

The Dayton Microcomputer Association, Inc.

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DMA1.org

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Dave LUNDY

ESTABLISHED IN 1976 (we'll be celebrating our 40th anniversary all this year), 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 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 Microsoft Word or Works, Open Office Writer, Word Perfect, or, yes, even WordStar (a word-processing program that goes all the way back to the 1980s!). We can now also accept PDF files. Send articles 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, Acronis, AMD, Key-pass, or Meijer's, are the property of their respective owners. However, for better readability, the Registered Trade Mark symbols (® or ™) have been omitted. The Editor occasionally inserts comments into articles. Such comments are usually in square brackets [like these] and are always preceded by the phrase: "EDITOR'S NOTE."

THE DATABUS is written and published by volunteers. We do not give professional advice on computer, network, or software installation, troubleshooting, or repair. If you need expert assistance, please seek the services of a competent professional.

January Meeting: KEEPASS: A PASSWORD-PROTECTION PROGRAM

Martin ARBAGI

7:00 P.M., Tuesday, 26 January at T. J. Chump's, 7050 Executive Boulevard,
Huber Heights (next door to Meijer's —click [here](#) for a map).

Come at 6:00 P.M. if you want dinner.

WE ALL HAVE PASSWORDS. Passwords for our bank and our broker; passwords for Amazon, Newegg, L. L.Bean, and Target; passwords for our e-mail and Social Security accounts; our doctor, Pay Pal, and that Web site we maintain ... and so forth. How do we keep them straight?

Well, we could use the *same* password for every account. But that wouldn't be very smart, would it? We could print them on paper, and keep them in a binder. That's not a bad idea, but you can't cut-and-paste from "hard" (printed) copy to a computer.

And how to generate passwords?

A number of programs, both free and pay, exist for generating, storing, and protecting passwords. Many of them store your passwords on the Web, but one does so on *your* computer—and is free.

Martin's presentation will include (among other things):

- 💻 why, despite the inconvenience, it's better to store your passwords on your computer rather than on the Web;
- 💻 all password protection programs require a Master Password. Martin will demonstrate an unusual method of generating (and remembering) such passwords;
- 💻 what Web sites won't tell you about "high ASCII" characters;
- 💻 getting started in Keepass with three sample Web sites; and finally,
- 💻 *do you need Keepass at all?*—An interesting alternative to using Keepass.



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.

MINUTES are usually published almost *two months* late. This is because the Minutes for, say, the December Board meeting must be approved by the Trustees at the following month's meeting—in this case, early January. The corrected and approved December Minutes will thus appear in this (January) issue, published toward the end of the month. The next Trustees' meeting will be on 1 February 2016 at the **Chestnut Street Community Room of the Greene Shopping Mall**. The meeting begins at 7:00 P.M. (Click [here](#) for a map.)

MINUTES

DMA Board of Trustees – Meeting of Monday, December 7, 2015

CALL TO ORDER

The meeting was called to order at 7:11 P.M. by Debra McFall. Trustees present: Martin Arbagi, Gary Coy, Pat Flynn, Debra McFall, Eric Ottoson, Ken Phelps, Ed Skuya, Gary Turner. Excused: Jim Ullom. Others Present: Gladys Campion

OFFICERS' REPORTS

President—Debra McFall

We are looking forward to the Holiday Dinner.

Vice President—Gary Coy

No report.

Secretary—Gladys Campion

Gladys Campion presented the Minutes for the November Board meeting. Gary Coy moved the minutes be accepted. Eric Ottoson seconded and the motion passed.

Treasurer—Pat Flynn

Pat Flynn presented a revenue and expense report for January 1-November 30, 2015. Our Fifth Third Checking Account has a balance of \$18,619.23. Our Fifth Third Savings Account has a balance of \$11,220.26. Our Dayton Foundation Account has a balance of \$74,820.93. Our Paypal Account has a balance of \$705.12. This gives us a total of \$105,365.54.

Pat can contact our insurance agent or our APCUG rep and ask about our current need for Directors & Officers (D&O) insurance.

COMMITTEE REPORT

Audit—Gladys Campion

Review of 2015 finances will be scheduled after Jan 1.

Bylaws Review—Eric Ottoson

Eric met with Grant and Lillian. The proposed amendments are being reviewed.

Funding—Open

No report.

Membership—Gladys Campion

At the time of the General Meeting in November, we had 62 Regular, 5 Associate, 0 Student, and 2 Life members for a total of 69 members. Attendance was 24 and the 50/50 brought in \$15.

Net Administration Team—Ken Phelps, Gary Turner

No problems to report. The Web site and e-mail are running well.

(Continued on page 5)

(Board of Trustees' Minutes—Continued from page 4)

Programs—Jim Ullom

- January will be a presentation by Martin Arbagi on Keypass
- February should be a talk on the 3D printers available at Greene county libraries.
- March will tentatively be a talk about Drones.

Publications—Martin Arbagi

The next DATABUS will be posted after the Holiday Dinner

OLD BUSINESS

Advertising/Publicity – Ed Skuya

Ed will try to post notices of the General Membership meeting one week in advance.

From now on, the efforts of this group will be recognized as the Publicity Committee.

Meetup – Debra McFall, Gary Coy

Debra has been researching the details of a Meetup account. The yearly cost will exceed the \$120 allotted at last month's board meeting.

Gary Turner moved that Debra should spend up to \$200 for a 12 month account with Meetup. Eric Ottoson seconded and the motion passed.

The Meetup fees should be paid with a DMA debit card. Gladly needs to add Pat Flynn's name to our Fifth Third account and have them issue a debit card in his name. It was also noted that a number of keywords need to be chosen for use in setting up the Meetup account.

Gary Coy will ask Dave Lundy for access to the DMA Facebook account and take over the maintenance.

Records Committee—Debra McFall, Gladly Campion, Eric Ottoson, Wynn Rollert, Martin Arbagi

The group met and reviewed the contents of 4 boxes. Three should be kept and the fourth shredded.

Wright State Archives—Martin Arbagi, Gladly Campion

No progress. Gary Turner told the board he had transferred tapes of Computerfest 2002 onto DVD.

Holiday Dinner—Gladly Campion

Plans are in place for December 15 at TJ Chumps in Huber Heights

Meet & Greet at 6 P.M., Buffet Dinner at 7pm, and Awards and Prizes at 8pm.

The Grand Prize is a 32" LED TV that can be used as a monitor. We also have a 7" Tablet, an Automobile heads-up display, a 2 TB hard drive, and 128 GB flash drive and much more.

Next Board Meeting

The next Board Meeting will be held at 7 P.M. on Monday, January 4, 2016 at The Greene Community Room in the breezeway of the Ritch Building on Chestnut Street. If you would like to join us for dinner, we will be meeting at 6 P.M. at El Toro in the shopping center on the North side of Indian Ripple.

Possible Location for General Membership Meetings – Eric Ottoson

The Berry room holds 40 to 50 people, has WiFi, but no TV for presentations. Eric is checking the details.

NEW BUSINESS

DMA 40th Anniversary—Gary Turner

An announcement can be made at the Holiday Dinner. We can ask the membership for memorabilia. (EDITOR'S NOTE: See the screen shot from the green-screen monitor on the next page.)

(Continued on page 6)

(Board of Trustees' Minutes—Continued from page 5)

Techfest – Gladys Campion

DMA will likely have three booths again this year: The Computer Museum, Linux SIG, and (for the first time this year): Dayton Diode.

ADJOURNMENT

Gary Coy moved to adjourn at 8:25 P.M. Eric Ottoson seconded and the motion passed

Respectfully Submitted,

Gladys Campion, Secretary

> You are carrying a 5¼" floppy disk.

> You are hungry.

> You are standing in front of a door.

Open door.

> The door is now open.

Enter door.

> Shrieking Geek Room You are in a room full of shrieking geeks eating pizza.

They are celebrating. A geek approaches.

Speak to shrieking Geek.

> What do you wish to speak to the shrieking Geek?

Say: "O geek, why do you shriek?"

> The geek replies: "We are celebrating the 40th anniversary of THE DAYTON MICRO-COMPUTER ASSOCIATION, Inc., and are collecting memorabilia."

Give 5¼" floppy disk to geek.

> The geek thanks you, and gives you two huge, greasy slices of mushroom pizza.

Eat slices of greasy mushroom pizza.

> You are no longer hungry.

Dear Friends,

Our Web site will be moving to anew server. This should occur in the next few weeks and without any change in the way you contact us. Our Web site can still be reached at www.ugr.com, as it has for years. Behind the scenes, the actual site will be moved to a new location. As this move occurs, a few rough patches may occur. Right now, when you go to our Web site, you may get a warning that the site's security certificate has expired and that it is not save to go to this site. This is not true. Your visiting and ordering from our site during this transition is as safe as ever. So just ignore these warning messages and you will be very safe and protected.

Finally, as the numbers of my customers grow, it is becoming harder for me to reply to each note requesting help. At times, I receive many more requests than I can answer in a timely manner. So let me suggest a couple of things that you can do to assist me.

Send your e-mails requesting support to support@ugr.com and not to me personally. I will focus on answering these directed e-mails first. Any requests that still come to me personally will be answered as time permits.

If you don't hear from me within a week, resend your e-mail with your request a second time. I try to give priority to any request that is sent to me a second time.

Try to check for your answer from the Acronis knowledge base or Acronis forums at www.acronis.com/support. If you find your answer, let me know that you no longer need me to reply to you.

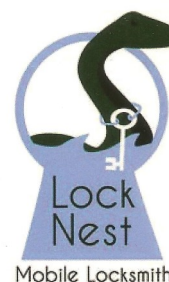
Thank you for your patience with me as we try to help you.

Gene & Linda Barlow
User Group Relations

(Continued on page 8)

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. At this month's meeting, give your card to Editor **Martin Arbagi** to be scanned, or send a good-quality image to Editor@DMA1.org A link to your Web site (if you have one) can be embedded in the image of your card. Under weird IRS regulations, your site may not include discount coupons for DMA members, although discount offers may be included in the advertisement itself. See the example below right, which includes a member discount.



Lock Nest Mobile Locksmith

Steve Davis
Owner

P.O. Box 753
Vandalia, OH 45377
937.890.1936



Locknestmobile@gmail.com
www.locknestmobilelocksmith.com

10% Discount to DMA
members!

—Beyond Doing Basic Backups—

By Gene BARLOW Support (at) UGR/com

User Group Relations www.ugr.com

Copyrighted (©) December 2015

FOR ALMOST TWENTY YEARS I have lectured and written articles about the importance of doing backups of your PC. Doing regular backups of your main computer's hard drive is the most important thing all end-users need to do to maintain and protect their computer systems. Without a good backup system, your computer may crash and you will not only lose all of your important files and photographs, but your computer will be dead and expensive to repair. Having followed my advice over the years, thousands of computer users have avoided such loss.

Basic Computer Backups

There are many different approaches to doing backups of your computer. Unfortunately, most of these approaches are just plain inadequate to totally protect your computer. That is why I have emphasized the Perfect Backup Approach as the most effective way to do backups. It consists of backing up your entire main hard drive on a weekly basis and storing these backups on a dedicated external hard drive. This is not a partial backup of a few of your data files or photographs, but the entire content of your main hard drive is backed up. Your Windows operating system, all of your application programs and setting files, as well as your important data files (photographs, videos, graphics, spreadsheets, databases, etc.) are protected. A good Image Backup system is needed to do this properly. I recommend you use the top rated Acronis True Image product for either the PC or the Mac computer. If you follow my instructions on how to do these weekly backups, then your computer and important data files will be very well protected.

Beyond the Basic Backups

Every end-user needs to faithfully do the Perfect Backup Approach mentioned above and for most computer users this will be adequate to protect you. However, there are a few ways to give your computer an added level of protection. The purpose of this article is to introduce you to these more advanced backup approaches. Please note that these should never be used as your only backups, but they should be used in addition to the Perfect Backup Approach described above. Together with the Perfect Backup Approach, they will give you a higher level of Protection than the Basic Backup can do by itself.

Critical File Backups:

While I recommend a backup of your entire main hard drive on a weekly basis, you may have a few critical files on your computer system that need to be backed up more frequently. Acronis True Image has the ability to backup individual files on a daily basis or even more often. The Continuous Backup feature in True Image will watch over these critical files and back them up every five minutes or so if they have changed. Do not be tempted to back up all of your files using this approach, as it could cause your computer un-needed extra work. Just select those very important files on your hard drive to get this frequent backup action.

Protecting your Backup Images

Making regular backups and storing them on an external hard drive attached to your computer is very important. But, then protecting your backup hard drive from damage is a very important next step. Let me recommend you do two things to protect your important backup hard drive. First, unplug the backup external hard drive from your computer between backups. That way, a virus attacking your computer will not be able to destroy your backup external hard drive when it crashes the main hard drive inside the computer.

(Continued on page 9)

(Beyond Basic Backups—Continued from page 8)

Second, get a second backup external hard drive to serve as your remote backup hard drive. Then you will have both a local backup drive and a remote backup drive. Store the local backup drive near your computer for the convenience of doing your next backup. Then after 3-4 months, move your local backup hard drive to a remote location (safety deposit box, your office, a friend's house, etc.) and start using your remote backup hard drive as your local backup drive. The remote backup hard drive will protect you from theft, fire, earthquakes, flood, and hurricanes that may destroy your local backup hard drive. The swapping of these two backup hard drives will protect you against these rare physical destruction of your local backups. You will still lose a month or two of information using this swap approach.

Cloud Backup Storage

A fairly new backup approach takes advantage of Internet storage to save your backups. Then, if anything should happen to your computer location (fire, theft, tornados, earthquakes, etc.) that destroys your computer and local backup storage, your very important files will still be safe on the Internet. Just remember that Cloud backups are very slow and more expensive than local backups. So, the most practical use of Cloud backups is to save your most important data files and photos and not to back up your entire main hard drive. Continue to use local weekly backups of your entire main hard drive to protect your entire main hard drive. This combination of weekly local backups and daily Cloud backups will protect your computer and important files in the best way possible.

To order Acronis True Image 2016 for PC/Mac, Acronis True Image 2016 Cloud or Acronis Disk Director 12 from us, go to www.ugr.com and select the product you wish to purchase. Once you are on that product's page, click on the appropriate Buy Now button to place your order. We charge only \$25 for a single license or \$60 for a three license package of our local software products. That is half what these excellent product normally sells for from Acronis or from your retail computer store. We also offer Acronis Cloud storage for the first time. If you order our Acronis True Image 2016 Cloud product, you get a license to our popular backup utility plus unlimited Cloud storage for one year to be used by one computer and up to 3 smart devices (smartphones, tablets, etc.). The cost of this True Image Cloud package is only \$50, again half the normal price of this package. When checking out of the shopping cart, enter in the special order code of UGNLI215. Not only do we provide the best prices for these excellent products, we also give our customers much better support than they will get from Acronis or other distributors.

If you have questions about this article or the Acronis True Image for PC/Mac, Acronis True Image Cloud or Acronis Disk Director products, send an email to support@ugr.com and I will try to help you with your questions.

This is one of a series of technical articles that I distribute to those that have subscribed to this newsletter. You can subscribe at <http://www.ugr.com/NewsletterRegistration.html>. Watch for them and learn more about your computer and its hard drive. If you do not want to receive these newsletters, simply reply and ask to have your name removed from the list and I will do so immediately. User group newsletter editors may print this article in their monthly newsletter as long as the article is printed in its entirety and not cut or edited.

...TR

WANTED: Typist (on PC)
ACCURACY: Important
SPEED: Not as Important

Contact: **WYNN ROLLERT** (DMA Member)
(937) 256-1772
... at any time

AMD A10-7800 CPU

By Daniel WOODARD, dgw (at) dmal.org
Dayton Microcomputer Association DMAI.org

IS YOUR COMPUTER BOGGING DOWN, perhaps not powerful enough to handle daily tasks or games? You've surely heard the old adage, "take two and call me in the morning." In the same vein, folks often would upgrade both a video card and the processor to try to speed up their PC. Recently, processors began arriving that combined both a traditional CPU and video card (gpu) into one unit. The recently released AMD A10-7800 is one of these, called an APU, or accelerated processing unit.

Although my computer had a fairly competent processor (Phenom II x4), the motherboard's onboard graphics were very weak, to the point where I was seeing huge amounts of lag when I or my kids were playing some basic browser games. I'm one of those folks who likes simplicity, so I've enjoyed watching as LAN cards, sound cards and even video cards have been integrated onto the motherboard. This was fine at first, but eventually I found myself wanting to upgrade the video capabilities, and I'd rather be able to do this without having to pull the motherboard or add a video card. I've had video cards in the past, but prefer the fanless variety since they don't add background noise, and there's no fan that can go bad. Silent video cards with huge heat sinks are more of a niche market today, so prices for better performers have climbed up between \$75-\$100.

The AMD A10 range of processors offered exactly what I wanted, using the FM2+ socket (first released earlier this year). The A10-7800 has what is probably the best built in graphics on a very competent but energy efficient processor. Since the graphics are built into the processor, there is no additional heat sink or fan required—it just uses the same heat sink fan that every CPU has anyway. Another advantage is that if I eventually decide to upgrade in a year or two, I can simply and quickly upgrade both the CPU and video elements of my system just by pulling the CPU and inserting a new one—no muss, no fuss.

My prior CPU was the Phenom II X4, running at 2.8 GHz. It drew 95 watts and put out quite a bit of heat. The first thing I noticed about the new A10 CPU was that the heat sink was about half the size of that required for the old Phenom II. I hadn't expected it to be much smaller, considering that now there was also essentially a video card crammed in there as well!

AMD's press release mentions that the processor supports UltraHD (4K) monitor resolutions. The A10-7800 (formerly known as Kaveri) also is touted as having 12 compute cores: 4 CPU and 8 gpu. It runs at a base clock frequency of 3.5 GHz, activating a turbo frequency of 3.9 GHz if an application is demanding. It has 512 video shader cores and a listed 65 watts of drawn power. Also incorporated is AMD TrueAudio, a built in DSP processor that provides dedicated positional sound effects calculation (including echo, etc.) for games. At the time of this writing, the processor is available for around \$140.

As I had mentioned, my main reason for wanting an upgrade was extreme slowdown or lag when playing browser games. I had also noticed an occasional lockup once or twice a month, and decided it was time to install new components. I used Browsermark and PCMark 8 to compare my system before and after the upgrade. Originally I had the AMD Phenom II x4 925 CPU and onboard Radeon HD 4250 video.

Phenom II x4 925 (4 core, 2.8 GHz, 95 watt)

A10-7800 (4 core, 3.9 GHz, 65 watt)

Winrar 156 Megabyte compress —
109 seconds

114 seconds

(Continued on page 11)

(AMD CPU—Continued from page 10)

Phenom II x4 925 (4 core, 2.8 GHz, 95 watt)	A10-7800 (4 core, 3.9 GHz, 65 watt)
Hyper Pi 8m calc., 22 iterations— 5 min. 26 seconds	4 min. 26 seconds
Power Consumption— 142 Watts full load, 83 W at rest	115 Watts full load, 60 W at rest
# of transistors— 758 million	2.41 billion
PCMark 8 casual Gaming— 7.8 fps	28 fps
Browsermark Score— 1,888	3,758

(full load vs at rest tested using Handbrake, h.264/mpeg4 video, doesn't include monitor)

I performed a variety of benchmarks, such as using Winrar to try to compress a 156 Megabyte video file. This may not have been the best choice of file, since they are already highly compressed, but the resulting times were very close, even though the newer CPU clearly uses a lot less power to do the same job. Hyper Pi, which calculates Pi using as many cores as the CPU possesses, showed a marked improvement over the old Phenom II.

If you'll refer to the chart above, you can see that the A10-7800 has roughly 3x as many switches/transistors as the Phenom II 925 did. To put that in perspective, my first computer, a TI 99/4a from about 1982, had a CPU with 8,000 transistors, while my first IBM clone in around 1990 had 275,000. Put another way, let's say that each switch represents a person. In that case, my first PC had close to the equivalent of my home town's population toiling away in there, while today it is roughly the equivalent to the population of Asia. Clearly, it won't be too long before there are more switches in my computer's processor than there are people alive.

I was also able to borrow a "Kill A Watt" energy testing outlet device from my Dad to get some interesting readings. For example, now I know that my monitor uses up about 27 watts, with the PC using another 60W when the system is not doing much of anything at the desktop. Without the monitor, the new A10 based system uses 115 watts when doing mpeg4/h.264 video file encoding, vs 142 watts on the old Phenom II system. With the side of the case cover off, I definitely could hear the APU fan become a bit noisier during the video encoding, (when the processor kicked into 3.9 GHz turbo mode) but it wasn't noticeable at all with the case closed. Considering the performance per Watt used, this would be a great choice for a power limited system – if you want to upgrade capabilities without having to upgrade a system's power supply, for example.

Browsermark showed roughly a doubling of ability, while PCMark 8 showed nearly a quadrupling of casual gaming frames per second. Ultimately, I got what I wanted out of the upgrade – browser games are playable again, with no lag for detailed animations in games and such. The system now also has the capability of playing various games with 3D effects, such as first and third person shooters – something I definitely could not have done on my old system.

It wouldn't be fair to finish this review without at least trying a few games. The A10-7800 was able to handle a game called King's Bounty that needed a video card upgrade to play about 3 years ago, due

(Continued on page 12)

(AMD CPU—Continued from page 11)

to numerous rendered battle animations. For the past decade, many of the first and third person shooters and other 3D games have used the Unreal Engine. (UE) I downloaded game demos using the UE2, which was used to make many games from about 2003 to 2008, and the system worked flawlessly. I tried another game that was made with UE3, which was used from about 2009 to present, and again, it did a decent job, but not at the highest resolutions.

The next version of the Unreal Engine is UE4, which is currently being used by developers to make games that will come out starting in 2015, and probably for the next 5 years or so. Using a recently released demo of UE4, I was only able to get framerates of about 9-14 frames per second, which is not playable. However, it is still orders of magnitude above what I would have gotten with any motherboard's onboard graphics, and probably about 15% better than a stand-alone R7 240 video card.

To be fair, the UE4 development system is meant to push even high end video cards at this point—cards that probably cost more by themselves than this processor does. It makes sense for them to do this, because it usually takes at least a couple of years to develop the games. Also, today's \$350 Radeon R9 or Geforce GTX video cards will be equivalent to a middle of the road \$120 card three or so years from now.

APU's such as the A10-7800 are very unlikely to ever interest either of these two groups: overclockers or video card enthusiasts. AMD wasn't going after either of these markets, so it shouldn't be a surprise. What AMD wanted to do was to offer a relatively inexpensive option for people who like to have what you might consider some mid-range graphics built into the processor. Intel has also started doing this, with Intel graphics built in to a number of their processors now. At least for present, AMD definitely has the upper hand as far as video game framerate on these, however. Looking over numerous online benchmarks, I found that the Intel processors could crunch numbers a bit faster, but that the AMD APU's often had double the game frame rates. I guess if you spend most of your time compressing files or doing intensive calculations, Intel might be a better choice. However, if anyone in your house plays games, the AMD APU would probably be a better investment.

In a nutshell: I give the A10-7800 a 9.5 out of 10 for energy efficiency and for being able to cram this much video processing ability into an APU. It would probably play 95% of the games out there currently, and you could easily spend \$60 to \$70 on a stand-alone video card that would not outperform this. That said, this is probably a better choice for those who occasionally try first person shooters, considering that it is unlikely to perform well in graphics heavy titles coming out in 2015 and later. For those who leave their PC's on all the time, the savings on an electric bill alone would likely pay for the cost of the A10-7800 in one or two years. This is especially true if your current system has older (released 2010 or before) stand-alone video cards or processors that draw 90W or more.

Dan WOODARD, a longtime DMA member, lives in suburban Clayton .

...TR



Dayton Microcomputer Association Events for February 2016

For additions or corrections, contact [Dave Lundy](#)
For details, such as location and contact info, please select Text type display.

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1 7:00pm DMA Board of Trustees	2	3	4 6:30pm Genealogy SIG	5	6 GT's Birthday 3:00-5:00pm Classic Computers
7	8 7:00pm Dayton Diode Mtg.	9 7:00pm Investment SIG	10 7:00pm Dayton Dynamic Languages Users Group	11	12	13
14 Valentine's Day	15 7:00pm Apple-Dayton SIG Presidents' Day	16 How-To SIG on hiatus til further notice	17	18 7:00pm Linux SIG	19	20 3:00-5:00pm Classic Computers
21	22	23 7:00pm DMA Main mtg.	24	25	26	27
28	29					



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

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 q No q Change of Address only? q Today's date: ____/____/____

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

Type of MembershipApplication 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):

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Total — Lines 1 and 2 (+ 4 if checked)

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Beavercreek, OH 45434-0402

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