PROTECT YOUR MEMORIES

Mark SHULMAN:
Preserving Digital Photographs

—Contents—

SAVE A TREE (or at least a branch)! If you prefer to print your DATABUS rather than read it directly from a monitor, don't print page 16 unless you wish to become a member or renew your membership.

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

Submissions ...

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

Editor@DMA1.org

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

ALL REGISTERED TRADEMARKS, for example: the DMA Arrow, APCUG, 23andMe, Express Scripts, or MD Live, are the property of their respective owners. However, the Registered Trade Mark symbols (® or ™) have been omitted for better readability. The Editor occasionally inserts comments into articles. Such comments are sometimes preceded by the phrase: "EDITOR'S NOTE," are often in square brackets [like these], and are always in sans-serif type, like these paragraphs.

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

June Meeting: 7:00 P.M., Tuesday, the 27TH
No Driving—No Charge*

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

Mark SHULMAN:
Preserving Digital Photographs

SUMMER IS FINALLY HERE! Along with all the green grass, backyard grills, family picnics, and class reunions, everyone we see seems to have a digital camera or smartphone camera. It becomes our mission to get photos of Aunt Martha, our brother and his wife, our cousins' young twins, and that dog we recently adopted. But we need to be smart with all those jpg files. Get them off the phone and onto a medium that is more permanent. Label the files and maybe send a copy to our sister who can't throw anything away. **Mark Schulman** of APCUG has given the subject plenty of thought and is offering some good advice. Mark is a member of the Central Florida Computer Society and the APCUG Speakers' Bureau. The video we're showing tonight is one he prepared for an APCUG Virtual Technology Conference (VTC).

Our meeting starts at 7:00 P.M. DMA members will receive an invitation by e-mail for ZOOM. Others may request an invite using http://www.dma1.org/contact-us/ Or … join us in person at TJ CHUMPS, 7050 Executive Boulevard, Huber Heights Ohio.   **… TDB**

Nominations for the DMA Board of Trustees are now open!

Terms are three years and Nominees must be …

- at least 21 years of age,
- dues-paying or associate DMA members for at least 1 year, and
- self-nomination is permitted.

No experience needed!

Contact GLADY CAMPION at any DMA General Membership meeting.
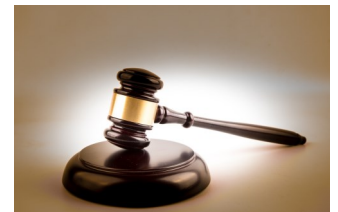
Minutes of the Trustees' meetings are normally published almost two months late, because the Minutes for, say, the May Board meeting must be approved by the Trustees at the *following month's* meeting in early June. They would then appear in the June issue — this one — of THE DATABUS, published toward the end of each month.

Trustees' meetings are usually on the *first Monday* of each month, except when that day is a legal holiday, for example: Labor Day in September.

During the epidemic, Trustees began meeting via ZOOM. This was so successful that they decided to continue the practice indefinitely. Meetings begin at 7 P.M. and are open to all DMA members. Request ZOOM credentials (that's a fancy way of saying "an invitation") from Secretary GLADY CAMPION at Tuesday's General Membership meeting.

NOTE: Corrected Minutes for the Trustees' meeting are not available at press time. They will be printed together with the June Minutes in the next DATABUS.

Internet Security – Once over easy, with Hash

By **Phil SORRENTINO,** Secretary and APCUG Representative
Sun City Center Computer Club, FL
https://www.scccomputerclub.org/
philsorr ** yahoo.com

THE INTERNET IS ESSENTIAL TO SO MANY THINGS WE DO, like shopping, investing, and banking, that you may have wondered how secure it is. And additionally, how secure is my private information during an Internet transaction? And now that we're thinking about it, how is the Internet made secure? If knowing a little about how the Internet is kept secure is interesting, read on; if not, jump to the next article.

The Internet provides essential communications among tens of millions of people and has become an essential tool for commerce; therefore, security has become a tremendously important issue. Internet security has many facets, ranging from keeping communications private to protecting passwords and guaranteeing secure commerce transactions and payments.

Computers are an integral part of the Internet, and when it comes to computers, security is a concern on many different levels. There is physical security that keeps your computer hardware from being stolen. There is software security that keeps people out of our private files. There is "malware" security that keeps your computer software from being infected with viruses, spyware, worms, and the like. And finally, there is "network" security that keeps private data protected as it goes from one computer (or client) to another computer (or server) on the Internet. These security concerns are important, but the subject here is network security. Network Security is implemented by applying cryptography to messages sent on the Internet.

Remember the "s" in "https://" and the little lock icon on the browser when you go to a "secure" website? Well, cryptography is behind all that security. Cryptography is used to secure telephone, Internet, and e-mail communications (as well as to protect software and other digital property). Cryptography is nearly as old as written language itself. It was invented to address the age-old question: How can I communicate with my friend so that no one else listening will know what was shared? Cryptography becomes necessary when communicating private information over a public or "un-trusted" medium, such as the Internet. Typically, you can be sure that the message you send over the Internet will get to the destination you expect, but

(INTERNET SECURITY—Continued from page 4)

you cannot guarantee that intermediaries (computers along the way) will not be able to see or read your message if it is not protected. With a collection of not-so-expensive equipment and a good deal of knowledge, a message on the Internet can be intercepted (sniffed), and if it is "plain text," it can be read. For mundane e-mail messages, this is not much of a concern; for messages that contain private data, for example personal information such as bank account or social security numbers, this could be an invitation for Identity Theft.

To get a bit technical here (here's the once over, with hash), we need to address the following four security concerns to guarantee messages are secure on the Internet.

1) *Privacy:* Ensuring that no one can read the message except the intended receiver.
2) *Integrity:* Assuring the receiving party that the received message has not been altered from the original.
3) *Authentication:* The process of proving one's identity.
4) *Non-repudiation:* A mechanism to prove that the expected sender sent this message.

There are, in general, three types of cryptographic schemes typically used to accomplish these goals: Secret-key cryptography, Public-key cryptography, and Hash functions, each of which can be researched in great detail by doing a Google search on the subject and settling in for some rigorous mathematics and explanations.

Secret-key Cryptography

However, here is a brief summary. Secret-key cryptography, sometimes called "symmetric" cryptography because the sender and receiver use the same key, is the more traditional form of cryptography where the (same) key is used to encrypt and decrypt a message.
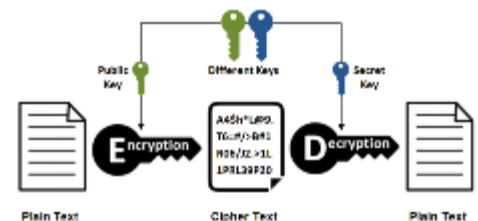
Public-key cryptography

On the other hand, public-key cryptography uses algorithms to create two asymmetric keys, a public, and a private key. (Unlike secret-key cryptography, it does not require a secure initial exchange of secret keys to both sender and receiver.) The asymmetric keys are a mathematically related key pair: a secret private key and a published public key. These keys protect a message by creating an encrypted message using the public key, which can be decrypted only by using the private key, providing "privacy," the first security concern.
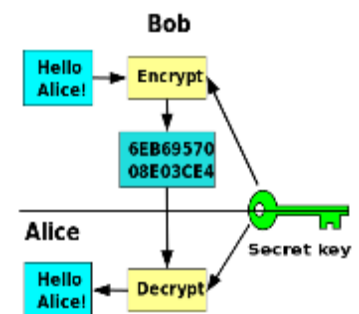
Hash

Hash functions are mathematical transformations used to encrypt data irreversibly, meaning that the Hash results cannot be reversed to recover the original message. Hash functions are well-suited for ensuring data "integrity," the second security concern, because any change made to the contents of a message will result in the receiver calculating a different hash value than the one sent by the sender. Since it is doubtful that two different messages will yield the same hash value, data *integrity* is ensured to a high degree of confidence.

"Authentication," the third security concern, is accomplished in nearly all modern computer systems using passwords that authenticate users attempting to access computer resources. For security reasons, passwords are not typically kept on a server in plaintext. Hash functions are commonly used to convert passwords to an irreversible data pattern. When you type in

your password, a Hash function converts it to a data pattern and compares it to the data pattern previously stored for your password. Your password is never stored on your machine or your server's machine; only the hash function results are stored. There is no way of going backward from the Hash function data pattern to the password (remember, the Hash function is irreversible). So now you know how the passwords are protected and why when you forget a password, the server can't tell you what it was; they can only reset it to a new password.

Digital Signature

The fourth security concern, "non-repudiation, " ensures the message was sent from the expected sender. This is accomplished by a digital signature which ensures that the sender cannot deny the authenticity of its signature or later deny sending the message. A digital signature is created using the private key of an asymmetric key pair. The signature can be verified by the corresponding public key of the asymmetric key pair, thus proving that the document was "electronically signed" by the private key owner, thus guaranteeing the message's source. So with all of these four concerns met my take, it looks like the Internet is pretty secure.

[EDITOR'S NOTE: Readers may also wish to take a look at a previous article "Pass(word): The Beef, the Hash, and the Salt for Einstein, and a Dictionary," by Arthur GRESHAM. It is an unusually lucid explanation of the "hash" process. The article is in two parts, which appeared in THE DATABUS for October and November 2021, and is available by clicking or tapping here and here.]

...TDB

The DMA COMPUTER MUSEUM is seeking the following volunteers:

- Videographer/Video Editor.
- Still Photographer.
- A team to maintain the anticipated DMA Computer Museum Web site.
- Data base Designer/Editor.
- Data Entry.
- People who are interested in exhibit preparation and construction.
- Museum Docents.

If you are interested in helping the DMA to serve the community better, please complete the form at https://www.dma1.org/museum/ and tell us how you would like to help the DMA Computer Museum. (Also see our ad on page 16 [inside rear cover].)

2023
DMA PICNIC
Saturday, August 19
Shellabarger Park, Riverside

- ✓ Click or tap here for a map.
- ✓ DMA Alumni and friends are welcome!
- ✓ Door prizes!
- ✓ Electricity & Internet will be available.
- ✓ Bring a covered dish to share, but *no alcohol or pets!*
- ✓ Tickets $6 — Available at all meetings from GLADY CAMPION, or e-mail membership@DMA1.org

Customizing Your Windows 11 Desktop

By Tom BURT, Vice President
Sun City Summerlin Computer Club
https://www.scscc.club
tomburt89134 ** cox.net

Introduction

Windows 11 usage steadily increases as more users upgrade from Windows 10 or buy a new PC with Windows 11 pre-installed. This article will offer a few configuration options for making the Windows 11 desktop more to your liking. We'll touch on various settings, mainly in the Personalization area.

Choosing a Theme

The default theme is "Windows Light." PCs from commercial vendors like HP, Lenovo, or Dell may have customized this. Click the "Settings" gear icon on the Start menu and choose Personalization > Themes. The Themes settings screen will display (see screenshot, right). It shows your current theme along with any customizations. Note that a Theme includes colors, images, sounds, and mouse cursor settings. When you have adjusted all the related settings, you can Save those settings as a named custom Theme.
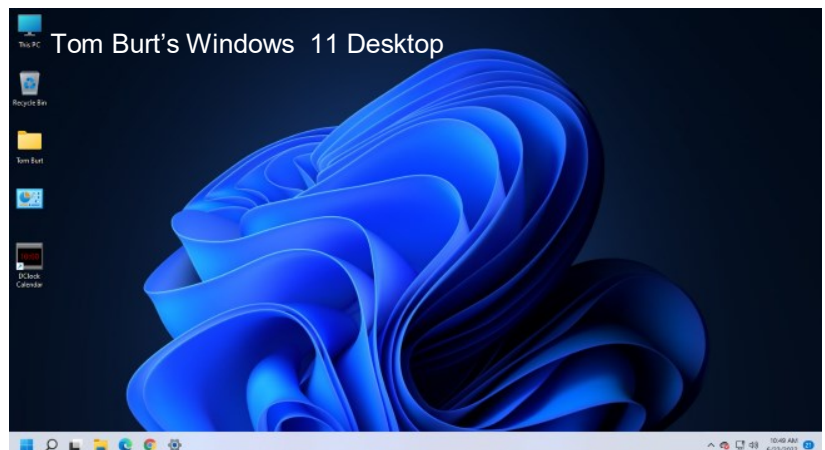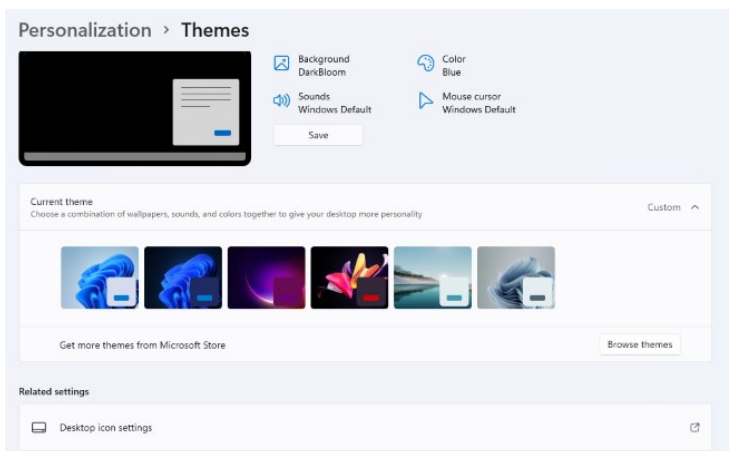
Themes Settings

Windows 11 offers six default Themes. Hover the mouse over each to see the name and behavior. Some Themes rotate between several background images. I decided to keep the default "Windows Light" theme and then customize it.

Choosing Desktop Icons

On the main Themes settings, under "Related settings," is a link for "Desktop icon settings." Click this to bring up the dialog to the left. You can click the checkboxes to specify which icons you want to appear on your desktop. The central panel shows how each icon will appear. You can select an icon and click the "Change Icon" button to open an icon chooser dialog. In addition, you can click the "Restore Default" button to revert an icon to the Windows default. Unchecking the "Allow themes to change desktop icons"

checkbox will retain your desktop icon settings if you decide to change to a different theme.

Choosing a Desktop Background

My next Desktop customization was to select a different background wallpaper. I liked the blue bloom but preferred it on the dark background used in the "Windows Dark" Theme. So I Googled for the location of the images for Windows 11 themes and found the blue bloom on a dark background in **C:\Windows\Web\Wallpaper\Windows,** named "img19.jpg". I copied this image to my **Photos\Saved Pictures** folder and renamed it "DarkBloom.jpg." I then went to Settings > Personalization > Background and set the dropdown to "Picture," and clicked the "Browse photos" button. Next, I browsed to Pictures\Saved Pictures and selected my DarkBloom.jpg image. That set my background to the desired Dark Bloom.

You can set the Desktop background to a solid color, a single image, or a rotating slide show. Knock yourself out!

Choosing Colors

My next Desktop customization was to change some of the color settings. I went to Settings > Personalization > Colors. This opened the screen partially shown below.
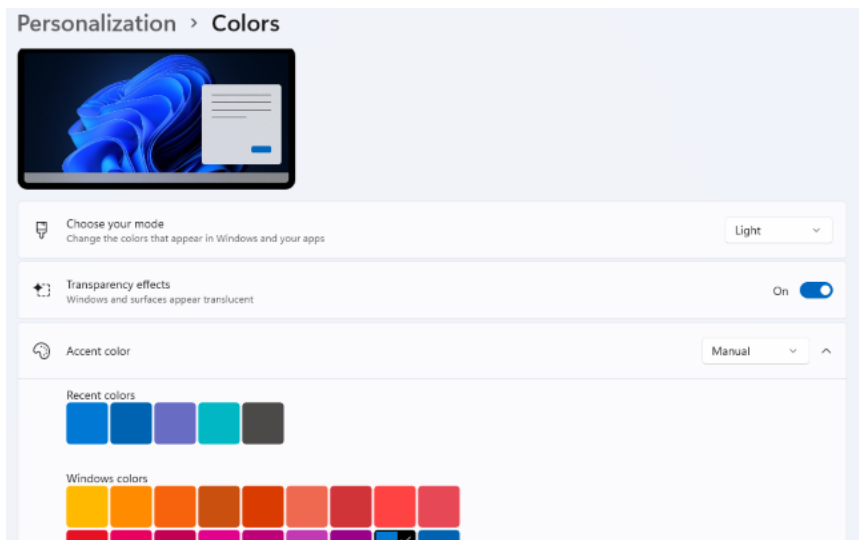
Colors Settings

I left the Mode (Light) and "Transparency effects" settings (On) as they were. I set the Accent color mode to Manual and then chose a medium blue from the palette. I could have created a custom color if I didn't like any of the palette's colors. Next, I scrolled further down until I saw a slider button for "Show accent color on title bars and windows borders." I clicked to turn this On.
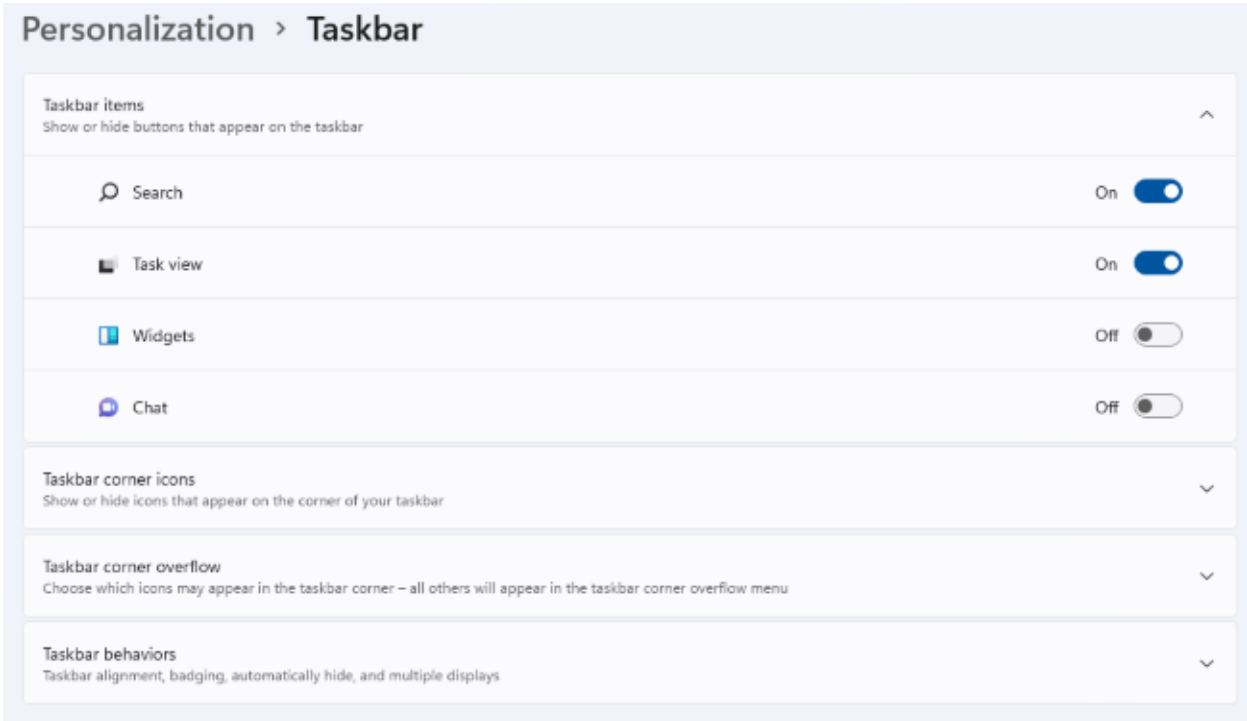
More Colors Settings
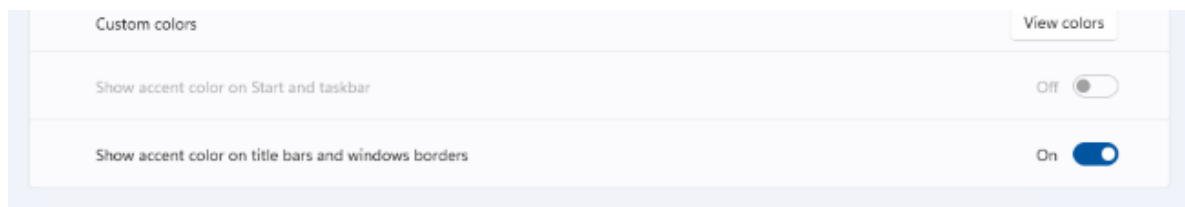
Configuring the Taskbar

My next Desktop customization was to set up the Taskbar. I visited Settings > Personalization > Taskbar to bring up the settings screen. *(See illustration on the next page.)*
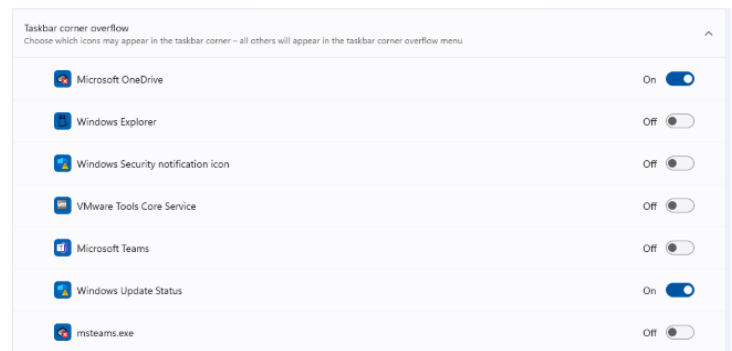
Taskbar Settings

I turned on the sliders for Search and "Task view" and turned off Widgets and Chat. Under the Taskbar corner icons (Pen menu, Touch keyboard, and Virtual touchpad), I left them all Off. I next clicked the down chevron to open the "Taskbar corner overflow" settings. The Taskbar corner was formerly known as the Notification area and the Windows Tray. Next, I turned on the Microsoft OneDrive and Windows Update Status icons to make them visible. The others appear in the overflow popup.


Taskbar Corner Overflow Settings

Lastly, I clicked the down chevron to open the "Taskbar behaviors" settings.

(CUSTOMIZING WINDOWS 11—Continued from page 11)

Taskbar Behaviors Settings

For Taskbar alignment, I selected Left from the dropdown. The default is Center. I left unchecked the "Automatically hide the taskbar" and left checked the "Show badges (unread messages counter) on taskbar apps.
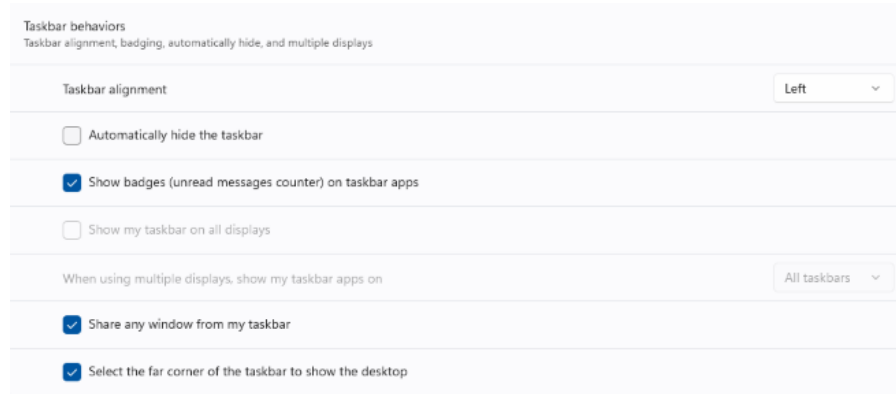
Adding Shortcuts to Programs

    Use the File Explorer to browse the program's .exe file (usually in Program Files or Program Files (x86). Left-click to select the .exe file and press Shift + F10 to bring up a context menu. Hover the Mouse over the "Send to" menu option and wait for a secondary menu to appear. Then click "Desktop (create shortcut)." Finally, rename the new Desktop shortcut to suit.
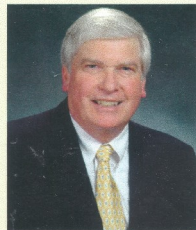
[EDITOR'S NOTE: Readers of this article may also benefit by reading my short article: "Night Light in Windows 10," which is equally applicable to Windows 11. It appeared in the July 2018 issue of THE DATABUS. Click or tap here for that issue.]

... TDB

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Jun 18 HAPPY Father's DAY	Jun 19	Jun 20	Jun 21	Jun 22	Jun 23 **Python Self-Study** 2:00pm, Online PyFri Discord See http://d8ndl.org	Jun 24
Jun 25	Jun 26	Jun 27 **MAIN MEETING** 7:00pm Online -AND- TJ Chumps 7050 Executive Blvd Huber Heights	Jun 28	Jun 29	Jun 30 **Python Self-Study** 2:00pm, Online PyFri Discord See http://d8ndl.org	Jul 1 **Classic Computers** 3:00pm By phone
Jul 4 Independence Day	Jul 3	Jul 4	Jul 5	Jul 6 **Genealogy SIG** 6:30pm Online gen-sig@dma1.org	Jul 7 **Python Self-Study** 2:00pm, Online PyFri Discord See http://d8ndl.org	Jul 8 **SBC SIG** 2:00pm DARA Clubhouse 6619 Bellefontaine Huber Heights
Jul 9	Jul 10 **DMA Trustees** 7:00pm Online **Network SIG** 6:00pm Conf Rm Wilmngton-Stroop Library	Jul 11 **Investment SIG** 7:00pm Online investment-sig @dma1.org	Jul 12 **Dayton Dynamic Languages** 7:00pm Innovation Hub / online http://d8ndl.org	Jul 13 **NASAC** 6:00pm Hustead Fire Dept. 6215 Springfield-Xenia Springfield	Jul 14 **Python Self-Study** 2:00pm, Online PyFri Discord See http://d8ndl.org	Jul 15 **Classic Computers** 3:00pm By phone
Jul 16	Jul 17	Jul 18	Jul 19	Jul 20 **Linux SIG** 7:00pm 348 Russ Eng Wright State Univ. Colonel Glenn Hwy Beavercreek	Jul 21 **Python Self-Study** 2:00pm, Online PyFri Discord See http://d8ndl.org	Jul 22

DMA Calendar
18 June through 22 July 2023
Click or tap here
for an updated version.

ABOUT THE DAYTON MICROCOMPUTER ASSOCIATION, INC. (DMA)

By Peter HESS, DMA President, 2018-2020

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

Making sense of today's technology

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

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

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

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

Spring Cleaning?

DO YOU have an "old friend," a loved example of technological equipment needing a new home?

Would you like to tell us about how you benefited through the use of that product?

The DMA COMPUTER MUSEUM has already received many donations from some early DMA members, and we are looking for more. As well as needing your old friend, we want to know about how you used the equipment. We are not afraid of having several copies of the same brand and model number of legacy equipment. Our goal is to have quality exhibit space filled with apparatus that works and can be part of many interactive displays.

We are also looking for software and computer product branded merchandise.

While the DMA Computer Museum is not yet ready to have an open house to display our many exhibits, we do have a dry, climate-controlled, secure workshop where we are storing recent donations. The present DMA Computer Museum outreach, which the DMA has offered for over forty years, will continue while we look for a building to house our museum exhibits, workshop, storage, and classroom space.

If you have something which you feel can help the DMA Computer Museum to serve the computing community better, please complete the form at https://www.dma1.org/museum/ and tell us what you would like to donate to the DMA Computer Museum.

✓ Please tell friends or family members of the intended plans to help the DMA to serve the computing community better.
✓ Please add the DMA to your will or to other planned giving arrangement.

If the you wish, we would be happy to give you credit for your donation — at the very least on signage which accompanies the equipment exhibit. We want to know your computing story.

The DMA Computer Museum is specifically looking for this equipment, as well as much more:

♦ LexisNexis UBIQ
♦ IBM AT

One of our museum curators will contact you about your donation.

If you aren't already…become a part of computing history!

—PETER HESS,
on behalf of the DMA Computer Museum Committee

Dayton Microcomputer Association Membership Form

Today's date _____/_____/_____

☐ *NEW*   Please credit the DMA member who recruited me: _____

☐ *RENEW*   Contact information below is new ☐ Y   ☐ N

TYPE OF MEMBERSHIP

☐ *REGULAR*

Name _____ Home / Work (_____) _____-_____

Email _____ Mobile Phone (_____) _____-_____

☐ *ASSOCIATE*   Family Associate membership is for a family member living at the same address as a Regular member. Name of Regular member: _____

Name _____ Home / Work (_____) _____-_____

Email _____ Mobile Phone (_____) _____-_____

☐ *STUDENT*   Free Student membership is available to those under 22 years of age, enrolled full-time in a program of higher education. Name of School: _____

Name _____ Home / Work (_____) _____-_____

Email _____ Mobile Phone (_____) _____-_____

Home Address _____

City _____ State _____ Zip _____

INTERCHANGE

Skills & interests you might share with DMA _____

What you hope DMA will provide _____

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

DUES AND FEES

Regular membership	$25.00 x ☐ 1yr ☐ 2yr ☐ 3yr	$_____
Family Associate membership	$12.50 x ☐ 1yr ☐ 2yr ☐ 3yr	$_____
Student membership	FREE	$____0.00
One-time setup fee for Shell account	$10.00	$_____
Total		$_____

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

Make your check payable to: **Dayton Microcomputer Association, Inc**
Mail check and application to: **PO Box 4005**
                                  Dayton OH 45401-4005

Or use Paypal to send your payment to: **membership@dma1.org**

DMA use only

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

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

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

Revised February 25, 2020