The Databus
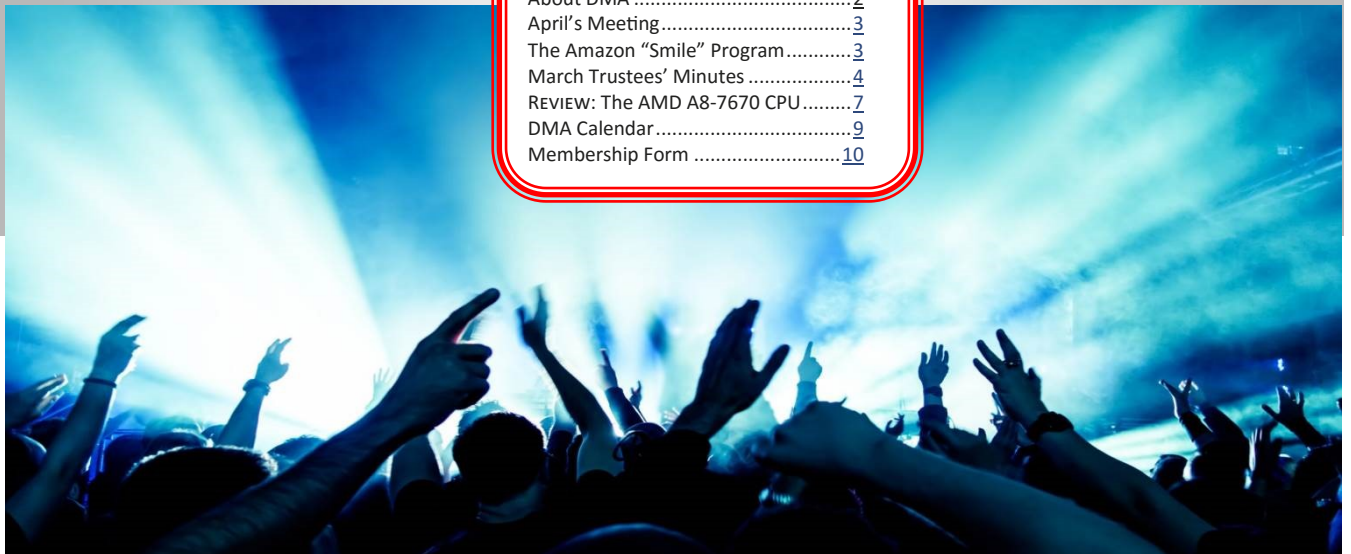
Newsletter of the Dayton Microcomputer Association, Inc.

Volume VI, Number 4 (New Series), April 2016

DMA

40 ANNIVERSARY

1976-2016

—Contents—

Established in 1976 (we're celebrating our 40th anniversary this month and for the rest of the 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, AMD, Linux, 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.

Dayton Microcomputer Association
GENERAL MEMBERSHIP MEETING
7:00 P.M. Tuesday, April 26, 2016
TJ CHUMPS, 7050 Executive Boulevard, Huber Heights OH
No charge—Guests welcome—Bring a friend—Click here for a map—Free parking—Also accessible via RTA bus routes 18 or 19

WAY BACK WHEN … a few guys (the gals came later) got together to build an electronics kit on a kitchen table and decided to see if others might be persuaded to form a club to talk about these new computer devices. That was 1976. Since then, the club has grown beyond all expectations in membership, events, and community service.

Computerfest had humble beginnings. DMA was one of several user groups involved in its formation, and some of the first Computerfestss were held outside of Dayton. But the annual (later, semi-annual) event grew in importance, enough to be used by Microsoft and others to announce their new products. Stewart Cheifet dedicated a full episode of his popular TV show, *Computer Chronicles,* to covering Computerfest. Dayton LANfest took off when computer gaming exploded. DLF expanded in a few short years from a monthly gaming event to an official qualifier for the World Cybergames out in California.

Our members watched the communications industry evolve from BBS to dial-up to broadband. One member ran the club's BBS from his basement. Gemair offered dial-up service to many local residents, nonprofits, and corporations. The Ohio Technology Access Project (OTAP) provided refurbished computers for many nonprofits and individuals with special needs. It also provided opportunities for volunteers to learn computer repair and rebuilding. Wireless Dayton Days placed teams of volunteers at public events held in downtown Dayton to demonstrate the free wireless service provided by the city.

DMA is proud of the many members whose accomplishments made these events possible!

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 March Board meeting must be approved by the Trustees at the following month's meeting—in this case, early Apri. The corrected and approved March Minutes will thus appear in this (April) issue, published toward the end of the month. The next Trustees' meeting will be at **7 P.M. 2 May 2016 in the Chestnut Street Community Room of the Greene Shopping Mall.** (This is in the covered walkway just across the street from the parking garage.) The meeting begins at 7:00 P.M. (Click here for a map.)

MINUTES
DMA Board of Trustees – Meeting of Monday, March 7, 2016

CALL TO ORDER

The meeting was called to order at 7:07 P.M. by Debra McFall. **Trustees present**: Martin Arbagi, Gary Coy, Pat Flynn, Debra McFall, Eric Ottoson, Ken Phelps, Ed Skuya, Gary Turner, Jim Ullom. **Others Present:** Glady Campion, Brent Kerlin.

OFFICERS' REPORTS

President—Debra McFall

Last month's presentation went well considering the circumstances. Gary Coy did a great job of stepping in at the last minute with a presentation on Android when the speaker had to cancel. Thanks, Gary!

Vice President—Gary Coy

Gary hopes to see a good turnout for the Drone presentation this month.

Secretary—Glady Campion

Glady Campion presented the minutes for the previous board meeting. Eric Ottoson moved the minutes be accepted. Martin Arbagi seconded and the motion passed.

Treasurer—Pat Flynn

Pat presented financial reports for the past month. *(See box, right.)* He has paperwork for investing in CDs.

COMMITTEE REPORTS

Audit—Glady Campion

Glady is still working on the report.

Bylaws Review—Eric Ottoson

Current amendment recommendations are being reviewed by Grant Root and Lillian Rudolph.

Funding—Open

No report.

Account Balances:
 FifthThird Checking:$18,306.82
 FifthThird Savings: $11,220.34
 Pay Pal: $655.12
 Dayton Foundation:$74,820.93
 Total: $105,003.21

Membership—Glady Campion

As of last month's General Membership meeting, we had 65 Regular, 4 Associate, 0 Student, and 2 Life members for a total of 71 members. Attendance last month was 38 and the 50/50 brought in $43.

Net Administration Team—Ken Phelps, Gary Turner

The Web site and e-mail are working with no problems.

Programs—Jim Ullom

March will be a presentation on Drones from Jay Day of Dayton Drones, and the Sinclair UAS program.

Jim Ullom moved DMA spend up to $80 on a drone for a door prize. Gary Coy seconded and the motion passed.

April is our anniversary celebration. It was suggested that Gary Ganger might talk about DMA's past and Gary Coy could talk about DMA's future.

Publications—Martin Arbagi

Martin plans to publish a combined February/March issue of THE DATABUS.

Publicity—Ed Skuya, Gary Coy, Debra McFall, Pat Flynn

The Meetup account is currently up to 47 members.

Jim Ullom moved the Publicity committee be allowed a budget of up to $500 for advertisements as long as they are approved by the President, Debra McFall. Eric Ottoson seconded and the motion passed.

OLD BUSINESS

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

Eric Ottoson presented a guideline on what records DMA should keep and for how long. He will be stepping back from this committee because of other obligations. Debra will be the new chair.

Wright State Archives—Martin Arbagi, Glady Campion

No new DATABUS issues have been donated.

Holiday Dinner—Glady Campion

Glady owes the board a final report.

Next Board Meeting

The next Board Meeting will be 7 P.M. on Monday, April 4, 2016 in the Community Room of the Ritch Building on Chestnut Street at the Greene. The Community Room is located in the breezeway of the Ritch Building. If anyone would like to join us for dinner, we will be meeting at 6 P.M. at America's Taco Shop and Great Steak, located on Glengarry next to Cold Stone Creamery. If you are parking in the garage behind the Ritch building, walk through the Ritch Building breezeway and South on Chestnut.

Possible Location for General Membership Meetings—Eric Ottoson

Eric found the Berry room in downtown Dayton inadequate for our General Membership meetings.

DMA 40th Anniversary—Gary Turner, Gary Coy

There was some discussion on what could be included in the anniversary celebration.

Linux Installfest—Gary Turner

The Linux SIG is planning an Installfest for Saturday, April 9th at Sinclair Community College.

NEW BUSINESS

Think TV Auction

The auction will be held April 18-23. Donating to the auction provides an opportunity for DMA to get our name out to the local community. Raspberry Pi kits would be appropriate. Gary Turner volunteered to order and pick up the kits from MCM Electronics.

Jim Ullom moved that DMA spend up to $200 for 2 Raspberry Pi 3 complete kits to be donated for

the auction. Eric Ottoson seconded and the motion passed.

Dayton Maker Fest

The 2nd annual Dayton Maker Fest will be Saturday, March 12th at Wright Brothers Institute's Tec^Edge *[sic]* offices on Springfield Street. Dayton Diode will be at the event. Their Milburn St. location will be open all day; with a Maker Fest after-party beginning at 7:00 pm. Glady will provide DMA flyers for the Dayton Diode booth, plus flyers and a DMA banner for the after-party.

Eric Ottoson moved DMA give up to $50 for food at the after-party. Jim Ullom seconded and the motion passed.

VOLUNTEER OF THE MONTH/QUARTER/YEAR

Mark Camden was recommended as VOQ1 for all his help with the March Drone presentation. He is using his connections with Dayton Drones and the Sinclair UAS program to pull the meeting together.

ADJOURNMENT

Gary Coy moved to adjourn at 8:46 P.M. Eric Ottoson seconded and the motion passed.
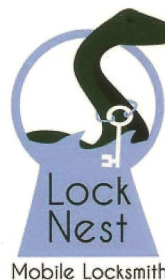
Respectfully Submitted,

Glady Campion, Secretary

THE AMD A8-7670K PROCESSOR:
A REVIEW

By Daniel WOODARD

The Dayton Microcomputer Association (DMA1.org)

DGW (at) DMA1.org

WOULD YOU CONSIDER YOURSELF A GAMER ON A BUDGET? If so, then AMD has a processor for you, the Godavari A8-7670K APU. Built using a 28nm process, the 95 Watt 7670K incorporates a Radeon R7 GPU (graphical processing unit) and fits in an FM2+ motherboard socket. The processor runs at a base speed of 3.6 GHz, and ramps up to 3.9 GHz as needed. The graphics portion of the chip runs at 757 MHz and has 384 stream processors.

The processor might appeal to those who already have an FM2+ based motherboard, or want something similar to a base line video card, but with the ability to upgrade easily. These processors have both the CPU and GPU combined into what AMD is calling an APU, or Accelerated Processing Unit. It might also appeal to those who want to minimize system fan noise, since there is no additional fan on a separate video card. A person who wants to keep total wattage under control (for example, to work with an existing system power supply) might also want one of these, since the combined CPU and graphics power usage is under 100 watts. Another plus is that the APU supports running DDR3 RAM at 2133 speeds, a jump up from some of the earlier models. The K at the end of the name also designates that this is a Black Edition, meaning that hobbyists can tinker around with the clock multiplier of both the CPU and GPU portions of the chip. I personally wanted to upgrade my A4-7300 based system, which I had built in late 2014, mostly because there were a few games my kids play where it did not quite keep up with demands. Otherwise, the A4-7300 had been quite an excellent choice for casual games, multimedia and productivity software for about $45.

I first did some "everyday computing" type comparisons between an A4-7300 dual core processor running at 4 GHz and the A8-7670K. I started out running Hyper Pi, which is a multicore computation of Pi, out to 16 million digits. This took 11 minutes and 43 seconds on the A4, but only 9 minutes and 34 seconds on the A8-7670K.

Next, I took a folder containing a mix of files totaling 454 megabytes and used winrar to do a compression. It took 4 minutes and 27 seconds on the A4, but 5 minutes and 25 seconds on the A8. The results were rather shocking at first—why would a processor with 4 cores take *longer* than one with 2 cores? Then I realized that I was using a very, very old version of Winrar—almost ten years old. It was very likely that this version only saw the first core on each processor, which would give the 4 GHz A4 an edge. However, as soon as I installed the latest version of Winrar and ran it using the A8, I saw the total time to compress the files drop to only 51 seconds! It was quite the AHA! moment for me—I had never before seen quite such a vivid example of why it is so important to upgrade software to more recent versions. Using the older versions of the software had been causing me to take about five times as long to accomplish the same task.

For the final part of the everyday computing benchmark test, I used Handbrake to compress a 44 minute 720p kid video to h.264/mpeg4. On the A4-7300, this took 28 minutes and 52 seconds, giving an average frame rate per second (fps) of 45.6. Using the A8-7670K, this took only 14 minutes and 40 seconds, giving an average fps of 89.6—converting the file in roughly half the time.

For 3D gaming comparisons, I used the 3DMark Sky Diver test, followed by the Geeks 3D GPU Test suite. The 3DMark Sky Diver test is exactly what it sounds like: a sky diver (glider, really—there are arm winglets like a flying squirrel) going through various scenes, putting the video card under strain to assess its capabilities, and giving an overall numerical score for comparison. For the Sky Diver test, final results for the A4 were 2,126 and for the A8 were 4,294—roughly double the ability. I also tested a Pentium G3220 based system I have with an actual Radeon R7 240 video card installed, and it finished the Sky Diver test with a score of 4,082. The Radeon R7 240 video card sells for about $60 retail. As you can see from the results, the A8-7670K has a slightly better 3D performance than a stand-alone $60 video card from about 24 months ago offers. That they have managed to build this into a processor and still stay under 100 Watts of power draw is an accomplishment.

I also ran the Geeks 3D GPUTest suite, which offers a batch of different tests. These include something called furmark, tessmark, GiMark, Pixmark, Plot3D, and others. Many of these are a lot of fun to watch, so I would recommend trying it if you like to watch animations, fractals and such. Rather than putting the number results from all of these here, I'll just summarize by saying that the tests show an average 110% video performance increase from the A4-7300 to the A8-7670K, again more than doubling.

For a real-world gaming test, I used a Steam game called BeamNG.drive which my oldest son has loved playing with for the past year. It is essentially a 3D car physics simulation where players can drive a variety of vehicles through many different environments. On the A8 I obtained roughly 33-35 frames per second in game, while on the A4 the game showed an average of just 17-18 fps. The slower frame rate was still playable, but seemed very jerky in comparison. A person would de finitely not want to go back to the slower frame rate after getting used to the better play of the A8-7670K for a few hours.

The A8-7670K is available for roughly $105-$110, and sometimes under $99 during sales. From reports online, it appears that overclocks of 4.5 GHz are easily accomplished with a decent heat sink. For folks who aren't interested in overclocking, this is definitely one of the first processors around the $100 price point that can competently allow 3D gaming at low to medium resolutions. If AMD continues to make advancements on their APU's, then we might actually see some folks doing budget gaming builds and returning to PC gaming (Steam, etc.) rather than buying game consoles.

http://www.majorgeeks.com/ files/details/3dmark.html
http://www.geeks3d.com/gputest/

Dayton Microcomputer Association
Events for May 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	2 7:00pm DMA Board of Trustees	3	4	5 6:30pm Genealogy SIG	6	7 3:00-5:00pm Classic Computers
8 Mother's Day	9 7:00pm Dayton Diode Mtg.	10 7:00pm Investment SIG	11 7:00pm Dayton Dynamic Languages Users Group	12	13	14
15	16 7:00pm Apple-Dayton SIG	17 How-To SIG on hiatus til further notice	18	19 7:00pm Linux SIG	20 8:00am-6:00pm Hamvention	21 8:00am-5:00pm Hamvention 3:00-5:00pm Classic Computers *Mtg. canceled due to Hamvention*
22 8:00am-1:00pm Hamvention	23	24	25	26	27	28
29	30 Memorial Day	31 7:00pm DMA Main mtg.				

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 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 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 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	❑ Cash
		❑ Check
Free Student Membership for students under 22 yrs of age. (Student Members *cannot* vote in DMA elections.)	3.) ❑ FREE	Check # ____
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) $_____	

Make your check payable to Dayton Microcomputer Association, Inc. (DMA), and then send the check and application to:
    PO Box 340402
    Beavercreek, OH 45434–0402

DMA Use only: Membership # _____

Exp. Date: _____/_____/_____

Processed by: _____

LAST REVISED: 25 November 2013

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