeting is this month. All officers and committee chairmen will give a short report and a vote will be taken to elect the new Trustees.

New Business

Holiday Dinner

Jim Ullom and Glady Campion are working on the arrangements.

Nexus LAN

Glady received a request from Dave Peeples for use of some old DLF equipment. Dave is now head of the Nexus LAN gaming group and planning an 80-man LAN party for No-

vember. He would like to borrow our gigabit switches. The Trustees present had no objections as long as Dave's DMA membership is current.

ADJOURNMENT

Nancy Christolear moved the meeting be adjourned at 8:45 P.M. Grant Root seconded and the motion passed unanimously.

Respectfully Submitted,

Glady Champion, Acting Secretary



5% Discount to DMA members!
(Special orders excluded.)

Dayton Microcomputer Association
Events for September 2011
For additions or corrections, contact [Dave Lundy](#)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1 6:30pm GameLogr SIG	2 7:00pm Dayton Diode TBA	3 3:00-5:00pm Classic Computers
4	5 DMA Board of Trustees postponed due to holiday Labor Day	6 6:30pm Dayton Diode 7:00pm Amateur Radio SIG on internet, familiar notice	7	8	9 9:00am-9:00pm Ohio LinuxFest OLMF Linux Bash, Hack-Off, OpenCon, & Bash Penguin T-shirt	10 8:30am-8:30pm Ohio LinuxFest
11 Ohio LinuxFest LPI Testing	12 7:00pm DMA Board of Trustees "Special Date"	13	14 7:00pm Dayton Dynamic Languages Users Group	15 7:00pm Linux SIG	16	17 3:00-5:00pm Classic Computers
18	19 7:00pm Apple Dayton SIG	20 7:00pm Software Development SIG	21	22	23 Autumnal Equinox	24
25	26	27 7:00pm DMA Main mtg.	28 5:30pm 23rd Annual Fall Joint M.V.C.S.: Advanced Persistent Threats, by Bill Kolligton	29	30	



Click anywhere on the DMA Calendar (above) to go to the Calendar of Events on the main DMA Web site.

Mac Tips

By Ernie Cox, Jr., member of the Computer Club of Green Valley, AZ

Reprinted from the October issue, *Green Bytes*

<http://ccgv.apcug.org>

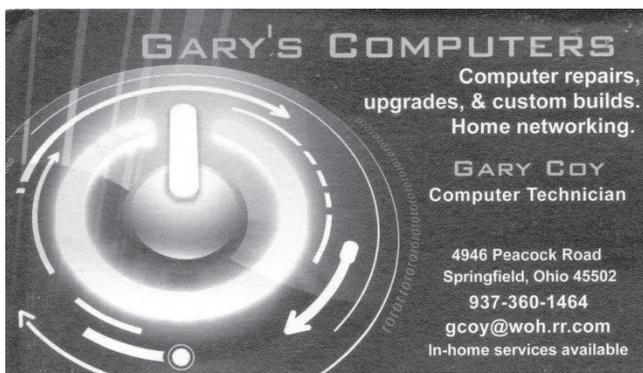
Ecoxjr (at) cox.net

Mac's Own Antivirus App

Mac OS X has a secret built-in antivirus utility. It's Apple's secret because Apple wants people to believe that Macs don't get viruses. In the Finder, press Command-J. In the desktop window that appears, enable the Show Icon Preview option. This engages the hidden antivirus tool, which wipes the virus from your Mac and restores your desktop icons to their previous state. Next time you suspect your Mac is infected, follow the same procedure. It's just as effective as any other antivirus on your Mac.

Deleting Email from Mail on iPhone

Having trouble deleting emails on your iPhone with speed? Swiping your finger across the email will bring up a delete sign to delete that email without opening. That's not very fast when you have to open 25 emails to read them first before deleting. That could take a long time. You can move groups of mail from one box to another quickly, but no deleting in groups is permitted. One of the ways to raise the speed of deletion is to go to your settings. Click on Mail, Contacts, Calendars and set the preview to 4 or 5 lines—5 is better. Now you can read more of the email and know if you want to read further or delete it without opening.



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Disks — What would our computers be without them?

By PHIL SORRENTINO, President, Sarasota PCUG, Florida

Reprinted from the September 2011 issue, *Sarasota PC Monitor*

www.spcug.org

president (at) spcug.org

WELL, THEY'D BE TABLETS, OR SMARTPHONES, neither of which have disks as integral parts of the hardware. The terms "disk" or "disk drive" usually refer to the component of the computer that typically stores large amounts of data. Storage can be readable only, or readable and writable (or recordable). There are two types of disk drives that are usually part of a personal computer: Magnetic and Optical. Magnetic drives are typically readable and writable. Nowadays, magnetic drives store in the hundreds of gigabytes (1 gigabyte = 1,000 megabytes). Optical drives are either readable (ROM) or recordable (RAM). Optical drives come in three different storage sizes, CDs (Compact Disks) which hold 700 megabytes, DVDs (Digital Versatile [or Video] Disks) which hold 4.7 gigabytes, and BDs (Blu-Ray Disks) which hold 25 gigabytes.

Magnetic Disks or Magnetic Disk Drives, or Hard Drives, (can any of you remember the term, Winchester Drive?), are at the very core of the personal computer. For those of you who remembered "Winchester," the original IBM PC didn't even have a hard drive. It only had one or possibly two 5¼ inch floppy disks. Remember the A: drive? And I bet there are only a few of you who ever had a B: drive (the second floppy).

The hard drive came along around 1983, with the IBM PC/XT, and was assigned as the C: drive. Then came optical drives, the CD ROM (around 1985), and the recordable version, the CD RAM (around 1990). These were typically assigned as the D: drive. Finally, The DVD came on the scene with backward compatibility with CDs. The DVD ROM appeared around 1995 and the DVD RAM around 1998. DVD equipment is backward compatible meaning drives can use DVD or CD medium (the actual disk). BDs are relatively new, coming on the scene around 2009. The BDs come in BD R which is recordable only once, and BD RE which is recordable and re-recordable. BD equipment is backward compatible meaning drives can use BD, DVD or CD media.

Specifying a magnetic disk drive is pretty straightforward. The only variables are the storage capacity and the speed. Today, typically, the speed is 7200 rpm. Although there are some older units around that rotate at 5400 rpm, and there are some fast drives that are running at 10,000 rpm, but they are the exception. So, the defining item is the storage capacity, which today runs from 100 gigabytes to a few terabytes (1 terabyte = 1,000 gigabytes). Once the manufacturer is chosen and the speed and storage is picked, the job is about done. The only other factor is the interface. SATA (Serial Advanced Technology Attachment), today is the preferred interface, but only if your computer has the hardware to support it. The older interface is called IDE (Integrated Drive Electronics), and sometimes called PATA (Parallel Advanced Technology Attachment).

Specifying Optical Disks is somewhat more involved. The first decision is the storage capacity. Today, DVD drives are probably the most cost effective (the best storage per dollar). Because DVD drives are backward compatible they can be used with DVDs or

CDs. BD drives are currently quite expensive and will probably not be found on most personal computers. BD drives will probably be around \$100 in contrast to about \$35 for a DVD drive. If you have only one DVD drive on your computer, it should probably be a drive that is capable of writing disks as well as reading them. If you have the luxury of two optical drives (probably on a desktop), one can be just readable, which will keep the cost of the pair to a minimum. Optical Drives that are capable of writing are sometimes called “burners” because the writing operation uses a laser to “burn” data spots on to the disk.

The round 120 millimeter (4.7 inch) disk that you insert into the Optical Disk drive is called the “disk medium.” The medium should match the Disk Drive type, meaning that you typically use CD media in a CD Drive, DVD media in a DVD drive, and BD media in a BD drive, although there is backward compatibility. For optical disk media, readable means that the disk can be written only once and then read many times; read/writable means that the disk is readable and can be written and rewritten many times. CD disk media comes in two types, CD-R (readable), and CD-RW (read/writable). Unfortunately, DVD disk media come in two disk varieties DVD- (the dash variety), and DVD+ (the plus variety), as well as being readable or read/writable. The good news is that, nowadays, all drives can use either of these varieties. (Although I have heard that some people prefer the DVD- for movies. They have reported better results with that variety for movies that were created on the computer DVD disk drive and then played on their living room DVD player.) So, typically, DVD Drives can accommodate DVD-R (read only), DVD-RW (read/writable), DVD+R (read only), or DVD+RW (read/writable) media. This is usually indicated by stating that the drive can be used with DVD±R disk media (readable), or DVD±RW (read/writable) media. Fortunately, BD disk media do not have the same problem. There is only one variety for BD disks, BD-: BD-R (readable), and BD-RE (read/writable).

Now that we have chosen an optical disk drive based on storage capacity, and we now know what medium we can use with the drive, the last thing to look at is the speed of the drive. For drives that only read, this is not really an issue because the read speed is typically faster than any of the writing speeds. An optical drive writing speed is specified as #X. Currently, for DVDs, # is a number between 1 and 52. This number indicates the speed relative to the original disk writing speed. So an optical disk capable of writing at 12X would write a disk 12 times faster than the original writing speed. The original writing speeds for the different Optical Drive types are: CD=.15Mbps; DVD=1.35Mbps; BD=4.5Mbps. So a 12X DVD Drive would write data at 12 times 1.35Mbps, or 16.2Mbps. Optical disk media are also rated for writing speed in the same way. When you buy optical disk media it is always good to buy media that are at least as fast as your drive so that you take advantage of your drive’s speed. If it is not at a great expense, faster media will probably give you better, although not faster results.

Disk drives give the computer the ability to store and access enormous amounts of data. Without these devices we might be confined only to using the “cloud” for our storage? But, even with these devices, this may be the direction personal computing is taking, anyway.

DMA Membership Application/Renewal

PLEASE ALLOW UP TO THREE WEEKS FOR APPLICATION PROCESSING AND INTERNET SET-UP

Name: _____ Birth date: ____/____/____
mo. day year

Associate Name: _____ Birth date: ____/____/____
mo. day year

Address: _____

City: _____ State: _____ Zip: _____

Phone: (Home) (_____) _____ - _____ (Work) (_____) _____ - _____ x _____

I wish to have my name and address published in the club roster: YES [] NO []

E-mail address: _____ @ _____

Name of DMA member who recruited me: _____ (only new regular memberships)

Are you a current or recent DMA Member? Yes [] No [] Change of Address only? [] Today's date: ____/____/____

If you are renewing, please give your Membership Number (from your membership card) _____

Type of Membership

Application is for: New Membership [] Membership Renewal [] Associate Membership* []

If applying for free student membership, please give school name and student ID number: Available only for students under 22 years old. (Student Members cannot vote in DMA elections.)

School Name: _____ Student ID#: _____

* A family or associate membership is an additional membership for a member of your immediate family or someone else who is living in the member's household. If this is a family or associate membership, give name of regular member:

Dues/Fees (Dues and Fees are subject to change without prior notice):

Membership (one year — New or Renewal) 1.) [] \$25.00

Family or Associate Membership (must live at same address as regular member) 2.) [] \$12.50

Free Student Membership for students under 22 yrs of age. (Student Members cannot vote in DMA elections.) 3.) [] FREE

Please assign me a user ID for E-mail and Usenet news access one-time setup fee for new E-mail accounts. 4.) [] \$10.00

Total — Lines 1 and 2 (+ 4 if checked) 5) \$ _____

[] Cash
[] Check

Check # _____

Make your check payable to Dayton Microcomputer Association, Inc. (DMA), and then send the check and application to:

PO Box 340402
Beavercreek, OH 45434-

DMA Use only: Membership # _____
0402

Exp. Date: ____/____/____

Processed by: _____

REV: 26 June 2011

Click here to pay your dues using PayPal. Simplified Membership Form, too!