Bits & Bytes

Arkansas' Premier Computer Club

December 2017

Bella Vista Computer Club - John Ruehle Center
Highlands Crossing Center, 1801 Forest Hills Blvd Suite 208 (lower level), Bella Vista, AR 72715

Website: http://www.BVCompClub.org   Email: editor@bvcompclub.org

HOW TO FIND US

All meetings are on the lower level of the Highland Crossroads Center in Bella Vista. You may use entrance A on the West side or entrance C on the South side and take the elevator or stairs to the lower level. Turn left (West) to reach the General Meeting room, right for the John Ruehle Training Center. Additional information is on our web site.

The NE Village House entrance to the lower level is no longer available for access to our rooms.

MEETINGS

Board Meeting: December 11th, 6:00 pm, John Ruehle Training Center

General Meeting: December 11th (2nd Monday), 7:00 pm, Community Room A (Rm 1001). **Program:** Jim Prince will give a presentation on "Windows 10 Updates, Past, Present & Future". **We will also have a raffle for a RCA Cambio Tablet (see page 3).**

Bring a guest! New Members and Guests are always welcome at the General Meeting

Genealogy SIG: December 16th (3rd Saturday), 10 am – noon, John Ruehle Training Center

Future Meetings:
January 8th -Pete Opland. Approximate title: "How to Purchase a New Computer".

HELP CLINICS

Saturday, December 2, 9am – noon
Wednesday, December 20, 9am – noon
Saturday, January 6, 9am – noon

Help clinics are a free service held in the Training Center for BVCC club members

Bring your tower, laptop, tablet or smartphone for problem solving.

CLASSES

"Why, When and How to Backup Your C Drive" – Tuesday December 12, 9am – 11am, Pete Opland. **See related article "The Importance of Backups" on page 2.**

Don't wait until the last minute to sign up for a class; although if this class is not full we will accept registrations at the December 11 meeting. Classes are **free to Computer Club members** and are held at our John Ruehle Training Center.
Check our web site at http://bvcompclub.org for the most current information on Training Session Descriptions and Calendar.

MEMBERSHIP

Single membership is $20; $10 for each additional family member. Join by mailing an application (from the web site) with check, or complete an application and pay at a meeting. **With free access to Help Clinics and classes, BVCC membership is a real bargain.**

REMINDERS

Check your Membership Card to see if it is renewal time.   We value each one of you.

RECYCLE CENTER HELP WANTED

The BVCC needs your help. If you have an hour or more of time you can give to the Bella Vista Recycling Center, they need greeters to assist people dropping off their recyclables. Our income is derived from dues and from grants from the Recycling Center based on hours donated and credited to BVCC.

NEW PUBLIC RELATIONS CHAIR

Our Public Relations Chair, Norman Farria, had to step down because of family health issues. We thank him for his service.

The duties of that office have been assumed by Marie Herr.

THE IMPORTANCE OF BACKUPS

What do you do if your computer will no longer boot successfully, or if boots with serious problems, such as finding that all your important files are no longer accessible?

If you don't know whether you are prepared for such a mishap, you probably are not prepared. A way to learn how to become prepared is to enroll in our "Why, When and How to Backup Your C Drive" class, next offered on December 12.

 This problem could strike anyone, either from a hardware failure or a malware attack. Malware can either damage files in ways that can't be recovered, or ransomware can encrypt files and demand payment of hundreds of dollars in ransom for the key required to decrypt the files.

If you do not have an adequate image backup of your system that includes both the Operating System and your files, recovering from such a disaster may take many hours and you could lose all your personal files and customized settings for all applications.

If your system becomes infected with ransomware and you pay for a key to recover your files, you have only the word of a crook that you will be given a valid key that will work, and that after using the key you won't still be left with harmful malware on your system.

If you have good image backups of your Windows system you have better alternatives: you can choose a backup date prior to when the problem occurred and restore your entire Operating System and all your user files to their state on a date of that backup. At worst, you may lose files added or changed after that backup date. You can choose how often to make backups so that the exposure of losing files is acceptable to you.

A system image backup will protect from both malware-induced failures and from hardware failures that require replacement of a failed hard drive.

The BVCC "Why, When and How to Backup Your C Drive" class will show you how you can combine free software with a modest investment ($50 - $75) in a USB external hard drive to save image backups to protect your Windows Systems.

Our goal is for 100% of our members to understand and use image backups of some kind, and this class will be taught as long as there is demand for it. When a member encounters a problem that requires their Operating System be rebuilt, having an image backup can save our Help Clinic personnel many hours of work and provides a much better end result for the member.

By Joel Ewing, BVCC President

DECEMBER RAFFLE

At the December 11 General Meeting we will hold a raffle drawing for a RCA Cambio 10.1" 2-in-1 Tablet 32GB Intel Atom Z3735F Quad-Core Processor with Windows 10. This tablet has a detachable keyboard.

Tickets to participate in the raffle will be 1 for a $1 donation, 6 for a $5 donation. Exact change or checks will be appreciated.

To win, you must be present and be a paid member of BVCC at the time of the drawing

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OPERATING RULES REVISION VOTE

As required by our By-Laws, a minor revision of our Operating Rules approved by the BVCC Board on November 13, 2017 will be submitted for concurrence and approval by the membership at the December 11 General Meeting.

The explanation of the changes and the full text of the revised Operating Rules may be found at http://bvcompclub.org/PDF/OperatingRules-2017-10-25_proposed.pdf, or follow the link on our web site Announcements page. A summary of the paragraphs changed and the nature of the change follows:

Aside from minor spelling and grammatical changes, the changes of substance to the indicated paragraphs of the Operating Rules are as follows:

2. Reflect the reality that Windows 10 updates on Training Center computers may be forced to occur at system start up or shutdown.

5. Lower the dollar amount requiring Board approval of expenses to be consistent with the limits placed in items (3) and (4).

6. Clarify responsibilities in the event of a General Meeting cancellation.

7. Provide for backup access (by the President) to our safe deposit box in the event the Treasurer is unable to function. This is actually a policy that has been in effect for over five years, but was not documented.

9. Add the additional requirement for the Treasurer to file annual Non-Profit Corporation report of Officers and Board of Directors with the Arkansas Secretary of State.

17. Change our method of maintaining long-term financial records and minutes of meetings to a digital format with suitable backups and protections to cap the growth of filing space in the Training Center and make historical records easily accessible to the Board.

18. Insure that on-line account and Training Center hardware login credentials are properly preserved and will be retained by BVCC in the event the primary officer using the account becomes incapacitated.

19. Provide for backup access to the BVCC bank accounts (by the President and Vice President) in the event the Treasurer were unable to function. This is actually a policy that has been in effect for over five years, but was not documented.

DATABASES - THEY'RE ALL AROUND US

By Phil Sorrentino, The Computer Club, Florida, http://scccomputerclub.org, Reprinted by permission via APCUG.

Think about it; during the course of the day we might use a telephone directory, a dictionary, an encyclopedia, an airline flight guide, a bibliography. All of which are databases. We use databases that store all kinds of knowledge that we use on a regular basis. At home or in your office, the paper filing system you have set up is really a database. But as the computer has become more a part of the fabric of our homes and offices, we use more databases that are resident on our home computers. Databases are one of the reasons that make home computers so useful. Databases show up in many places and are at the heart of many computer software programs or Apps. Many of our databases are "on-line", available only through the use of a browser on your home computer. Some of these databases include your Healthcare Providers Formulary, the Library of Congress Online Catalog, and Facebook.

Your contact list is a database, as are your collection of MP3 music, and your collection of friends (in a social media environment, such as Facebook, or LinkedIn, or Twitter). We all use a multitude of databases, most of the time without knowing anything about the database details or operations. Software applications allow us to use the database and extract the information that we are looking for. For example, take Google. Google has created an enormous database of locations on the internet and through its application, at www.Google.com, allows a user to search the database and come up with websites that might provide answers to their questions. Many years ago, I authored a Nutrition Analysis program that provided the totals of 21 nutrients for a person's one day food intake. The basis of this App was a Food Nutrition database that held the amounts of each of 21 nutrients for each food. At that time, the database was only available in handbook form so the 21 values for each of around 2500 foods had to be entered into a computer database so that the App, "Nutriplan", could extract the values when the user selected the particular food. The App provided the answers and reports, but the database held all of the possible nutrition information for each individual food.

Just as background, a database is an organized collection of data. Data, in the home computer sense, are words, numbers, images, (and maybe even moving images, a.k.a. videos), represented in a structure, possibly tabular or graphical. Spreadsheets are an easily understood representation of databases. A typical spreadsheet represents something of interest in the real world, on the computer as rows and columns. Usually, for an item database, the rows are the items and the columns are things that describe the item. So, to expand on my example of the Food Nutrition database, let's say the rows are the food names, and there are 21 columns for the nutrients. The rows might be "Apple", "Pear", "Peach", "Banana", etc. Each column would be another nutrition component; for example, column 1 might be protein, column 2 might be vitamin A, column 3 vitamin C…, I think you get the idea, all the way up to column 21, maybe fiber. You could even add a column that had a picture of the food, or a recommendation for how the food could be prepared. Once the database is defined, a clever programmer could develop all sorts of Apps that could produce useful nutritional evaluations, (once the user had input the day's food intake).

This type of row and column database is typically referred to as a "flat file", maybe because it seems to have two dimensions, row and column. A more powerful database organization is called a Relational database. A Relational database is a collection of data items organized as a set of tables. The tables are connected by "keys" or key variables. The "keys" allow data to be accessed quickly and efficiently. Software that uses or manipulates a Relational database is called a Relational Database Management System (RDBMS). Access and Oracle are examples of an RDBMS. These complex database systems are typically manipulated by

using SQL (Structured Query Language), a database language, which has become the standard (circa 1987) for defining, manipulating and managing Relational Databases. (For those of you who have been around computers since the beginning (circa 1982 [the beginning for PCs only. Mechanical computers with card databases began with 1900 census and mainframe computers began in 1940's - editor]), you might remember dBase II. dBase II was the first widely used database management system for microcomputers. dBase II included a database engine and a database language all in one package. dBase II was around before SQL, and coincidentally lost favor as the industry switched to SQL as it became the standard for Relational Database manipulation. By the way, there never was a dBase I, the developer thought the II in the name of the software package would make it more acceptable (read that salable). The II was just a marketing trick. "Ah, marketing, where the rubber meets the sky.")

Access and Oracle are both examples of an RDBMS, but are at the extreme ends of size and complexity, although each uses SQL as the managing software. Oracle is a professional system designed for very large, critical use, databases where rapid, multiple accesses are anticipated. Access, although a very capable RDBMS, is designed for smaller database projects (possibly those projects that can be easily handled by a small group of clever programmers). Access is on many business systems, and is ubiquitous because it is part of the more expensive version of Microsoft Office.

So, you see, databases are at the core of some very simple Apps, like Nutriplan, and some very comprehensive Apps, like Google.com. Undoubtedly, due to the size and scope of the data involved, Google probably employs the Relational database model. Nutriplan, on the other hand, because of its relative simplicity, worked very well with the flat file model.