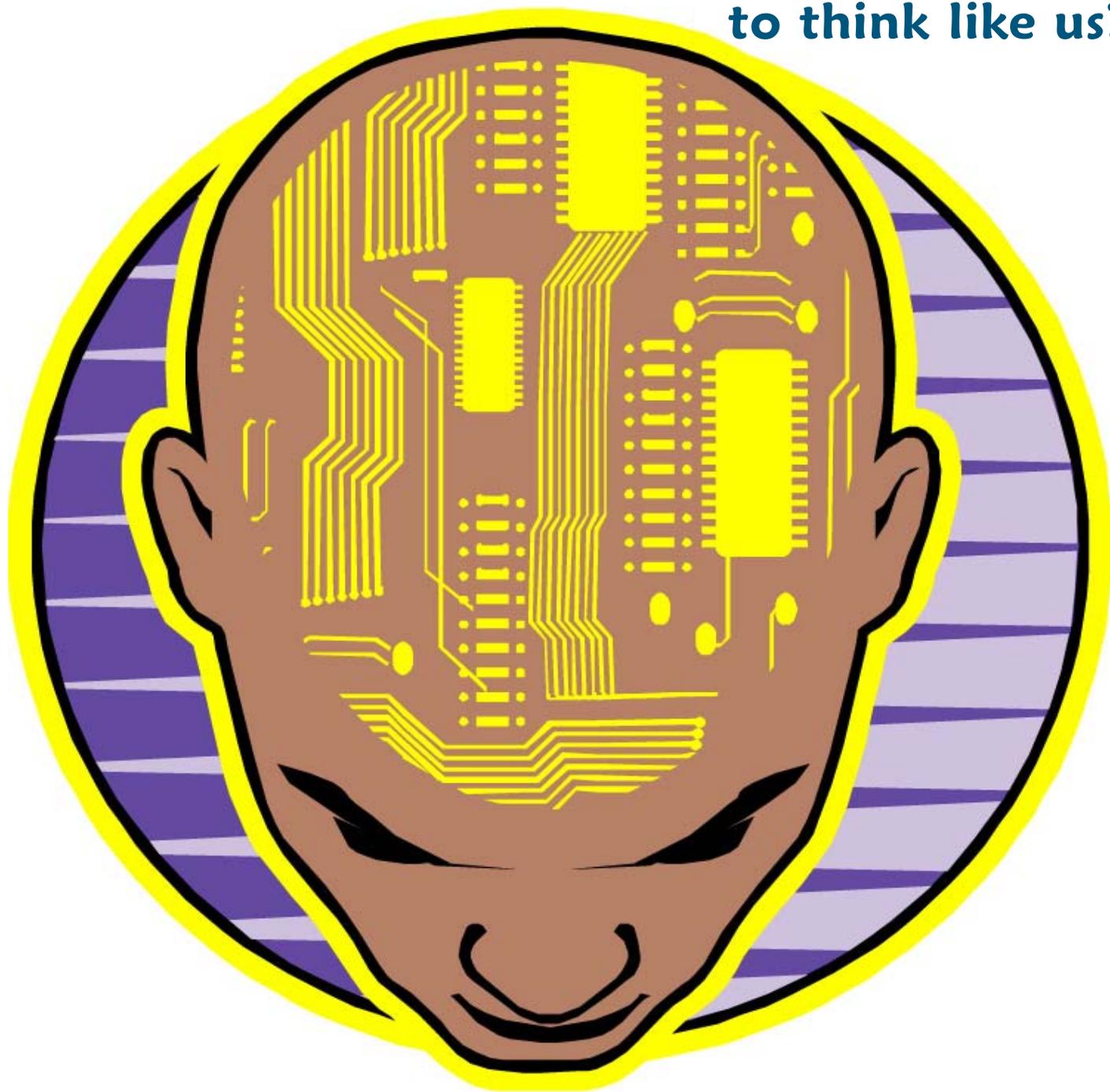


Next Meeting:

**Can computers learn
to think like us?**



BRUCE PRESTON ON THE CIRCUITOUS PATH TO
Artificial Intelligence

Directors' Notes

A meeting of your board of directors was held on Wednesday, May 9, 2012. The meeting was called to order at 7:15. Present were Richard Corzo, Andy Woodruff, Jim Scheef, Bruce Preston, Dave Green, Lisa Leifels and Patrick Libert; Guest: Charlie Bovaird.

The Minutes of Previous Meeting were accepted with corrections.

Treasurer's Report

Balance on hand 4/1/12	\$5,525.24
INCOME	
Dues	\$634.32
Bank Interest	\$0.24
Total Income:	\$634.56
EXPENSES	
Resource Center Phone	\$76.30
Newsletter Printing	\$85.00
Newsletter Postage	\$48.75
Renewal Letters Postage	\$12.30
Address Labels and Tape	\$70.70
Deposit Slips	\$13.85
Total Expenses:	\$306.90
Balance on hand 4/30/12	\$5,852.90

The annual IRS form 990N was filed.

Membership/ Meeting Stats Report

Meeting date:	3/6/12	4/3/12	5/1/12
	MAR	APR	MAY
Paying members	145	138	138
w/ email addresses	137	130	129
New members	0	2	0

DACS.DOC

NL printed	100	100	100
NL mailed	76	76	76
NL mailed-memb	56	56	55
NL mailed-other	6	6	6
NL mailed-free lib	14	14	14

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General Meetings

Mar - Rob Limbaugh: Maintain a Windows Machine

Apr - Mike Kaltschnee: Tablets

	Mar	Apr	May
Seat Count	43	40	45
Members Signed In	36	32	37
visitors signed in	7	6	8

Old Business

1. General meetings

- May 1: John Patrick - State of the Internet. Preview: Drew Kwashnak, Review: Andy Woodruff

- June 5: Patrick Libert - Music Services. (Pandora, Spotify, iTunes Match, Amazon Cloud Player) Preview: Bruce Preston, Review: Richard Corzo

- July 3: Facebook - Jim & Chris Guld of Geeks on Tour (if confirmed), otherwise Artificial Intelligence - Bruce Preston.

- August 7: Robotics and Beyond - Paul Chayka & Mike Morrissey.

- September 4: Tom Schonder of Google - Google Apps (Gmail, Google Calendar, Google Sites, and Google Docs), Google Voice, and Google+.

Possible future topics:

- Artificial Intelligence - From Alan Turing to Eliza to Watson. Bruce to develop targeting July, or for a future month

- Apple-OS X Mountain Lion is due "late summer". Contacted Dave Marra for October or November. Waiting to hear back.

- Cloud storage services- Dropbox, box.net, Skydrive, Mozy, Carbonite, YouSendIt, etc. Proposed by Drew. This would be a comparison of functionality and platforms supported (i.e. Windows, Mac, Linux, smartphones, etc.). Jim and Richard would help with the smartphone support. Richard set up a thread on the DACS forum. Tabled until we have more time to pull this together.

- Presentation on Facebook. Jim suggested having someone talk about how to configure the security, privacy issues, what does "Like" accomplish, the difference between a group and a page. We hope Geeks on Tour Jim & Chris will cover this.

- Online Learning, focusing on personal development/enrichment courses rather than academic. An ex-
Directors' Notes, Cont. on page 3

Membership Information

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The editors welcome submissions from DACS members. Contact Ahmad Asgharian (dacseditor@dacs.org). Advertisers, contact Charles Bovaird at (203) 792-7881 (aam@mags.net)

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Applications & Hardware to enhance *dacs.doc* are welcome.



Patrick Libert
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HelpLine

Our former telephone HelpLine has been replaced by our web-based DACS Community Forum at <http://forum.dacs.org>. We have topic-specific forums where DACS members can post questions. Questions may be answered by SIG leaders or other DACS members. If none of the categories fit your question, just post it to the Ask DACS forum.

Topic

Microsoft Access
.NET Programming
Digital cameras/scanners/image processing
Content Management Systems
Linux
Mac and iPhone/iPad/iPod touch
PC maintenance
Smartphones & Tablets
Virtual machine software
Desktop publishing and website design
Windows

Forum

Access SIG
ASP.Net and C#VB.Net SIG
Digital Imaging SIG
Drupal SIG
Linux SIG
Apple SIG
PC Maintenance SIG
Mobile Devices SIG
Virtual Computing SIG
Web Site Design SIG
Windows SIG

Directors' Notes, Cont. from page 2

ample would be the offerings of Linda.com. Elizabeth has been investigating. No report this month.

◦ Jeff Robbins-Drupal expert. Andy has contacted him. Jeff is interested in doing a presentation, but is not able to commit to a date at this time. Andy will follow up again in August.

◦ Bruce is going to investigate a former colleague who runs a private educational program for unemployed/underemployed IT professionals.

2. Open positions

• The membership chairperson/greater position is open.

3. Jim started to set up Drupal/CiviCRM for maintaining membership data. He will continue working on it at the Drupal SIG on 5/10.

4. Member Mike Kaltschnee, with support of board member Rob Limbaugh, has begun planning a 'hackerspace' or 'makerspace' for Danbury. He explained his idea at the May general meeting. A planning meeting for those interested will take place Monday, May 14, in the Resource Center.

5. We started a one-year subscription with Microsoft Office 365. The portal is <https://portal.microsoftonline.com> and our SharePoint Team site is <https://dacs.sharepoint.com/>. There are some structural/organizational concerns that can be changed. Richard will work with Drew. We need to confirm that all board members give it a try. We also need to see if the Lync component can provide virtual meeting capabilities.

6. Bruce Preston has requested a solution to holding remote SIG meetings like the MS Access SIG. Mikogo offers a 10% discount to 501(c) (3) organizations, but the price for our volume is prohibitive. He is currently using www.anymeeting.com, a free service with advertising that has limited but sufficient capabilities. It is not yet determined if Microsoft Lync will work.

New Business

1. Ahmad will be away until the 25th of this month. Richard Teasdale has agreed to fill in this month as copy editor. As always, newsletter submissions should

Directors' Notes, Cont. on page 4

Meeting Review

John Patrick - "State of the Internet "

By Andy Woodruff

JOHAN PATRICK TREATED US once again with his annual talk about the state of the Internet.

John is president of Attitude LLC, and he serves on several boards of directors.



He is a long-time expert about the Internet, as he was a founding member of the World Wide Web Consortium at MIT in 1994, past chairman of the Global Internet Project, and former vice president of Internet technology at IBM.

In past meetings, he told us that the Internet was "in its infancy". Tonight he said the Internet has grown to adolescence. And there is a lot more growing that will happen in coming years.

"Disintermediation" is a word John used to describe the effect of market forces on the Internet. According to dictionaries, the word means essentially the doing away with middlemen in markets. John used the word broadly to describe changes to the "models of the past that no longer work". For instance, "publishers are feeling the heat", as users turn increasingly to the Internet rather than to printed books. Television "has yet to be victimized by the Internet" but will eventually become obsolete in its current form. It was interesting to recognize the changes that the Internet has already wrought and to try to fathom the coming changes.

Cloud storage has recently become widely available, and John pointed out that we now seldom use memory sticks. The cloud has changed this. Now we use DropBox or similar services.

Some companies have recognized appropriate ways to sell with the Internet,

and some have not. John pointed out that Amazon has amassed 25% of all "e-retailing" in the United States, and he said this came about because Amazon correctly learned how to satisfy its customers on the Internet. Other less successful e-retailers "have not awakened to how the Internet should work". For instance, their websites do not always work well; they try to protect the old ways of doing things; and some even try to refer prospective customers to sales channels such as authorized dealers, rather than simply making the sale on the website.

John sees a big future in medical applications on the Internet. He said "e-prescribing" is still in its infancy, and there is a "personal healthcare revolution ahead". John is, in fact, moving his own career efforts in the direction of Internet health care efforts. There are many areas of effort within medical applications on the Internet. "Healthcare information exchanges" are Internet-based systems that enable physicians to get patient information from other physicians. Clinical devices can measure data and make this data available on the Internet to the patient and his/her physicians. Home health monitoring will make it possible for a patient to leave a hospital earlier and still be under a physician's care. "E-dispensing" will make it possible for machines to fill prescriptions that have been prepared by a pharmacist directly to dispensing carts in a nursing home.

The "Watson" computer that appeared on the television show Jeopardy could be a real medical tool. A primary care physician, when searching for the cause of a patient's symptoms, could call a future "Watson"-like computer and ask for advice.

We will see more and more microprocessor-controlled devices in our homes, and frequently these devices will connect to the Internet. We already see the camera in an iPhone transmit its images directly to the cloud, and there are currently innovative bedside monitoring devices that connect to the Internet.

Soon, "everything in your home will be connected".

John commended government for "successfully resisting the urge to regulate the Internet", although there are threats to net neutrality. He also sees the Internet as a tool for citizens to utilize government-produced data through websites, such as *data.gov*. He noted that libraries are changing, but not being put out of business by the Internet. For example, the local town of Ridgefield, Connecticut is currently expanding its library, and the expansion is in space and meeting rooms rather than in printed books.

Internet speed is the biggest Internet issue in this country. The United States has unfortunately fallen behind other countries in Internet speed, due in part to corporate lobbying. John writes in his blog: "France is offering 100 megabit access for \$90 per month and WiFi throughout the country. Thanks to the telco lobby, many states have banned the offering of WiFi by municipal entities." Further, John told us that "you don't always get the speed you are paying for, in the United States". The relatively slow Internet is a disappointment, because we could be more productive if it were faster ... and the slow speed may cause our country to fall behind in other ways too.

John recognized the need for privacy, such as patient privacy and privacy on Facebook. He said that "privacy policy is at its infancy" stage. "Facebook has obfuscated the default selections such that people don't understand the privacy settings." These things will change in the future, as we are currently at the early stages of social networking. Now it is not possible to retract a posted photo; but it may be possible in the future."

John writes about these topics in his blog at <http://patrickweb.com/wordpress/homepage/>.

Directors' Notes, Cont. from page 3
go to dacseditor@dacs.org.

2. We approved the new Mobile Devices SIG, initially led by Richard Corzo and Jim Scheef (?). It will cover smartphones, tablets, and e-readers, and meet the fourth Thursday of the month.
3. We'll plan on making a DACS poster and pamphlets available at the Robotics and Beyond (<http://www.roboticsandbeyond.com>) summer camp in July and August. We will print additional pamphlets if required.

The meeting was adjourned at 8:30 PM.

—Bruce Preston
<http://www.dacs.org>

Meeting Preview

Not so Elementary, My Dear Watson

By Allan Ostergren

DACS MEMBERS KNOW Bruce Preston as an inspired SIG leader and a seasoned computer consultant and database designer who has written about and hosted numerous General Meeting presentations on consumer software and problem solving. For our July program he took on a more esoteric topic: artificial intelligence, and due to a last minute change in schedule, he agreed to move it forward to our next meeting on June 5.

From the time our earliest ancestors left the trees for the savannah, they dreamed of artificial beings that thought like them but had superhuman powers. However, it wasn't until the desperate struggles of World War 2 that intelligence analysts, led by Alan Turing, began to lay out endless strings of ones and zeroes to process the mathematical computations needed to crack the complexity of the German Enigma code.

Electronic computers have evolved since the 1940's, and personal computers became readily available in the early 1980's. And following Moore's Law, they have become faster and ever more powerful. Software makes them more intuitive and user friendly, and capable of amazing feats. But are they intelligent in their own right, and could mankind clone itself with a race of cyber sapiens running on a life force made up of ones and zeroes?

In a 1950 paper, Turing addressed the question of whether machines can think, concluding that digital processing could make them invincible in solving computational problems. Then, in 1956, John McCarthy coined the term "artificial intelligence" (AI), defined as "the study and design of intelligent agents" (IA). A thinking

machine becomes "intelligent" through sensors and logical instructions that make it aware of its environment and able to "learn" from its behavior.

Although computers were highly efficient at crunching facts and figures, enabling them to reason and react independently would require a whole new branch of cybernetics and logic theory. Somehow, all the complexity of human reasoning, emotion and experience, as well as the fine innuendo of language and symbols, seemed too complex to render into bits and bytes. Early initiatives at the Defense Department withered and were replaced by more limited projects like smart car competitions. At the same time, fictional imagination conjured other, more sinister consequences of cyber science: computers that could take over the world ("Colossus: the Forbin Project"), have a nervous breakdown ("2001: A Space Odyssey"), or empower their creators to self-destruct ("Forbidden Planet").

In recent years, IBM has taken on the challenge through super computers, primed with vast databases of information and designed to analyze billions of data bytes per second. In 1997, Deep Blue, a chess playing computer defeated world champion Garry Kasparov in a six-game competition, and only last year, IBM's Watson overwhelmed the Jeopardy! two greatest money winners. However, these victories were not accomplished by superior reasoning, but by brute force and lightning speed.

For his presentation, Bruce will explore the path to creating intelligent machines - through circuits, stored programs, logic and machine learning. He will explain how programmers move information by switches and

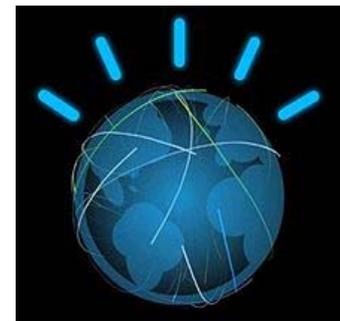
circuits and impose a complex structure and discipline through a myriad of rules and algorithms. He will then proceed to explain how computers "learn" meaning and context from rules programmed into them.

Bruce will show how programmers at IBM "taught" their respective computers to compete with human intellect. Deep Blue was taught the rules of chess and given a book of opening moves and end game moves—the rest was left to brute force computation. Watson received extensive lessons on the variations of English idioms and information trivia. Bruce will then compare these with simpler machine learning tools, like voice recognition software, and explore the future implications of the Watson project. Finally, he will cap the show with a bonus demonstration of Siri, Apple's intelligent personal assistant for the iPhone.

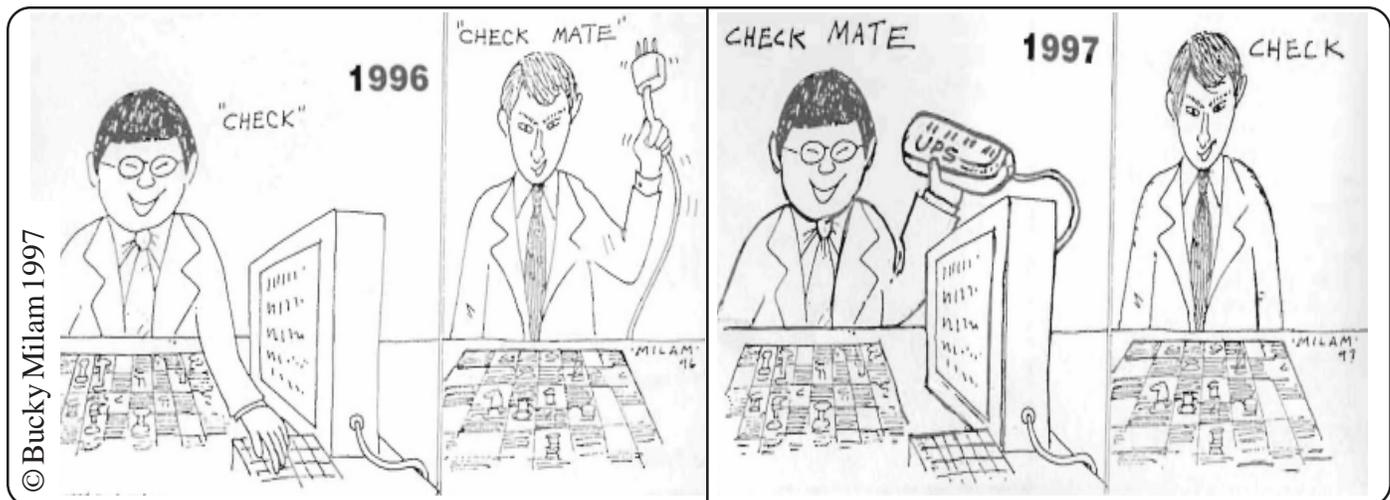
But perhaps most significantly, at the end of the presentation Bruce will do what no computer has done: answer your enthusiastic questions.



Deep Blue vs. Kasparov



IBM's Watson



Special Interest Groups

SIG NOTES: June 2012

Access. Designs and implements solutions using Microsoft Access database management software.

Contact: Bruce Preston, 203 431-2920 (bpreston@dacs.org).

Meets on 2nd Tuesday, 7 p.m., by virtual connection.

Next meeting: June 12 (check Website for technical details)

Apple. Focuses on all aspects of the Mac and iPhone operating systems.

Contact: Richard Corzo (macsig@dacs.org).

Meets 1st Thursday, 7 p.m. at DACS Resource Center.

Next Meeting: June 7

Digital Imaging. All about digital cameras, retouching, and printing using various programs.

Contact: Ken Graff at 203 775-6667 (graffxx@gmail.com).

Meets last Wednesday, 7 p.m. at the DACS Resource Center.

Next Meeting: June 27

Drupal. Covers all things on Drupal, the open source content management system (CMS).

Contact: Jim Scheef (jscheef@dacs.org).

Meets on the second Thursday at 7:00 p.m. at the DACS Resource Center, or go to the DACS Community Forum (<http://www.dacs.org/forum/>) within the Members only area.

Next meeting: June 14

Jobs. Networking and jobs search

Contact: Charles Bovaird, 203-792-7881 (aam@mags.net).

Go to DACS Community Forum (<http://forum.dacs.org>) for job listings.

Linux. Provides Help in installing and maintaining the Linux operating system. Also of interest to Apple owners using OS X.

Contact: Dave Mawdsley, linuxsig@dacs.org

Meets 3rd Wednesday, 7:30 p.m. at the DACS Resource Center.

Next Meeting: June 20

Mobile Devices. Focuses on smartphones, tablets, and e-readers of all makes and models.

Contact: Richard Corzo and Jim Scheef (Mobilesig@dacs.org)

Meets 4th Thursday, 7 p.m. at the DACS Resource Center

Next Meeting: June 28th

PC Maintenance. Review of PC hardware and OpSys maintenance and use.

Contact: Charles Bovaird, 203-792-7881 (aam@mags.net).

Go to DACS Community Forum (<http://forum.dacs.org>).

Server. Explores Back Office server and client applications, including Win NT Servers and MS Outlook. SIG is on hiatus and presently merged into the Drupal SIG.

Contact: Jim Scheef (jscheef@teleAprksys.com), or go to the DACS Community Forum: <http://www.dacs.org/forum/>, within the Members-only area

Web Design and DTP. Learn about Adobe software for web, graphics and desktop publishing.

Contact: Annette van Ommeren (avo@annagraphics.com).

Meets 3rd Tuesday, 7-9 p.m. at the DACS Resource Center.

Next Meeting: June 19

SIG News & Events

Apple. Apple's MobileMe service will be ending on June 30th. Many of its features are being rolled into Apple's iCloud service, but there is no direct replacement for iDisk if you want to store files in the cloud for your own use or to share with others. In our May meeting we looked at a possible replacement for iDisk--Microsoft's recently updated SkyDrive (<http://windows.microsoft.com/en-US/skydrive/home>).

Microsoft recently released SkyDrive applications for Windows and the Mac OS that provide easy access to 7GB of free disk space. Previously SkyDrive was mainly available through a web interface, but now you can have a copy on each of your computers on which you install the SkyDrive application, as well as access it on your mobile devices such as an iPhone, iPad, Windows Phone 7 phone, and even an Android device through a third-party app. On the Mac a SkyDrive folder is created in your home folder and you can quickly access it from a SkyDrive icon in the Finder sidebar. Any file you add or update there is automatically synced with all the other copies of your SkyDrive.

Although we looked at SkyDrive, there are other options such as Dropbox, Box, Google Drive, and Amazon Cloud Drive. Microsoft has a comparison table of their offering against some of these competitors: <http://windows.microsoft.com/en-US/skydrive/compare>.

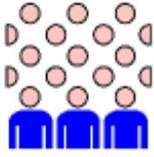
On an unrelated topic, people have been digging up old videos of the late Steve Jobs. Network World has this curious Apple sales video from 1984 or so, entitled "1944", promoting the Macintosh against the "enemy" IBM in a World War II-styled video featuring Steve Jobs as Franklin Roosevelt: <http://www.networkworld.com/community/node/80448>.

Linux. Our lively session this month included some practice and discussion about workspaces with Ubuntu 12.04 Desktop, Rosetta Stone for Linux, APT on CD, a short demo on MySQL with PHP, HAM Radio web utilities, a fix of a computer with a dual boot containing Windows XP and Ubuntu 12.04 Desktop, and a proposed fix for another computer with a power

SIG notes, Cont.on page 11

June 2012

Danbury Area Computer Society

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday																																																																																				
<div style="display: inline-block; border: 1px solid black; padding: 5px; margin-right: 20px;"> <p style="text-align: center;">May 2012</p> <table border="1" style="font-size: small;"> <tr><td>S</td><td>M</td><td>T</td><td>W</td><td>T</td><td>F</td><td>S</td></tr> <tr><td></td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td></td></tr> <tr><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td><td>12</td></tr> <tr><td>13</td><td>14</td><td>15</td><td>16</td><td>17</td><td>18</td><td>19</td></tr> <tr><td>20</td><td>21</td><td>22</td><td>23</td><td>24</td><td>25</td><td>26</td></tr> <tr><td>27</td><td>28</td><td>29</td><td>30</td><td>31</td><td></td><td></td></tr> </table> </div> <div style="display: inline-block; border: 1px solid black; padding: 5px;"> <p style="text-align: center;">Jul 2012</p> <table border="1" style="font-size: small;"> <tr><td>S</td><td>M</td><td>T</td><td>W</td><td>T</td><td>F</td><td>S</td></tr> <tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td></tr> <tr><td>8</td><td>9</td><td>10</td><td>11</td><td>12</td><td>13</td><td>14</td></tr> <tr><td>15</td><td>16</td><td>17</td><td>18</td><td>19</td><td>20</td><td>21</td></tr> <tr><td>22</td><td>23</td><td>24</td><td>25</td><td>26</td><td>27</td><td>28</td></tr> <tr><td>29</td><td>30</td><td>31</td><td></td><td></td><td></td><td></td></tr> </table> </div>					S	M	T	W	T	F	S		1	2	3	4	5		6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31					1	2
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		 <p>MS ACCESS 7:00 - 9:00 P.M. Bruce Preston bpreston@dacs.org</p>	 <p>7:00 PM Board of Directors</p>	 <p>7:00 PM Drupal Jim Scheef 860 355-0034</p>		 <p>DACS.DOC Deadline</p>																																																																																				
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			 <p>7:00 PM Digital Imaging Ken Graff 203 775-6667</p>	 <p>Mobile Devices Richard Corzo mobilesig@dacs.org</p>																																																																																						

Digital Commerce

Why Danbury Needs a Hackerspace

by Mike Kaltschnee

HACKERSPACES, ALSO known as makerspaces, are places where people can get together to learn, make things, and share information. Every

hackerspace is unique, but many have a wood shop, metal shop, electronics labs, and a community table where people work together.

Hackerspaces are typically setup as a co-op

where the members share the cost of rent, heat, electricity, insurance and other expenses. A lot of the equipment is scrounged, fixed or purchased. There are more than a hundred around the world (even libraries are adding hackerspaces), and you can find a list of them at <http://hackerspaces.org>. There are video tours of hackerspaces on <http://hackaday.com/category/hackerspaces/>. Hackers, a term maligned by the press, are people who like to understand how things work

and build things, and “crackers” are the guys who try to steal credit card numbers. Hackerspaces are part of the “Maker” movement, where people are trying to get back to our manufacturing roots. We have a strong history in the U.S. of hackers: Franklin, Tesla, Edison, Ford and Wozniak are just a few famous hackers. The Danbury School System even has a program for middle school students focused on science, technology, engineering & math (STEM).

The maker movement has been developing momentum, with shows like Mythbusters (their workshop is an incredible makerspace), Make Magazine, Wired Magazine, and the Geek Dad & Geek Mom websites. Sites like Kickstarter.com enable people to propose a product, get funding and give backers updates on the development process. A recent Kickstarter watch project raised more than \$10 million in advance of production. Quirky.com lets anyone propose a product or enhancements, and then distributes the product at Bed Bath & Beyond. Even Radio Shack is getting back to its roots and is selling Arduino processors and electronics

kits again.

What do people do at a hackerspace? Some people work on projects and use the metal shop, wood shop, or electronics lab to create things, and others use the 3D printer (example: <http://makerbot.com>), laser cutter or other equipment that they might not otherwise have access to at home. Most makerspaces offer classes on how to use the equipment, learn to solder, build electronics projects, and much more. Crafts are another popular activity, and I've seen sewing machines, pottery wheels, and other craft supplies at hackerspaces. The site <http://Instructables.com> has a lot of fun projects for both kids and adults to try.

There are several hackerspaces already established in the area, and many have open house events where anyone can visit for free. CT Hackerspace has more than 4,000 square feet in Watertown, and the members are building a 3D printer, CNC router, chain mail armor, electronics, and more. Resistor, in Brooklyn, was one of the first in the USA and was the birthplace of the Makerbot 3D printer, a company that now employs more than 130 people. Nesit.org in Meriden is more focused on electronics and computer security, runs free computer repair events and even held a technical conference last summer. AS220 Labs in Providence is part of an artist community, and is located next to an old-fashioned type setting shop.

Why should DACS get involved? Despite the “Danbury Area Computer Society” name, a hackerspace could expand the type of people interested in the group, bring in new members, be another site for SIG meetings, and get some press coverage for the group (CT Hackerspace was featured on a recent TV show). At the last DACS meeting, a large number of members showed interest in a Hackerspace when quickly polled during the meeting.

There will be a hackerspace in Danbury, and I feel strongly that DACS should be involved.

If you're interested in getting involved in the Danbury Hackerspace project visit DanburyHackerspace.com and sign up for the email list. The second planning meeting will be held on June 4th at 7pm at the DACS Resource Center. You can also follow our progress on Twitter (@DanburyHackers) or Facebook (<https://facebook.com/DanburyHackerspace>).



People working on projects at the Resistor Hackerspace Open House

Time Travel

PC Computer Evolution

By Wil Wakely

WITH THE SAD DEATH in October 2011 of Steve Jobs of Apple fame, it seems appropriate to review the history of the personal computer in which he was so instrumental in its evolution. In 1970, he was only 15 years old when the micro-computer, as it was then called, stirred to life. Prior to that time, mainframes and mini-computers dominated the scene, requiring large installations and huge capital expense. IBM 360s required a special air-conditioned room and cost up to \$5.5 million each. Our smart cell phones now have more computing power than they did.

The invention of the transistor at Bell Labs in 1947 and the Integrated Circuit invented in 1958, concurrently by Texas Instruments and Intel, allowed miniaturization and cost savings that revolutionized future computer designs. One of the first affordable micro-computers was the Atari, essentially an arcade game machine that played PONG, a tennis simulation. It had no programming language and used a joy-stick for control and a TV for a display. The Commodore 64, VIC-20 and PET were the largest selling small computers in 1976. It did have a programming language and a multitude of applications. Other computer models appeared briefly on the scene: the Osborne, a “luggable” portable computer; RadioShack TRS-80, (Trash80); Heath H-89, a kit; Sinclair ZX80, a miniature inexpensive powerhouse from England; KayPro, by Andy Kay, owner of a local Solana Beach company; IMSAI, a computer that actually looked like one with 22 front panel switches and 40 blinking red lights.

Steve Jobs and his friend, Steve Wozniak, were computer club buddies and got together in 1976 to design the Apple I. During a visit to PARC ((Palo Alto Research Center, a Xerox company) Jobs saw their development of the GUI (Graphical User Interface that we now call Windows) and the mouse that controlled the cursor. He immediately realized that it was a great idea. No keyboard required! He borrowed (!) the idea and implemented it in the Apple II. Later, Microsoft borrowed (copied?) the Apple GUI for their Windows and, not surprisingly, legal actions became rampant among the three.

In 1979 a killer application called VisiCalc came on the scene. It was a rudimentary spreadsheet that was first incorporated in the Apple II. Now a personal computer could actually do some work as opposed to just playing games. VisiCalc went on to inspire Lotus 1-2-3 and Excel which are much more powerful spreadsheet programs. WordStar, a word processing (WP) program, also appeared in 1979.

Several WP programs already existed, but WordStar quickly dominated the field. Typewriters became instantly obsolete.

Also about that time, an IBM manager in the Boca Raton, FL, facility developed the prototype IBM PC. It was a tough sell to upper management because of the fear of it cannibalizing the mainframe business, but he persevered and the IBM-PC was born. However, it had no operating system (OS).

Rather than create a new one, they sought out Gary Kildall, the owner of Digital Research Inc. (DRI) in Pacific Grove, CA. He had developed CP/M which at that time was a widely used operating system for small computers. When IBM personnel flew to the West Coast for their appointment with Kildall, they were told he was off flying his airplane. He was obviously not impressed with IBM. Justifiably miffed, IBM approached Bill Gates at Microsoft for an OS.

Gates and his partner, Paul Allen, had been together since 1975 writing the BASIC programming language. Bill quickly agreed to provide an OS to IBM. He called a local friend, also a programmer, who had developed QDOS (Quick & Dirty Operating System) based upon DRI's CP/M OS. After they agreed to minimal financial terms, Gates modified it slightly for IBM and named it MS-DOS (Microsoft Disk Operating System). IBM further cleaned out 300 bugs and called it PC-DOS, with Gates retaining all the rights. Brilliant negotiation! At the time, computers were sold without the OS, which had to be purchased separately. So in 1981 IBM launched the IBM-PC followed by 11 upgrade models. The XT model had the first internal hard drive.

Apple and Microsoft continue to fight for market share with supporters who are strongly opinionated lined up

on each side. Apple has kept both the hardware and software proprietary, whereas PC is “Open Source,” so third party suppliers can participate, increasing competition which ultimately reduces cost and increases availability of components. Also, because of Open Source, many more software applications are available for the IBM-PC than the Apple.

A second battle over the CPU (Central Processing Unit), the brains of the computer, pits Intel against AMD and Motorola. Again, competition favors the customer with perhaps Intel having a slim lead in performance, but not price.

Video displays have evolved from TVs to CRTs (cathode ray tubes), offered in either white, green or orange characters, to high resolution LCDs (Liquid Crystal Displays, aka Flat Screens). OLED displays (Organic Light Emitting Diodes) are on the horizon with the promise of lower cost and better features.

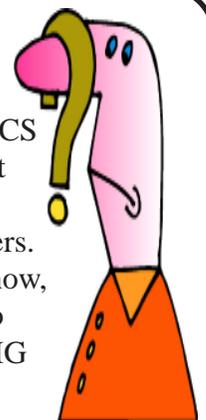
Internal memory in early computers cost \$125 for 8KB. Now, 4GB, which is 500,000 times larger, only costs a fraction of that. Storage memory has evolved from punched paper tape to magnetic tape to floppy disks in sizes of 8”, 5” and 3.5”. Now hard disk drives, flash drives, CD/DVD/BlueRay burners, and Internet Cloud sites offer huge storage capability at minimal cost.

So what is next? Probably a major breakthrough will occur that we can neither predict nor even envision. There will be many exciting PC developments ahead, so stay tuned.

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This article appeared in the November 2011 issue, Bits and Bytes, and is distributed for reprint by other user groups.

Are you up to your nose with computer questions? DACS Special Interest Groups may have the answers. If not, let us know, and we'll try to create a new SIG that helps you find them.



Ask DACS

May, 2012

Moderated and reported by Jim Scheef

WE WELCOME QUESTIONS FROM the floor at the start of our General Meetings. The role of moderator is to try to guide the discussion to a likely solution to the problem. In addition, members who are not able to attend the General meeting may submit questions to askdacs@dacs.org. We will ask the question for you and post the reply in *dacs.doc* and on *dacs.org*. Please provide as much information as possible, since we can't probe during the session.

Q - Can an iPhone that has no active cellular service account be used with Wi-Fi like an iPod Touch?

A - No one had direct experience with any "no account" smartphone so the suggestion was to try it. The questioner was unable to connect to the hospital network, hence the question. Rob Limbaugh reported that some older versions of iOS had problems connecting to Cisco Wi-Fi access points, and that could be the problem in the auditorium. The iOS to Cisco incompatibility was fixed in the most recent versions of iOS. Another member turned off the cellular service radio in his iPhone (with current version iOS) and Wi-Fi continued to work just fine; however, the problem iPhone was not on the current iOS. The next question was if it would be possible to update the iOS operating system using iTunes without the phone having an active cellular account. Again, no one has this experience. As I write this, I realized that my original Motorola Droid has this exact situation, as I moved my Verizon account to my current Droid 3. Once I found a battery with sufficient charge, the phone booted up and immediately connected to my home Wi-Fi. It then downloaded and installed a new version of the Android operating system. After the reboot, it started to download email, so Wi-Fi was clearly working without any cellular account. Of course, your mileage may vary.

Q - I tried to update an Ubuntu installation on an older laptop to the latest version (12.04) using the built-in update service (analogous to Windows Update). After the

update, the screen is blank (no desktop) although the machine seems to boot.

A - Discussion rapidly centered on the video driver. Our resident Linux guru, Drew Kwashnak (aka: Dragonbyte on the DACS Forums) suggested booting the laptop using the 12.04 live CD. If the desktop appears, then the problem would likely be from the installation. If the live CD gives the same result as the installation (a blank screen or X-windows does not start), then Ubuntu 12.04 may not support the laptop's video chip. Searching for similar issues on the Ubuntu forums would be a good place to start to resolve an installation problem or ask about driver support (know your video chip when you ask). If there are no personal files on the disk, it may be easier to remove the failed installation and do a clean install to an empty disk.

The questioner then mentioned that he can log in to the guest account and the desktop appears just fine. This rules out a problem with the video driver; but now the problem is a configuration issue in the main user account. The next suggestion was to create a new user account. If that user account works, then just use the new account. Since you cannot create new users from the guest account, log in to a text console using the main user's credentials, then use command-line utilities to create the new user account. If the new user works with the graphical user interface, then you're done.

Q - As a follow up to the previous question, does Ubuntu have a

program that can detect the hardware in a machine (video, network, etc.) and then locate the best drivers?

A - In a quick search of the Ubuntu website (where full documentation is available), I could not find such a utility. According to the documentation, the installation program does detect the system hardware several times during the install process. Unfortunately, I could not find a separate program to do this that would run under either Linux or Windows. Booting up Ubuntu 12.04 from a live CD would test whether that version includes the drivers needed for your computer.

Q - Are [open source] applications developed to run under Linux less secure than programs developed to run under Windows?

A - This is the classic open source versus closed source question and generated interesting discussion. The Open Source community has always claimed that the peer review made possible by the fact that the source code is available to everyone results in more secure software than the secrecy used by "conventional" software vendors. Yes, the code is available to the bad guys, but more than half of all websites run on Linux, and this would not continue year after year if companies found that this made them more vulnerable. The questioner then added that the application in question is not open source but runs on Linux. This pointed out that not all Linux software is open source and the fact that it runs on Linux does not make it inherently less secure. Now the question becomes a comparison between Linux and Windows when both are properly configured with all up-to-date security updates. It boils down to which is more powerful - Zen or Karma? There is no clear answer.

Q - My website has disappeared. I received a message that my domain name was about to expire and by the time I looked, it had expired. Now my hosting service says they

cannot renew the domain name.

A - Several members in the audience checked the domain in question and found that the domain name registration has expired. This is a serious situation, because it is possible to lose the domain name. When the registration expires, the Domain Name System (DNS) removes the entry for the domain name from the root servers and the website, and anything else related to the domain, like email, becomes unreachable. Except for pages cached by the search engines and possibly *timemachine.com*, it can appear as if the entire domain never existed. As one member pointed out, once the domain registration has expired, anyone can register that exact name. If the domain name appears valuable, companies called "drop-catchers" will poach the name the instant the registration expires. Until recently, they could then hold the domain for ransom, often extracting thousands of dollars. Changes in the regulations have resulted in a short grace period for the rightful owner to reclaim the name. The DACS website is now hosted at *Bluehost.com* and they act as our registrar as well because the domain registration is included with the hosting service. If you prefer a separate registrar, I have been using *Register4Less.com* for many years. They start sending warning emails about six months before a domain name expires, helping to avert a crisis. A quick check while writing this revealed that the questioner has regained control of the domain and the website is visible once again.

[Disclaimer: Ask DACS questions come from members by email or from the audience attending the general meeting. Answers are suggestions offered by meeting attendees and represent a consensus of those responding. DACS offers no warranty as to the correctness of the answers and anyone following these suggestions or answers does so at their own risk. In other words, we could be totally wrong!

SIG Notes, Cont. from page 6

issue. As you can imagine, our session this evening went in a variety of directions (like most of our sessions). Presentations were made by Jim Ritterbusch, Mark Regan and myself. Discussions continued on other happenings in the computer world.

Jim demonstrated Rosetta Stone for Unix--the webpage shown at <http://bhami.com/rosetta.html>. The page is a kind of treasure map for system administrators using Unix or Linux who are interested in operating system structures, the location of files within them and commands to use depending upon the specific computer system of a large company. The site aptly claims to be "A Sysadmin's Unixersal Translator (ROSETTA STONE)" because of the extensive translational way that the data is presented.

I presented a live demo using a command-line utility called "aptoncd" (PDF available at <http://madmod.com/aptoncd.pdf>) The issue addressed was, "How does one capture the listing of packages that are installed in a system, so that they can be used on another system?" Typically, the package list of the APT cache is very long and mostly forgettable by humans, because of its strange naming patterns. (Computers are very good at this, but humans are definitely not.)

When a computer system is brand new, the basic installation on another computer or server doesn't require such a utility as aptoncd. However over time, the list of packages that get added to a system tends to grow, with each new application also loading in multiple helper packages and files. Thus, having a CD-R with an accurate listing of all the packages makes the installation of those packages on another system a snap.

Our evening session included a software fix for a dual-boot computer using Windows XP along with Ubuntu 12.04, and a study and possible solution to a power issue of another computer.

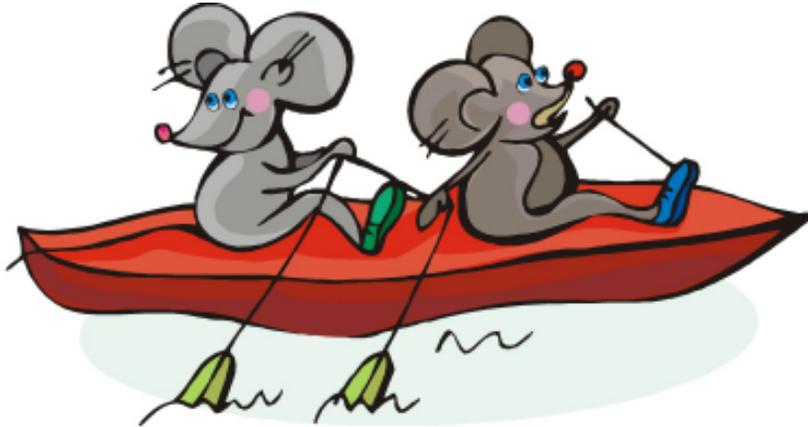
Briefly, I demoed a look at a small database on my computer that allowed for PHP actions on its records, which included: listing, adding, editing, deleting and searching. The database that listed presentations at our Linux SIG was accessible from a local page using the Firefox browser on my computer.

Visitor Mark Regan discussed HAM Radio applications on the web that make use of long distance communications and tracking of callers. Relevant applications for computers can be found for Windows, Mac and Linux systems. Having a HAM Radio license allows for great free or inexpensive connections between people on opposite sides of the world. Check out <http://aprs.fi/> and put in a call sign such as KB1VLZ. Mark wished that DACS had a HAM Radio SIG.

Discussions included some of the workspace issues of Ubuntu 12.04. Workspaces in Ubuntu allow for applications to be simultaneously opened in partitioned desktop spaces. (Imagine multiple clipboards with notes on different topics.) One workspace might contain Firefox, another LibreOffice Writer, another Thunderbird, and a command-line terminal. A simple click gives access to the relevant workspace needed at that moment using the full desktop. Drew Kwashnak suggested that there are ways to modify the number of available workspaces from the default 4 to 6 or more. Perhaps at the June meeting we can investigate this further. There's lots to look at with Ubuntu 12.04's new desktop procedures.

Ubuntu 12.04 Desktop, Server, etc. were released officially on April 26th. This latest, free release is with long-term support (LTS) of 5 years that replaces the 10.04 LTS version used by large numbers of individuals, businesses and governments. The 10.04 version will continue support and updates until April, 2013, but migration to the 12.04 LTS allows for improved performance, updated packages and better integration with cloud services. At tonight's session, Ubuntu 12.04 was on at least two of the computers brought to the meeting. We are always on the lookout for new ways to use new Linux distributions such as Ubuntu or Fedora.

We invite new participants and DACS members to our sessions geared for the beginner, intermediate or advanced user. Topics and discussions are motivated by those attending and cover hardware and software problems that members may have with their computers. Our members tend to have presentations or demos to show off on their own laptop computers. Bring your old laptop. Perhaps it could use Ubuntu or Fedora installed free for a great replacement or addition to your existing system.



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Artificial Intelligence

July

Jim & Chris Guld
of Geeks on Tour
Facebook (tentative)

August

Paul Chayka &
Mike Morrissey
Robotics and Beyond

September

Tom Schonder
of Google
Google Apps