

# May Meeting: *MEDIA PORTAL*

Volume III (New Series), Issue 5 — May 2013

**Presented by: LeRoy Clouser**

7:00 P.M. at the Regional Center, 4801 Springfield Street, about one mile west of the Air Force Museum — Click [here](#) for a map.

TODAY, MORE AND MORE PEOPLE are becoming familiar with, and interested in, HTPCs and media center software. However, we find many users are increasingly frustrated with the limitations of other media center software. Some look pretty, but have little “under the hood”; others are easy to set up, but limit what you can do and how you can do it.



**MediaPortal is unique.** It has power to spare; great looks and is easy on resources. Version 1.0 was released after five years of development, when we were sure the product was stable and included all the advanced features even the most demanding users require. Even so, MediaPortal requires about half the CPU and RAM that some other media center software require.

LeRoy is an active member of NASAC, the Springfield/Xenia user group where he is best known for sharing tech tips. He is also a member of the Carillon Park Rail & Steam Society and a rail safety instructor with Operation Lifesaver.

**The Databus**

Newletter of the Dayton Micromonoputer Association, Inc.

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## The Demise of the Digital Camera

By Jerry SCHNEIR, Member, Los Angeles Computer Society, California

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I PROBABLY SHOULD HAVE USED ONE MORE ADJECTIVE IN THE TITLE: “inexpensive”, so that the title would have read “The Demise of the *Inexpensive* Digital Camera”. You have only to look around you at any party or gathering and see that the majority of the picture taking is being done by the guests with “smart phones.” Relatively few cameras appear at these gatherings, so you might ask: Why? What *has* happened and *is* happening to fuel this dramatic change?

By some estimates, smart phones account for over 50% of the cell phones in use today, and those smart phones all have built-in cameras. And within the last couple of years, the cameras in those smart phones have become much, much better. To prove my point you have only to look at two new products to be announced, one from Nikon and the other from Nokia, one a camera company; the other a phone company.

The Nikon S800c combines a camera with Wi-Fi capability, even Internet browsing. It will not be long before a phone is added to that device. Nokia on the other hand created a phone, the 808c Nokia PureView Pro which combines a phone with new digital technology. It dispenses with the usual scaling/interpolation model of digital zoom used in virtually all smartphones, as well as optical zoom used in most digital cameras, to vary the magnification and field of view. This new technology which is already in use by Sony in some of their more advanced cameras (Sony NEX F3), allows zooming without any lens elements’ changing positions. And amazingly enough, the results are really fantastic.

More and more camera manufacturers are equipping their cameras with the ability to transfer images from the camera to a phone, iPad type device or a computer directly, no wiring required. As phone manufacturers start to incorporate this new technology into their phones, the need for people to have both a smart phone *and* a camera diminishes. Many manufacturers, aware of the missteps of Kodak in failing to recognize the change in technology (film to digital) and the consequent destruction of the company, are moving quickly to rearrange their product offerings.

What will be showing up in the marketplace are more mid- to high-end cameras with fewer and fewer low-end cameras. The reasoning is pretty simple: the camera phones, as good as they are getting, are still a very long way from producing images as good as those from the mid- to high-end range of cameras. If you take a close look at the camera offerings of today you may note the changes that are taking place right now.

Digital SLR cameras are moving in two price directions, up and down. Canon /Nikon/Pentax/Sony are locked in a battle in both the high-end professional/semi-professional/dedicated amateur lines at one end and the beginner/intermediary dSLR camera lines. However, this is an area that has fragmented greatly; new camera designs along with new technology are resulting in smaller and lighter cameras capable of producing results equal to that of their bigger cousins. I can hear the verbal challenges now to that statement, but I am noticing more and more pros/semi-pros using

(Continued on page 3)

this newer technology and reaping the benefits of fewer backaches from the pounds lighter equipment. These stark changes were brought about by the “mirrorless” interchangeable lens cameras. In some circles these are referred to as CSC (compact system cameras) or ILC (interchangeable lens cameras) or EVIL (electronic viewfinder interchangeable lens cameras). Cameras in this mirrorless grouping are the Fuji X-Pro 1, the Sony alpha and NEX family of cameras, the Nikon J1/Vi cameras, the just announced Canon EOS M cameras, the micro four-thirds (mFT) line of cameras such as the Olympus OM-D5 and Panasonic GX1, and of course the entirely different Ricoh line of interchangeable lens AND sensor cameras.

In addition to those camera groupings, another new collection of cameras has appeared: the large sensor fixed lens cameras such as the Canon G1 X and the Sony RX 100 along with the Fujifilm X10 and X100. I can see some questions arising about what constitutes a large sensor. To my way of thinking, sensors in the size range of 1/1.7 and larger meet that criterion, but just barely. But wait: the camera companies are also introducing more mid- to high-end point and shoot cameras such as the Panasonic FZ200, Pentax X5, Canon SD500, Nikon P7700, and Fuji SL300.

But if you look, you will see relatively little effort or money being spent on the inexpensive line of cameras, those retailing for \$200 or less. What you are seeing is product renaming with a change in camera color but very little in the way of any new features. What also appears to be happening here is that as the new models appear, the older models are marked down substantially. As an example, Olympus Pen LP-2 was \$550 or more. It can now be had for about \$300 while the even older version, the LP1, is still around and going for a bit under \$300 — and those are prices with the kit lens. The Fuji S4500 came out at about \$300, but today it can be bought for under \$200 and it came out in January of this year.

The economic downturn of the last few years certainly has played a part in the changing face of digital photography, making it less lucrative to introduce middling to low cost cameras and to focus on the mid- to upper range of cameras with special features, such as better video, longer zoom ranges, great low light and high ISO ability. You will also be seeing a move away from the traditional CCD sensor to the CMOS and BSI-CMOS type sensor since these are far better suited to video and low light photography.

One other very bad thing is happening and that is the increase in camera complexity. I hear it almost every week from my students: “I can’t understand the manual (even if there is one included), there is no index or the index is very incomplete, the booklet uses abbreviations without ever defining them, the authors seem to assume I know something when I do not, it doesn’t explain a feature or how to use that feature.” I have long maintained that the instructions are written by people whose native language is *not* English and may not even be photographers.

This is a most interesting period in photography. Image quality and the ability to use high ISO settings or shoot in dim light have never been better. Cameras, at least the mid- to high-price cameras, have more features and generally perform much better. The next five years will see very significant changes in the photographic landscape. Stick around, you may even like what you see.

—TdB

## External Storage

By Dick MAYBACH, member, Brookdale Computer Users' Group, NJ

March 2013 issue, *BUG Bytes*

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n2nd (at) charter.net

ALTHOUGH WE USE EXTERNAL STORAGE MUCH LESS than in the early days of home computing, it is still an essential technology for backing up internal hard disks, exchanging files among different computers, and expanding storage capacity. The increasing size of files had made obsolete many older technologies, and those that are still attractive fall into four types: electronic, optical, magnetic, and Internet.

There are many variations of electronic storage, but two are now dominant: USB memory sticks and SD cards. They have similar capacities with current “sweet spots” (capacities where the cost per byte is lowest) of around 16 Gbytes, although this is continually moving up. SD cards are typically faster, but appear to be less rugged with exposed connections and thinner packages. I have carried a naked USB memory stick in my key case for many years, and it has never failed, but I always keep my SD cards in their plastic cases. USB sticks have the further advantage that every computer has USB connectors, while SD access is less common, and although memory card readers available are very cheap, they also have low quality and often are unreliable. The circuits used for electronic storage do have finite lifetimes, in that they wear out after a (very large) number of writes; however, the risk is negligible for external storage devices.

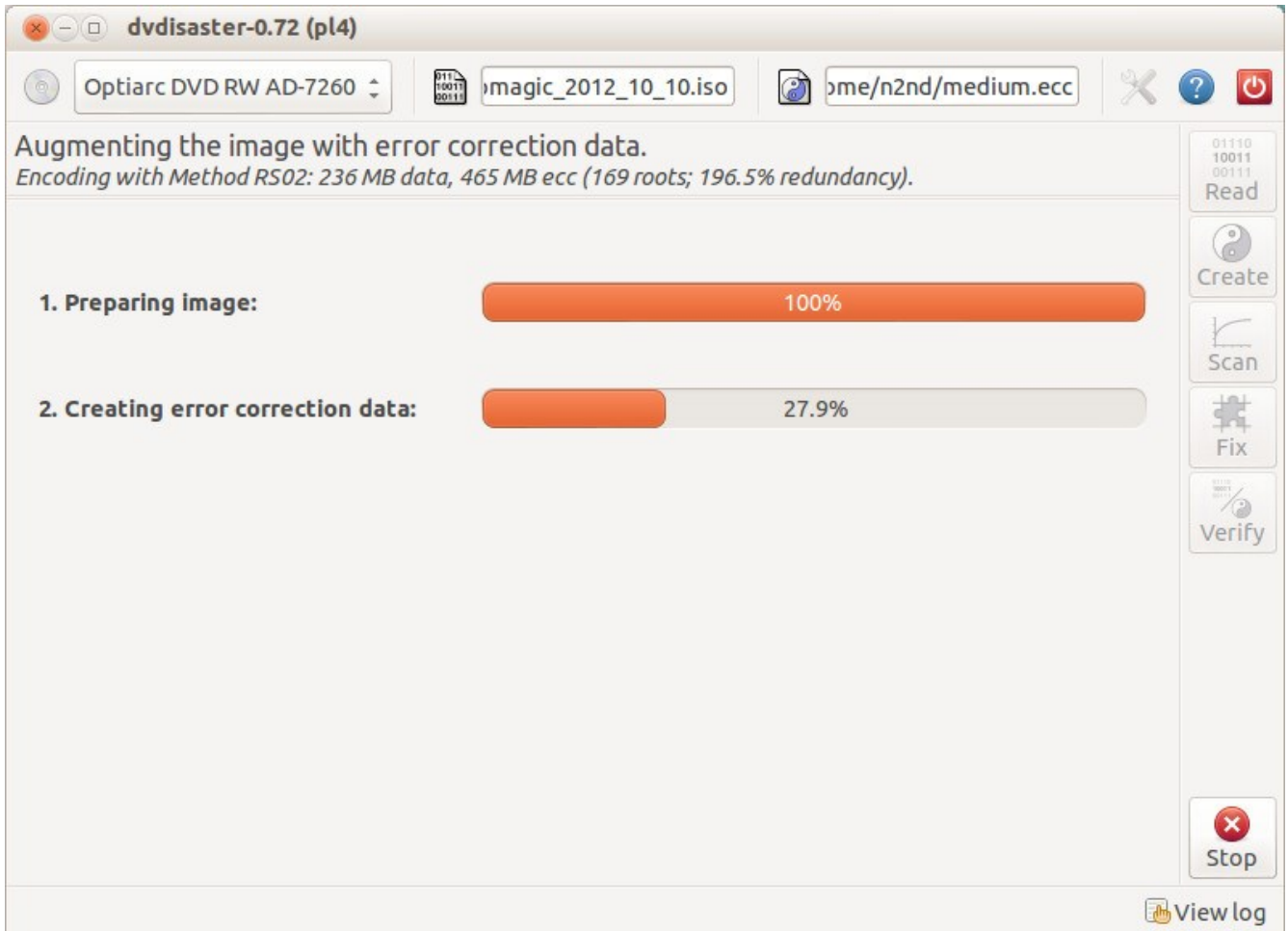
Optical storage is problematic, because much the available media are of poor quality and may begin to develop errors in just a few months. Even high-quality media rapidly deteriorate if exposed to high heat or humidity. For more on this, see my article, “Using DVDs for Long Term Storage,” *BCUG Bytes*, June 2008, available at <http://www.bcug.com>. Actually, my own experience with CD-ROMs and DVDs has been good, although I’m careful to use only quality media. Of the dozens stored at home, some for several years, I’ve had problems with only one, which can be read only on the drive that created it. On the other hand, the outer tracks of several music CDs stored in my car are no longer playable. Another problem is the low quality of CD-ROM and DVD drives, with Blu-Ray being especially bad. Blu-Ray drives are acceptable for playback, but their lasers frequently burn out after writing just a few discs. This is unfortunate, as the capacities of CD-Roms and DVDs are rapidly becoming too low to be really useful.

If you use optical storage for archiving, consider using the free program *dvdaster* (<http://dvdaster.net/en/>) for Linux, OS-X, and Windows, which adds error-correction and thus allows you to recover your stored files, even though up to 20 percent of the bits on the medium are corrupted. You need a disk-burning program that can create a file (called an iso-image) that is a bit-for-bit image of a CD-ROM or DVD, and also has the ability to copy an iso-image to an optical medium. The procedure for creating an error-resistant disk is as follows.

- Use your disk burner to create an iso-image, which must be at least 20 per cent smaller than the capacity of the medium.

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- Use dvdaster to add error-correcting data to the iso-image. The screen-shot below shows this in progress. After creating this image, click on the **Verify** button to check that it's good.
- Finally, use your disk burner to write the iso-image to the optical medium.



(Note the small blue circle containing a question mark at the upper left of the screen-shot. Clicking on it brings up an extensive manual in your Web browser, which you should read carefully.)

(Continued on page 6)



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**Steve Davis**  
Owner

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www.locknestmobilelocksmith.com



**10% Discount to DMA  
members!**

Periodically scan your optical media (using dvdaster's **Scan** button) for errors. If they begin to appear, recover the data using dvdaster (which will produce an iso-image), create a new disk, and discard the one with the error. Until the medium begins to develop errors, you can read it like any other disk using your usual software.

Magnetic storage, in the form of external hard disks, offers high transfer speed and high capacity, making it attractive for many applications. It also has the lowest cost per byte. To achieve this performance, these devices are assembled with very tight clearances, which means they must be sealed against airborne contamination. The magnetic disks cannot be separate from the motor and head assemblies, making these devices much larger and less rugged than electronic storage devices. Here, you have a choice of interfaces with USB being the most common, followed by E-SATA. USB-3 drives are beginning to appear, but are considerably more expensive than USB-2, although this will surely change, probably soon. Diskettes are now obsolete, for good reasons. Their capacities are tiny, and their reliability is low. You can still buy drives, but their quality is very poor, with many delivered dead-on-arrival or failing very quickly. If you still have valuable data on diskettes, you should transfer it to a better medium soon.

Internet storage, commonly called "the cloud" is expanding rapidly. Modest capacities, up to around five Gigabytes, are widely available without charge. Transfer rates can be low, often just a few tens of kilobytes per second, and of course, the storage is available only if you have an Internet connection. There are also concerns about how secure the data is and whether it will continue to be available if the vendor goes out of business.

Which of these approaches you use depends on your application. For synchronizing the data among your own computers, Internet storage is the most convenient. Once you have set it up, the contents of the synchronized directories are always identical, no matter which computer you use to make changes. Since the information resides on every PC, you lose nothing if the cloud vendor discontinues the service.

For transferring files between your PC and a friend's, a USB memory stick (up to a few Gbytes) or a USB hard disk (for larger transfers) is the best choice. Almost every computer has a USB port, so your friend doesn't need to install any special software or hardware to effect the transfer. I always carry an eight-Gbyte USB memory stick, formatted as FAT-32, in my key-case, and I've never found a computer that couldn't read from and write to it. (Actually, my stick has two partitions, a seven-Gbyte FAT-32 one for transferring files, and a one-Gbyte Linux one containing Parted Magic. See my article "Parted Magic: Lots of Disaster-Coping Tools," *BCUG Bytes*, April 2012, available at <http://www.bcug.com>. This means I always have the ability to transfer files and a tool kit to solve computer problems.)

For backing up your PC, an external hard disk is the only reasonable solution. These feature high capacities, fast transfer rates (especially if equipped with a USB-3 interface), and high reliability. Their bulk and relative high fragility are not serious problems in this application.

External hard disks are also good for archiving things like photos and financial data, but you could use DVDs, provided you add error-correction using and store them in a benign environment. For added security, consider making more than one copy, and either transfer the information to new media every few years or periodically scan it for errors using dvdaster. Archival

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storage is an especially difficult problem. Computer technology is changing fast, and you must stay alert lest you lose the ability to access your archives (as happened to me when 5 ¼ inch diskette drives disappeared from PCs). For example, if you used dvd disaster to safeguard your archived DVD, you must be sure not only that the program runs on your new PC, but also that it uses the same methods as those used to record the data, and of course the new PC must be able to read DVDs.

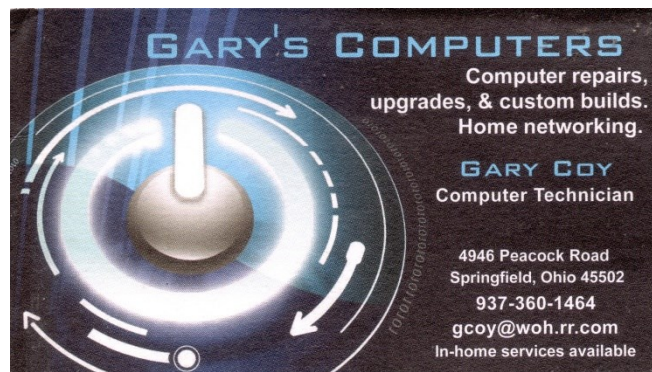
For sharing photos or files with friends, Internet storage is hard to beat, although mailing them a DVD or CD-ROM also works well, especially if they want to show the pictures to their friends.

To expand internal disk storage capacity, the preferred solution is an external hard disk with an E-SATA interface, although USB-3 is not a bad solution. Most likely, you would use E-SATA for a desktop, since it requires an expansion card, and USB-3 on a laptop (USB-2 if your laptop is older or not top-of-the-line). Mac owners could consider Firewire or Thunderbolt.

As you can see, there is no single solution, unlike in ancient times when diskettes were universal (or if we go back to near pre-history, cassette tapes, audio tapes, punched paper tape, or even punched cards). However, there is a good and inexpensive solution for every application. —TJB

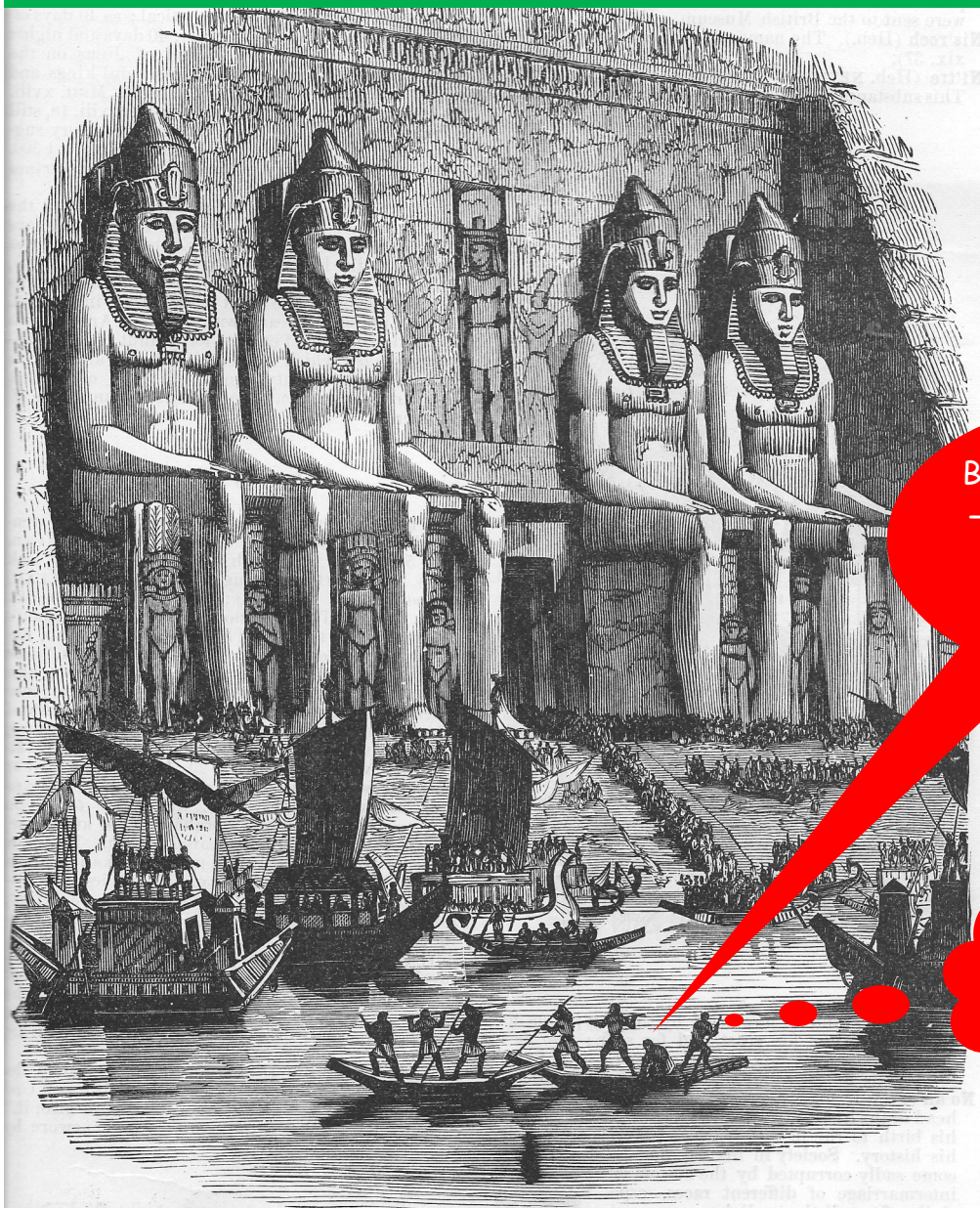
## —Help Wanted—

Wanted: DMA members to help with revision of our By-Laws. Apply to President GRANT ROOT at any General Membership Meeting,



The DMA ANNUAL PICNIC takes place on Saturday, August 24<sup>th</sup>, at Indian Riffle Park in Kettering, Noon ... ? Tickets are on sale NOW — \$3 (cheap). Buy them at any General Membership Meeting, or from Gary Turner or Martin Arbagi.

- We supply brats, hamburgers, hot dogs, rolls, condiments (mustard, ketchup, pickles, etc.), and pop.
- You supply a covered dish (salad, dessert, etc.) or a beverage. (*No alcohol or glass containers, please!*) Food served at 1 P.M.
- Electric power will be available.



By Jove, Arbuthnot  
— this doesn't look  
like Indian Riffle  
Park!

You and your  
☠️🔥📧🕒 time  
machine!



**M**INUTES are normally published about two months late, because Minutes of the previous month must be approved by the Trustees at their meeting the next month. For example, the Minutes for April were reviewed by the Trustees at their May meeting. Once approved, the corrected Minutes are then published in this month's (May's) DATABUS.

## MINUTES

### DMA Board of Trustees — Meeting of April 1, 2013

#### CALL TO ORDER

Grant Root called the meeting to order at 7:19pm.

**Trustees present:** Martin Arbagi, Gladys Campion, Jim Dalley, Ken Phelps, Wynn Rollert, Grant Root, Ed Skuya, Gary Turner, Jim Ullom.

**Others present:** Dave Lundy.

#### OFFICERS' REPORTS

**President** – Grant Root

Thanks to Jim Ullom for reserving the meeting room at TJ Chumps for the March general membership meeting and tonight's Trustee meeting.

**Vice President** – Gary Turner

Installfest will be held this month at Sinclair.

**Secretary** – Gladys Campion

Gladys presented the minutes from the March Board meeting. Martin Arbagi moved the minutes be accepted. Jim Ullom seconded and the motion passed.

**Treasurer** – Martin Arbagi

Martin reported on the transactions for March and the account balances. There was a request that any earmarked funds be itemized. There was a question on who is covered by our liability insurance. Martin will ask for clarification.

#### COMMITTEE REPORTS

**Audit** – Gladys Campion

Gladys presented a report on revenues and expenses for 2012.

**Bylaws Review** – Grant Root

Grant and Eric Ottoson have decided on a wording for a non-discrimination clause to be added to our bylaws. The paragraph was read aloud to the Trustees.

#### ARTICLE XIII - NON-DISCRIMINATION POLICY

It is the policy and commitment of DMA that it does not discriminate on the basis of race, color, national origin, religious creed, sex, or gender expression, sexual orientation, marital status, age, or disability in any of its activities. These activities include but are not limited to meetings, membership, volunteer opportunities, selection of vendors, and provision of services. We are committed to providing an inclusive and welcoming environment for all participants.

*(Continued on page 10)*

[Renumber existing ARTICLE XIII as XIV.]

The amendment would be published to the membership in April and May, and a vote taken during the general membership meeting in June.

Grant made a motion that we adopt this wording and present it to the membership for a vote. Wynn seconded the motion, Grant abstained, and the motion passed.

#### **Funding – Open**

No report.

#### **Membership – Dave Lundy, Gladys Campion**

We currently have 106 Regular, 4 Associate, 0 Student, and 2 Life members for a total of 112. Attendance at the March membership meeting was 35 and the 50–50 raffle brought in \$27. Martin established an account with Square for credit card processing. The hardware and instructions should arrive soon by mail.

#### **Net Admin Team — Ken Phelps, Gary Turner**

Grant will check with Mike Carr about the status of the DMA phone number 222-4362

#### **Programs — Jim Ullom**

- The Trustees were very impressed with the talk on Instagram and Facebook given by Jim Ullom's granddaughter Taylor Flynn and her friend John Maynor.
- April is scheduled to be a presentation on Media Portal by Leroy Clouser.
- May's topic will be Cloud Backup Services, presented by Grant Root.
- June is tentatively set for a series of presentations by our SIG leaders.

#### **Publications — Martin Arbagi**

THE DATABUS has been posted online.

### **OLD BUSINESS**

#### **APCUG Regional Conference — Jim Ullom**

Jim and Bob Vance are working on the schedule and confirming speakers. The APCUG conference is scheduled for September 13-15 at the Englewood Holiday Inn. Martin Arbagi has volunteered to put together a booklet for the event.

#### **Dayton Foundation — Martin Arbagi**

There was considerable discussion on the amount of our funds to invest with the Dayton Foundation.

Grant Root moved and Martin Arbagi seconded that we invest \$85,000 in the Dayton Foundation. The motion passed with 5 in favor, 2 opposed, and 1 abstaining.

Martin Arbagi moved and Wynn Rollert seconded that we use dollar cost averaging by investing \$10,000 per month for a period of 8.5 months. The motion passed with 5 in favor, 2 opposed, and 1 abstaining.

#### **Linux Installfest — Gary Turner**

Linux SIG will hold an Installfest on Saturday, April 13, 10 A.M. – 4 P.M., at Sinclair Community College. The room numbers may possibly change. Final details are still being worked out.

*(Continued on page 11)*

**ASC Outstanding Engineers and Scientists Awards Banquet — Gladys Campion**

As part of our membership in the Affiliate Societies Council (ASC) of Dayton, all DMA members are invited to attend the ASC Outstanding Engineers and Scientists awards banquet which will be held in April. Details will be forwarded to the Trustees.

**NEW BUSINESS****Hamvention — Gladys Campion**

With Hamvention in May, Gladys asked if we should set up a tent at the event as we did for several years. Ken Phelps suggested we might get better name recognition if DMA members attending the event wore DMA-logo shirts and carried some brochures or hand-outs. The club could pick up the cost for the shirts.

**Emails to the Membership – Grant Root**

Grant asked about the process of sending “DMA Events” email reminders. Dave Lundy told us the “DMA-announce” list is no longer used. Reminder emails are written in plain text and sent to the email addresses of current members in our membership file. Addresses ending with “dma.org” are considered primary. The few members who have not given any email address do not receive these reminders.

**Dayton SCORE – Gladys Campion**

Dayton retired executives, the group called “SCORE”, is offering a free course on improving the management of local nonprofits. Gladys will send a link to the Trustees.

**ADJOURNMENT**

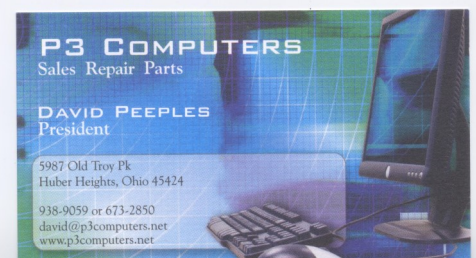
At 9:10, Jim Ullom moved the meeting be adjourned, Ken Phelps seconded, and the motion passed.

*Respectfully Submitted,*

*Gladys Campion, Secretary*



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



# Dayton Microcomputer Association

## Events for June 2013

For additions or corrections, contact [Dave Lundy](#)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1 3:00-5:00pm <a href="#">Classic Computers</a>
2	3 7:00pm <a href="#">DMA Board of Trustees</a>	4	5	6 6:30pm <a href="#">Genealogy SIG</a>	7	8
9	10	11 6:30pm <a href="#">Dayton Diode Mtg.</a>	12 7:00pm <a href="#">Dayton Dynamic Languages Users Group</a>	13	14	15 3:00-5:00pm <a href="#">Classic Computers</a>
16 Father's Day	17 7:00pm <a href="#">Amateur Radio SIG</a> 7:00pm <a href="#">Apple-Dayton SIG</a>	18 7:00pm <a href="#">Software Development SIG</a>	19	20 7:00pm <a href="#">Linux SIG</a>	21 <a href="#">Summer Solstice</a>	22
23	24	25 7:00pm <a href="#">DMA Main mtg.</a>	26	27	28	29
30						



Click anywhere on the DMA Calendar above to go to the original at [DMA1.org](#).





Post Office Box 4005  
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Telephone:  
(937) 222-4DMA  
(937) 222-4362

**We have a new  
Web Site!**

**DMA1.org**



## *Your 2012/13*

### **Officers:**

*President*

*\*Grant ROOT*

*Vice-President*

*\*Gary TURNER*

*Secretary*

*Gladys CAMPION*

*Treasurer*

*\*Martin ARBAGI*

### **Trustees:**

Ken PHELPS

Wynn ROLLERT

Ed SKUYA

Jim ULLOM

*\* Also trustees.*

### **Webmaster:**

Dave LUNDY

**E**STABLISHED 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 Association of Personal Computer Users' Groups (APCUG) and the Affiliated Societies' Council (ASC). Click on any of the logos — including our own — to go to that organization's Web Site.

## **Submissions ...**

**T**HE 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, yes, even WordStar! No PDF files, please. Send e-mails to:

**Editor@DMA1.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 usually receive preference.

All registered trademarks, for example: DMA, dvd disaster, Nikon, Sony, or Windows, 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 these].

**DMA Membership Application/Renewal**

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

Name: \_\_\_\_\_ Birth date: \_\_\_\_/\_\_\_\_/\_\_\_\_  
mo. day yearAssociate 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.) ☐ \$25.00Family or Associate Membership (must live at same address as regular member) 2.) ☐ \$12.50Free Student Membership for students under 22 yrs of age. (Student Members *cannot* vote in DMA elections.)  
3.) ☐ FREEPlease 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) \$ \_\_\_\_\_

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

DMA Use only: Membership # \_\_\_\_\_

Exp. Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

Processed by: \_\_\_\_\_

REV: 26 June 2011

☐ Cash  
☐ Check  
Check # \_\_\_\_\_**Click [here](#) to pay your dues  
using PayPal. Simplified  
Membership Form, too!**