

# Bits & Bytes

Arkansas' Premier Computer Club



## August 2022

**Bella Vista Computer Club - John Ruehle Center**

Highlands Crossing Center, 1801 Forest Hills Blvd Suite 208 (lower level), Bella Vista, AR 72715

Website: <http://BVComputerClub.org>

Email: [editor@bvcomputerclub.org](mailto:editor@bvcomputerclub.org)

### MEETINGS

**Board Meeting:** August 8, 6pm, in John Ruehle Training Center, Highlands Crossing Center.

**General Meeting:** August 8, 7pm, "Keyboard Shortcuts in Windows", presenter Joel Ewing. Usually the the most intuitive method to perform an action uses some combination of mouse movements and mouse clicks, but many common actions may be requested by a keyboard shortcut alternative that may be easier and quicker under the right circumstances.

We will meet in-person in Room 1001 on the lower level of The Highlands Crossing Center, 1801 Forest Hills Blvd, Bella Vista, or you may attend the meeting on-line via Zoom. Zoom access information is published on our website.

Visitors or Guests are welcome.

Because of COVID-19, we recommend observing any current masking and social-distancing guidelines that may be in effect at the time of the meeting. Consider attending by Zoom if you or others in your family are in a high risk category.

### HELP CLINICS

August 6, 9am - noon at John Ruehle center

August 17, 9am - noon at John Ruehle center

Members may request Remote Help on our website at <https://bvcomputerclub.org> at menu path Member Benefits ► Remote Help .

### MEMBERSHIP

Single membership is \$25; \$10 for each additional family member in the same household.

Join on our website at <https://bvcomputerclub.org> at menu path Get Involved ► Join/Renew, by mailing an application (from the web site) with check, or complete an application and pay in person at any meeting.

### CLASSES

(At BVCC Training Center)

**Thursday, August 18, 9am-11am, "Basic Computer Knowledge: What is a Computer?", with Joel Ewing.**

**Wednesday, August 24, 4pm-6pm, "Computer Security for Regular People, Part 1", with Justin Sell.**

Advance sign up required for each listed class: For reservations: email to [edu@bvcomputerclub.org](mailto:edu@bvcomputerclub.org), or sign up at the General Meeting. Classes are free to Computer Club members.

Check the monthly calendar and announcements for any last minute schedule changes at <https://bvcomputerclub.org> .

## NEW OR RETURNING BVCC MEMBERS

We are pleased to welcome the following new members or members returning to BVCC after an absence since last month's newsletter:

Fern Svehla

Shirley Lausen

Mary Hoepfner

Michelle Forsgren

Susan Brumbaugh

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## ELECTION OF OFFICERS AT AUGUST GENERAL MEETING

The Fiscal Year for BVCC runs from the month of our incorporation, September, through the following August, which means **we elect new officers and Board members at the August General Meeting to begin serving in September.**

Every August we elect a President, Vice President, Secretary, and Treasurer to serve for a term of one year, and either one (in even years) or two (in odd years) Board Members to serve for a term of two years, so this year there are five elected positions open.

Those who have agreed to allow their name be placed in nomination by the Nominating Committee are as follows:

- President: Joel Ewing\*
- Vice President: Woody Ogden\*
- Secretary: Lori Obrenovich\*
- Treasurer: Dean Larsen
- Board: Loretta Ostenso

\*incumbent

Nominations from the floor are allowed, but the individual nominated must have agreed to serve.

Dean Larsen is currently serving a Board position that expires at the end of August 2023. If elected Treasurer, that Board position will be vacated; and, in accordance with our Bylaws, in September the Board will appoint a replacement to serve out the remaining year of that Board term. At this point there is one additional volunteer willing to fill that position.

In theory our nominating committee is directed to come up with two candidates for each position. The reality is that it has been over a decade since we have had the luxury of finding more than one person willing to volunteer to run for any open office, and covering every office has only been possible because some existing officers have always been willing to serve additional terms.

For the long-term viability of BVCC, it is essential that we continue to find new people willing to serve. It is so helpful to have a pool of the "willing" to draw upon when an office needs to be filled. The easiest way to indicate your willingness to serve is complete the on-line member survey reached from the "member survey" link on the "Helpers Wanted page (Get Involved ► Help Us) on the BVCC website.

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# WAYMO SELF-DRIVING CARS

by Jeff Wilkinson, President, Sun City Summerlin Computer Club  
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On a recent visit to San Francisco, we noticed [Waymo](#) cars on many downtown streets. At first, we thought it was part of Google maps since Waymo is an Alphabet company, Google's parent company. But after seeing multiple Waymo cars together, we, you guessed it, Googled it and found out it was a ridesharing service.

The Waymo taxi service began in Phoenix shortly after mapping the greater Phoenix area was completed in October 2020. This driverless service was previously available only to research testers and onboard safety drivers. Now, it serves a 50-square-mile area in the Phoenix suburbs of Chandler, Tempe, and Mesa. With a huge investment at stake, the challenge is to reduce the amount of human interaction required to safely perform the service.

At this time, San Francisco is in Beta testing, initially offering free rides to select passengers in San Francisco via its [Trusted Tester](#) program. Waymo's fleet includes Toyota Priuses and hybrid Chrysler Pacificas, but, Waymo has partnered with **Jaguar** to deliver the world's first fully self-driven premium EV experience. We saw only these vehicles in San Francisco.

Because San Francisco's terrain is hilly, with dense streets and multiple obstacles from continuous construction activity, Waymo cars will have a safety driver on board. The team has been mapping the city since 2019, and the cars contain 5 LiDARs (Light Detecting and Ranging) and one surround-view camera on top of each vehicle. LiDARs provides a detailed, 3D map of the car's surroundings. It gives shape and depth to the objects, roads, buildings, and more—the data from these sensors is fed to a computer running Google's machine learning algorithm.

The human body has five senses, hearing, sight, smell, taste, and touch. We use these senses to navigate the world we live in. Some of these senses are detected with man-made sensors in self-driving cars. Cameras for sight, taking multiple photos to be compared with known objects using the computer algorithm. Cameras are used with object detection algorithms to classify all the things the car sees into usable data for the algorithm. The cameras are also placed for a 360-degree view and are adapted for identification in various light and climate conditions. Once the camera has gathered the data, an object detection algorithm, which involves computer vision and neural networks, is used to classify the objects into labels like pedestrians, cars, signs, and more.

LiDAR is used to simulate the touching sense and provide range and distance information. The camera can rotate at hundreds of revolutions per minute and provide a 360-degree view and high-resolution information range. The vertical angle of detection allowing height measurement and the updating frequency are other important features. In addition, multiple channels with input from different laser beams provide higher quality data to the object detection algorithm.

The Waymo driver uses the information it has gathered, along with its over 20 million miles driven in the real world, to predict where other objects (like pedestrians, cars, etc.) would go, how fast they would move, and the way they move.

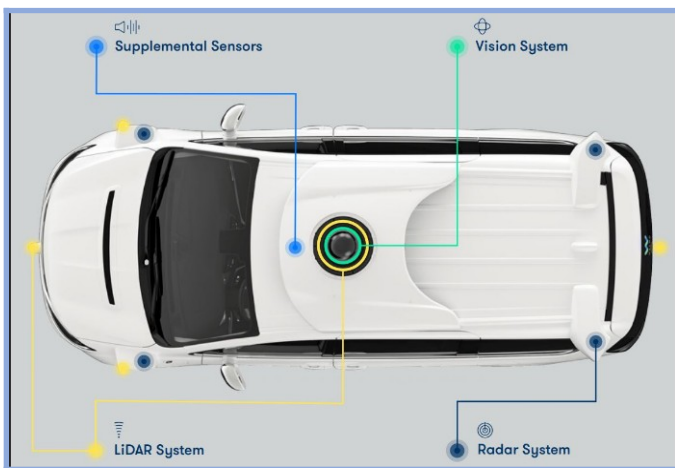


It predicts **all** the possible paths each object may take in less than a second. With constant updates and corrections as the trip begins.

In addition to safety and navigation, self-driving vehicles must be power-and-fuel-efficient. Therefore, numerous sensors, actuators, application-specific circuit boards, and subsystems are installed in self-driven cars to manage system-level operations, power consumption, and fuel efficiency.

The voltage in the vehicle battery is crucial for the safety of the users and the vehicle's functionality and is constantly monitored. Autonomous cars use milliohm meters and shunts feeding differential amplifiers to precisely measure the battery voltage drop.

Actuators, step motors, and solenoid valves in the electronic fuel injection system help improve fuel efficiency and reduce emissions and are also actively monitored and controlled.



Self-driving vehicles depend on sensors, actuators, and processors to make crucial decisions on the road, ensuring the safety and comfort of their users.

So, these self-driving Waymo Jaguars with the odd-looking spinning lidar and cameras are rolling technology hubs with dynamic inputs feeding various actuators and solenoids, which are constantly updated by feedback from even more sensors!!

Initial tests yielded less than stellar feedback, but progress is steadily being made, which is not surprising given the complexity of the project!!

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## RIGHT-CLICK YOUR MOUSE, BEST SHORTCUT EVER!

By Jim Cerny, Forums Coordinator, and Class Instructor  
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If you are not familiar with the power of RIGHT-clicking your mouse, you are in for a great Windows tip to help you in almost every place on your computer. First, of course, everyone should be familiar with LEFT-clicking the mouse to select things and options. Computer instructions say "click on" this or that, and it is understood that they mean LEFT click. But the RIGHT mouse button is a big help also, and instructions should always specify "RIGHT-click" when you are to use that button.

So, what does "right-clicking" your mouse do on Windows? Well -- and this is the core of this article -- **right-clicking your mouse on anything makes a menu of options appear for that item.** This works for almost anything you can see on your Windows monitor. So, let's look at a few examples for you to try to show you what a helpful shortcut this can be for you.

Place your mouse arrow (cursor) anywhere on your desktop screen (on an empty area, not an icon). Now right-click your mouse, and you will see a menu appear of choices or commands for what you can do with your desktop. For example, you will see choices such as "View," which allows you to change

how you view your desktop. Or "Sort by," which gives you options for sorting what is on your desktop. If you don't know what a command or option does, ask Google.

For another example, place your mouse arrow on a BLANK area on your Taskbar at the bottom of your Windows desktop screen. Now right-click, and you will see options of what you can do with your Taskbar – such as locking or unlocking the Taskbar, arranging open windows on your screen, and more. You can even LEFT click on "Taskbar settings" to go directly to the Taskbar settings options. So have fun and TRY something! (Remember always to use a LEFT mouse click to select a menu option).

For a third example, let's say you are editing text in a document. First, drag your mouse over some text to highlight it (this is "selecting" the text you want to work with). Now right-click on the highlighted text, and viola, you see options of what you can do with that text. You can select "cut," "copy," or "paste," for example, or change the font or make it a new paragraph.

If you have not realized the power of right-clicking your mouse, then you should be saying a big "WOW, this is so cool!" Now you can have some fun trying right-clicks anywhere and everywhere. Try right-clicking on an icon, a cell in a spreadsheet, a file or folder name in File Explorer, or a photo on the internet. You do not have to select an option on the menu that appears; left click somewhere else, and the menu will disappear, and nothing will happen. So, you won't change a thing when you look and explore. Right-clicking is a great shortcut that will save you time searching for many options or choices. Most apps (applications, programs, etc.) will also provide right-click menus. So why not give it a try? You have nothing to lose but a click!

