Music-- Capture it, Organize it and Enjoy it

by Phil Sorrentino
Member of the Sarasota Personal Computer Users Group, Inc.

Music in the past was captured and made available on analog sources and played back on analog devices. Those analog sources were tubes (in Thomas Edison's times), record disks (78s, 45s and 33 1/3 vinyl), and finally tapes (reel-to-reel, 8 track, and cassette). And they were played on a phonograph (circa late 1870s), a turntable (spanning the 20th century) or a tape machine (spanning the late 20th century). All those devices were engineered to convert the analog music on the source media to sound that eventually hit our ears. Analog music was the capture of some sort of wiggle, like the wiggle of a turntable needle or stylus, or the wiggle of a magnetic field on a magnetic tape. The quality of the music we experienced improved all along the time that analog music was available, finally culminating in High Fidelity, Stereophonic Sound. Stereophonic because there are two tracks, one for the right and one for the left, to match the hearing mechanisms on our head, one on the right and one on the left. High Fidelity is the property of reproducing all of the music frequencies that were originally produced by the original source, like a singer's voice, or a rock and roll band, or a symphony orchestra. The frequency response of the human ear is about 20 Hz to around 16,000 Hz (although sometimes it is stated as 20 to 20k). These are general ranges

and as we age, the lower limit tends to rise and the upper limit tends to be lowered. (By the way, if someone is exposed to very high intensity sounds or noises {measured in decibels}, their hearing range could be affected. In fact, sounds greater than somewhere around 100 decibels {db} can produce permanent damage to one's hearing range.) So, High Fidelity Stereo was developed to deliver two channels, each with about a 20 to 16,000 Hz frequency range. What more could you ask for. (Well, actually now with digital reproduction you can have much more, like 5.1 surround sound, but that is a subject for another time.)

Enough of the past, now on to the digital music age. One of the differences between analog and digital sources of music is the fact that with an analog source, the music quality deteriorates with each play. Each time a record or tape is played, some of the range of the music is lost. But with digital sources (digital files), the quality always remains the same. Go ahead and play away. The reason for this is that the digital representation for music is just a series of ones and zeros (which is reproduced exactly with every copy). As long as that series is reproduced (and the process that interprets the ones and zeros doesn't change), then the results, the music, will always be the same. So, once we get the music, we have it at that quality, for good. But how is digital music created? What is the source? And what devices are used to reproduce it?

The recording process starts with (analog) microphones which produce a small analog signal. This
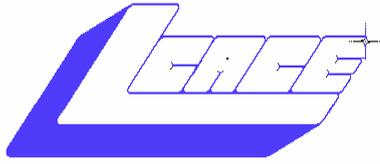
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Membership

Membership in *LCACE* is open to all individuals and families interested in personal computing. Annual dues are $20.00 per individual/family. Associate membership is only $10.00 (out of state, unable to attend meetings). Membership includes a one year subscription to the *LCACE News Journal* and access to all club libraries and functions. Applications for membership may be obtained at the monthly meeting, by request on the club hotline, and are now available on our web site at - http://www.lcace.org.

Meetings
LCACE meetings are usually held on Saturdays at the Grayslake Area Public Library, 100 Library Lane, Grayslake, Illinois. The meeting room opens at noon and the formal meeting begins at 12:30 p.m. All meetings are open to the public. Bring a friend!

Advertising
Ad rates per issue: Full page - $25, Half page - $15, Quarter page - $10, Business Card - $5. Discounts are available on advance purchase of multiple issues. Please send camera-ready copy and payment to the club address by the 21st of the month preceding publication. For more information on ad pricing, please call our Hotline. Ads are FREE to all paid members.

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Robin's
RAMblings

At our January 9, 2010 meeting techs from Staples of Mundelein mentioned that it was possible to run a virtual machine if you had *Windows 7 Professional or Ultimate*. Fred Barnett, assisted by program chair Julio Rivera, taught us about virtual machines at our October 9th meeting. Fred and Julio, we look forward to your presenting other programs in the future.

Tom Meskel of Grayslake and Phil Nocerino of Lindenhurst were guests at our October meeting. Dana and Kenneth Savage of Gages Lake and Julie Bell of Gurnee are our newest members. Dana, Ken, and Julie, welcome to LCACE! Julie will present a program about Ubuntu, a Linux operating system, at our February 12th, 2011 meeting.

Mark your calendar for our upcoming meetings :

November 6-"My Uncle, the Hollywood Producer" which the Grayslake Area Public Library will co-sponsor

December 4-Holiday party-State Bank of the Lakes -1-5 p.m. Save the date!

January 8, 2011-Show and tell and ask the gurus

February 12, 2011-Ubuntu by Julie Bell

March 12, 2011-Staples of Mundelein on the latest in technology

April 2, 2011-Elections, club party, show and tell, ask the gurus

May 14, 2011

Do you have ideas about programs you would like? Please contact Julio Rivera, programs@lcace.org, or email me at president@lcace.org.

This year's holiday party will be December 4th at the State Bank of the Lakes in Grayslake from 1 to 5 p.m. The bank is open on Saturday until 1, so if you arrive before 1 p.m., PLEASE do not park in front of the building. There is plenty of parking.

The club will provide turkey, ham, rolls, condiments, pop, coffee, and ice cream. We ask that everyone bring a dish to pass. Please think healthy food.

2010 holiday raffle tickets will be available for sale at our November 6th meeting. In addition to buying tickets for yourself, please plan to pick up tickets to sell. The person who sells the winning first prize ticket and also the person who sells the most tickets will receive prizes at the holiday party.

This year we have five holiday raffle prizes. Our big prize is a 17" HP laptop with 4GB RAM and a 320GB hard drive. Second prize is a 10" Acer netbook with 1GB RAM and a 160GB hard drive. An 8GB Apple iPod Touch is our third prize. Fourth prize is a VuPoint Magic Wand Scanner. Last but not least, fifth prize is a one year membership to LCACE.

Tickets are $1 each; 6 for $5, and 25 for $20. The more tickets you buy, the better your chances of winning one of these fabulous prizes. Winners need not be present so plan to sell tickets to out of town family and friends.

If you're interested in buying technology products this holiday season, you may want to consider making your purchase Thanksgiving week. Black Friday prices have been tempting for several years. Going out shopping during predawn hours doesn't interest me after a particularly unrewarding experience several years ago. You can often find similar prices online on Thanksgiving Day or even earlier that same week. If you miss what seems to be the bargain of the century, don't despair. The price could be just as good in the following weeks or perhaps even better. Something bigger (or littler), better, and faster may be just around the corner.

Do you have a smartphone? The latest trend seems to be using smartphones to read email, access the internet, play games, watch videos, and listen to music (People must occasionally use them for making and receiving phone calls, too.). Do you have a tablet device, too? A small laptop and a smartphone might serve you better.

What are you using to protect against spyware? I've recently tried the free versions of *Malwarebytes' Anti-Malware* and *SUPERAntiSpyware*. Both seem to work well. You may also want to run a free online virus scan from Microsoft http://onecare.live.com/site/en-us/default.htm

Happy computing!

signal is amplified and then digitized. From this point on everything is digital, therefore perfectly reproducible. Digitization produces a file that has been engineered to contain the complete audible frequency range. This is the .wav file that is on the CD that is purchased. The CD becomes the source for the music. (Today, most music is distributed on CDs, although more and more music is being downloaded to computers for eventual listening.) Typically there are about 15 songs on a CD, but with the capacity of a CD (700 MB) and the average size of a song (35MB), you might get as many as 20 or 21 songs on a CD. So, if CDs are the source of the music, a CD player is the device that is used to reproduce the music. CD players come in two basic varieties, stereo cabinet type to be used with a stereo system maybe in the family room, and portables for use on the go. Some larger stereo cabinet models can hold as many as 400 CDs and provide a place to store all the CDs (without their cases). Now that's how the digital music is produced, distributed, and played, but what about MP3s? Well, an MP3 file is the result of processing a WAV file with an MP3 conversion program, the product of which is much smaller than the original. (WMA is another file type similar to MP3 that has been introduced and used by Microsoft.) MP3 files are typically one tenth the size of the corresponding WAV file. The resultant file size can vary because there are settings used by the MP3 conversion program. The MP3 conversion process is a "Lossy" conversion, that is, some of the quality can be lost in the conversion. The quality is selected by choosing a bit rate for the conversion. For music this rate typically goes from 128 kbps (considered near CD quality) up to around 320 kbps (for those audiophiles that have very good hearing and reproduction systems). There are also lower qualities for low frequency range (voice only), files which are 32 kbps and 64 kbps. The lower the quality, the smaller the size of the MP3 file, and similarly, the higher the quality, the larger the file size. Some people might be able to detect the difference between a 128 kbps quality and a 320 kbps quality, but if you cannot then the smaller file would be a better choice. (If you're not sure if you can detect the difference, create an MP3 of one of your favorite CDs at two different bit rates and then play each one and see if you can tell the difference. If you can tell the difference, use the higher bit rate as your quality setting.)

So, with that bit of background, we are able to discuss the process of converting songs on a CD to MP3 files. This process is called Ripping a CD. (Don't blame me, I didn't name it.) The process

does nothing like its name implies, it simply converts the WAV file on the CD to an MP3 file on the computer, at the chosen quality. Ripping can be done with many programs like Windows Media Player, Musicmatch Jukebox, Audacity, and Winamp. (Windows Media Player (WMP) which comes with all Windows Operating Systems will be used here in examples.) To Rip a CD, place the CD in the CD/DVD reader/writer tray, start WMP, and click Rip on the top Selection Bar. It's that easy. A list of the files on the CD will be shown with a checked check box for each. If you don't want one of the songs, uncheck the box. When the conversion is finished you will have an MP3 file for each of the checked songs. Typically, the MP3 files will be in a folder with the name of the CD album, within a folder for the artist within the folder that was setup as the rip folder. From this folder, you can move or copy the songs to a library folder. Most people will probably use the Music (or My Music) folder that is part of Windows for this. Next month we'll discuss organizing the Library to take advantage of the fruits of your (possibly) considerable labor in creating the music files. And don't forget: backup all that music regularly, so you don't have to go through that process again. :

How do you connect to the Internet?

By Constance Brown
CAMUG President
www.camug.com

Do you use dial-up, DSL, cable, satellite, mobile broadband, wireless or a combination of the above? Your answer likely reflects the availability of services in the area where you live and whether you use a laptop, personal computer, netbook or smart phone for email and Internet access. Let's take a look at some of these services.

Lake County Area Computer Enthusiasts

"Members Helping Members"
(since 1983)

HOLIDAY RAFFLE 2010

1st Prize:

HP 17" Notebook
- Core Duo T6600 processor
- 4GB of RAM
- 320GB hard drive
- Webcam and microphone
- Lightscribe Super Multi Dual layer DVD±R/RW
- Windows 7

2nd Prize:

Acer Aspire One 10.1" Netbook
- Intel Atom N450
- 1GB of RAM
- 160GB hard drive
- Windows 7 starter

3rd Prize:

Apple iPod Touch-8GB
A great music and video player, pocket computer and thousands of other uses.

4th Prize:

VuPoint wand scanner
Fast and convenient way to scan, archive & organize for your personal use.

5th Prize:

1-Year's Membership LCACE
"Members Helping Members"

Tickets: $1 each, 6 for $5, or 25 for $20

Drawing December 4, 2010
WINNER NEED NOT BE PRESENT

5
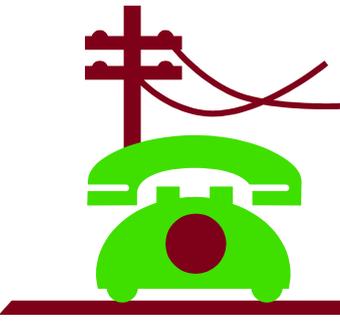
Dial up service has been around for a long time. If you are running equipment using a 56K modem, theoretically you could have a download speed of 56K (56000 bits per second). Rarely do you achieve this speed. Many of the dial-up services are low-cost and overwhelmed with clients, resulting in slow connection speeds and dropped connections with no warning. Also the transfer rates usually are much below the theoretical speeds. I have often seen 24K connections. Anyone using dial-up also has the frustration of not being able to take calls while on the Internet or checking email.

A few things can be done to maximize the connection speeds for dial-up. If you are using Windows 98, updating your software may help. Call your phone company and ask them to test for interference on your line. If it is within acceptable limits, you can request them to turn up the gain on your line. This is similar to turning up the volume on your CD player in the car when the noise of the rain striking the windshield makes it difficult to hear the music. You can also trouble shoot the devices plugged into your phone line. First, unplug all the devices—all your phones, fax machines and satellite TV. Then check your connection speed. If it has increased, you know that some device was interfering. Re-plug the devices one at a time and re-test your connection speed. When you find the troublesome device, leave it unplugged until you need to use it. You can also try adjusting flow settings using your modem software.

In some areas the telephone company offers DSL, a plan that splits your phone line in such a way that voice and data packets flow separately. This allows a person to be on the phone while surfing the Internet and checking email. The speed is usually much faster than dial-up. In fact, it can outperform cable speeds if you are close to a repeating station. If you are distant, the speeds may not be significantly higher than dial-up. The costs are reasonable, considering the benefits.

Cable access is very popular. It does not in any way interfere with telephone use. In fact, speeds are high enough that many people have fired the phone company and now use voice over internet protocol (VOIP) to make phone calls. In many cases, this saves a significant amount of money each month. Cable speeds can slow dramatically, however, if all the neighbors decide to get it! When the youngsters get home from school, the information flow backs up and access slows down. It is almost like trying to flush a large amount of debris through a small pipe. The pipe doesn't change size. The person flushing the debris has to slow to a speed that the pipe can handle. When this problem becomes significant and enough people complain, the cable company may add additional lines to service the needs of the community.

Satellite access is costly and used in areas where no other high speed access is available. HughesNet and Wild Blue are two large providers and are available in this part of Ohio. Smaller companies retail the HughesNet service in the Akron Canton area. There may be providers available as well as these two. Costs can be hefty for installation and may run significantly higher than $80 per month depending on the bandwidth you desire.

Wireless Internet and Hotspot services are ways the traveler can connect. Here in Canton, wireless is provided at no charge at all the public libraries and many business locations including Panera Bread, Starbucks, some of the McDonalds and the airport. If you live in downtown

DigitalCorner

Learn Photography:
Online SLR Camera Simulator!

http://camerasim.com/SLRsim.html

HAPPY BIRTHDAY

Jay Bitterman
Gerald Straw
John Urh

New Members

Julie Bell
Kenneth Savage
Danjean Savage

November is the **_LAST_** meeting to hand out tickets for the Holiday Raffle for the big prizes. Please be sure to see me at the November meeting to pick up tickets to sell! If you cannot be there, contact me at treasurer@lcace.org and I will arrange to get tickets to you.

The party is shaping up to be another good one! The door prizes are purchased and we have quite a few great prizes. We are still looking for a volunteer for Santa.

If you have tickets you have sold you may turn in the money at our November meeting.

Winnie Frost, Treasurer

FOR SALE

Time to clean out your closet. Bring it to the meeting and place it on the **FOR SALE** or **FREEBIE** tables. All items placed on the FOR SALE table MUST have your name and asking price attached to it. If you just want to get it out of your closet, then place it on the FREEBIE table and hope one of your club members has a better home for it. All items not sold or taken must be reclaimed by the end of the meeting.

101 FANTASTIC FREEBIES

Canton, you can often connect to the Internet through wireless access provided by the city and businesses. Often the connection is limited unless you are near a business that has decided to increase the signal for the area surrounding it. You will want to safeguard your private information when using public Wi-Fi. Some businesses provide secure Wi-Fi to their customers. In order to use their service, you have to be provided with a password. Commercial Hotspots may direct the user to a login screen where access for a specific amount of time may be purchased for a fee.

Mobile broadband wireless is gaining in popularity and we will see more and more people moving in that direction as standards are adopted between companies and networks expand. Cell phones with Internet and email access use this service. So do netbooks. You can also access mobile broadband through a USB device that connects your laptop to the Internet. Some of these combine wireless hotspot services with broadband wireless. Plans run in the $50-$60 range monthly with limitations on the amount of usage. You do not want to use mobile broadband service to play games or watch videos. T-mobile's device allows you to monitor your use and to determine whether a hotspot is available that doesn't count against your mobile data flow allowance or whether mobile broadband is your only choice. Most likely other companies provide similar monitoring software. Mobile broadband is not available in every place where your cell phone works, but coverage is available in all heavily populated areas and is growing. At this point Verizon has the largest network based on my personal research and that conducted by Encyclopedia Britannica when they selected a carrier for their sales and training teams.

We have many more choices of services than used to be available to us. Periodically it is wise to review all of your communication services and see whether something is available that can save you money while decreasing frustration.

Nikon School

Chicago
Saturday
November 20, 2010

Introduction to Digital SLR Photography $129
Next Step: Color, Light, Technology $159

www.nikonusa.com/Learn-And-Explore

"MEMBERS HELPING MEMBERS"

CUB has a Cellphone Saver which analyzes individual customers' actual usage and can identify better calling plans among the top 5 carriers.
www.citizensutilityboard.org/cellphonesaver.html

Best website shopping days? Wednesday through Friday with discounts up to 5 percentage points lower than on other days. Reported by:
http://www.ShopittoMe.com

To get a free credit report go to:
www.annualcreditreport.com.

Submitted by: Ms. Winnie Frost
Lake County Area Computer Enthusiasts

I had to work on a Vista machine. So I went to the library to get some books on Vista.
I came across one called "How Microsoft Windows Vista(TM) Works" by Micheal Miller ISBN 978-0-7897-3585-0
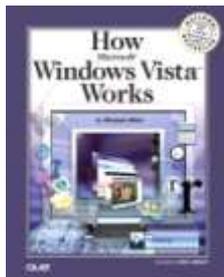
It is a short book 249 pages. It is broken down into different sections: Section 1: Operation systems, XP vs Vista, Vista.
Section 2: Basic Operations - on/off, system resources, managing user, managing applications.
Section 3: Windows Vista Graphics
Section 4: Digital Media
Section 5: Networking and the Internet
Section 6: Security and Maintenance

What I liked was each section was just a few pages long. Good pictorial representation, and descriptions of what it was discussing that most people can relate to. I felt it was not overly technical.

Quote of the Month

HOPE

Hope has never trickled down. It has always sprung up.

STUDS TERKEL

I would recommend this book to any new computer user or current computer user, as a refresher. These are just basic computer concepts that seem to be missing in most computer books now a days. It doesn't matter which operating system you are using, most of the concepts in this book apply to all computers, although it may use a different program in that operating system to accomplish the same task.
Check it out from your local library for yourself.

Submitted by: Julie Bell
Lake County Area Computer Enthusiasts

Door Prize

Winner
Kenneth Savage

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Web Site: http://www.lcace.org

Take a good look, you just might see yourself.

http://lcace.org/PhotoAlbums.htm

NEXT MEETING
December 4, 2010

Holiday Party

November 6, 2010

at the Grayslake Library

"My Uncle, the Hollywood Producer"
by
Robin Seidenberg

Lake County Area Computer Enthusiasts
409 S. Elmwood Avenue
Waukegan, IL 60085

POSTAGE
REQUIRED