THE LOS ANGELES COMPUTER SOCIETY NEWSLETTER

Volume 34 Issue 5

User Friendly

MAY 2017

LACS

IN THIS ISSUE

APCUG Reports

The latest APCUG Reports are on www.lacspc.org. Scroll down the menu on the right side to Miscellaneous Information, then click on APCUG. It is interesting to read about what APCUG and other user groups are doing. Maybe we can get ideas for LACS?

Member of

apcug

An International Association of Technology & Computer User Groups

www.apcug2.org
www.facebook.com/APCUG
www.twitter.com/apcug
www.youtube.com/apcugvide

MAY GENERAL MEETING

Exploring the Internet

Speakers: **Two Movie Websites, Jim McKnight**, LACS
Travel Websites - Part 1, Stephanie Nordlinger, LACS

This will be the first of a number of programs given mostly by our members on the general topic of "Exploring the Internet." A lot of the "action" is not in new hardware or new software; it is in what you can learn by exploring the internet. While our speakers will show you specific websites and provide guidelines for searching, we expect the audience to have relevant questions and experiences to share. To make the podcasts on the LACS website more useful, each contributing audience member must use a microphone.

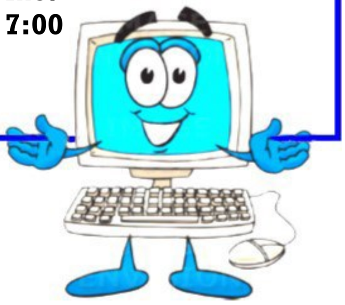
Our speakers have decades of experience using PCs and other devices to access the internet. They both have often held LACS offices and directorships. Jim sets up and runs our equipment at meetings, leads the Daytime SIG and has serviced or repaired many members' computers. Jim worked for the IBM Corporation for 38 years and maintains an outstanding website at www.jimopi.net.

Stephanie, our vice president, has been a lawyer in Los Angeles for many years.

You will learn from every topic presented. Join us. Bring a younger person who can provide a ride for you now or later.

We need more volunteers to make future presentations. Please see Stephanie's article on page 7 listing possible topics.

Tuesday, May 9, 2017, 7:30 - 9:00 PM
Fellowship Hall, 8065 Emerson Ave.
Westchester, L.A. 90045
An informal Computer Forum meets from
6:30 to 7:20 to answer individual questions.
All are welcome.
Refreshments and Socializing at **7:00**
More info: www.lacspc.org
or at 310-398-0366



GENERAL MEETING REPORT
February 14, 2017

By **Leah Clark**, LACS Editor
Speaker: **Stanley Johnson**, LACS President

Cloud Storage and File Backup with Dropbox and Google Drive

Stanley first mentioned Office 365, which he used to prepare this presentation. This is an example of Cloud computing; he was able to create his PowerPoint presentation online.

He first learned about Dropbox and Google Drive when he was in college. He and his fellow students could easily collaborate on writing reports, being able to share files, see and edit what everyone was contributing, and to do this from any device, anywhere. The Cloud enables storing and accessing data and programs over the internet instead of your computer's hard drive. "The Cloud" is just a metaphor for the internet.

Google Drive

Google Drive is free for up to 15 GB of data storage, which includes all of Google's G Suite (Google Drive, Gmail, Photos, Sheets, Slides, Forms, My Maps, Drawings, Sites, and a .pdf converter.) You may pay for more storage space. It allows you to upload and store all your files online and to access them from any device.

To use Google Drive, sign in to your Google account. If you don't have a Google account, you'll need to set up a Gmail account. Everything that is in your Google Drive will show up. Click on "New" for a drop-down menu where you can select to create a new folder, to upload a file or a whole folder, or select any G Suite program.

Stanley clicked on Google Docs to get a blank page similar to Microsoft Word. He demonstrated with our board agenda. He shared it with all the members who could make revisions. In "Revision History," everyone could see what the others had done. He had full control over who could see or make changes to the document, and he could know who made what changes. He could download it to his computer and see it on his phone and tablet.

You have to try it out, and if you're not sure about something, you can search for help online or ask on our Yahoo group list: lacslist@yahoogroups.com.

Google Sheets is similar to Excel, and Google Slides is similar to Powerpoint. As a teacher, Stanley uses Google Forms to get student information and can put it into a spreadsheet.

Google Drive can be customized to do most anything you want to do. To find a way, you just need to be savvy enough to search for it. There are many good things about Google Drive, but it is not perfect, and not quite the same as Office software.

Stanley trusts Google Drive for most of the things he uses daily. If you have critical files, save them in multiple places.

Dropbox

Stanley showed us some of the features of Dropbox. When you go to www.dropbox.com, you can sign up for free, or you can use your Google account. There are a couple of new things that Dropbox has on its website. One is "Dropbox Paper." People can create documents and collaborate on them. It is not compatible with other systems; you cannot convert a Paper file to Word or Google Docs.

Dropbox is a great tool for sharing. To give someone edit access to a file, you will need to create a sheared folder. You can grant different permissions and levels of access to either edit or to just view the files. To share something, you create or download a shared folder and invite others to look at it.

There are apps that allow Dropbox to be integrated with Google Drive and Microsoft Office programs. Stanley likes when he takes a picture on his phone; it is automatically uploaded to his Dropbox and will be in a folder on his computer.

Office 365

Office 365, a Microsoft subscription service, is also cloud-based. There is a way to collaborate with other people similar to how Google Drive and Dropbox do it. It allows real-time sharing.

Stanley briefly mentioned iCloud and OneDrive. He finds iCloud to be limiting.

All these programs are competing with each other, so it will be interesting to see what evolves. ♦

FROM YOUR EDITOR

Virtual Technology Conference
Sat. May 6, 2017
10:00 AM, PDT

Conference Description & Registration go to https://apcug2.org/apcug-2017-spring-virtual-technology-conference-vtc24/

Future LACS Meetings

Stephanie Nordlinger, our vice-president, has been doing a lot of work to find interesting and helpful presentations for our general meetings. Her list of ideas is on page 7. Please look it over, and give her your ideas. Stephanie wrote:

> We need volunteers to help formulate these and other ideas and put together the programs - hopefully, about two subjects per meeting. I am happy to discuss these matters – please email or phone me.

At the April general meeting, Stanley Johnson, our president, gave members an open invitation to share with our group something that they are knowledgeable or passionate about. He is hoping our members will share the great knowledge, experience, and resources that they have. We are considering having multiple, short presentations at some meetings.

Please contact Stephanie or Stanley to discuss any ideas you may have.

Articles for User Friendly

I use a lot of articles and reviews from members of other user groups in *User Friendly*. I would like to publish contributions from our own members. Do you use any hardware, software or utilities that you really like or dislike? Why not share your experience with LACS members? Do you have any specific expertise or knowledge you could write about? Or present at a meeting?

Let's Get To Know Our Members

Thank you, Jerry Schneir, Heshmat Laaly and Ros Cirlin for submitting a biography. (See pages 4 and 5.) I hope more of our members will introduce themselves in this way. Each of you is unique, has a different background and has a lot to offer. We want to get to know you.

Recommendation

A new member, Lisa Wilson, recommends the website, www.cheapinternet.com for saving money. I took a quick look at it. They provide high-speed Internet plans for those with low incomes. Thank you, Lisa.

Tech Terms

Have you been curious about the origin of names for computer apps and other technology terms? Recently, I wondered about "Bluetooth." So I checked Google and other sites. This led to looking up more names. Here is information on two terms I found. I do know that evertthing on the Internet isn't true, so I'm not responsible for the verity of any of this!

Bluetooth: Bluetooth's name comes from 10th-century Danish royalty. The technology is named after the second King of Denmark, King Harald Gormsson. His nickname was "Blåtand" in Danish, which means "blue tooth." Scholars believe that he earned the nickname from having a bad tooth that looked blue/black.

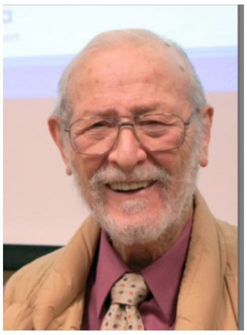
Jim Kardach, one of the founders of Bluetooth SIG, explained in an article: "King Harald Bluetooth was famous for uniting Scandinavia, just as we intended to unite the PC and cellular industries with a short-range wireless link." Bluetooth's logo is King Bluetooth's initials in Scandinavian runes.

Wiki: A Wiki, like Wikipedia, is a group of interconnected sites built from user engagement. "Wiki wiki" in Hawaiian means "quick." Wiki's creator, Ward Cunningham, decided that a Wiki would be a quick, simple way to access multiple sites' information.

KNOW OUR MEMBERS

Biographies of LACS Members

Gerald (Jerry) Schneir



Jerry graduated from USC with a Doctor of Pharmacy degree in 1956. He had one of the first computer systems in his pharmacy in the 1970s. Upon selling his pharmacy, he became VP of Marketing for a company devoted to prescription programs using in-store computer systems.

He moved from the Valley to Santa Monica in 1987.

Jerry's life-long hobby is photography, and he had a collection of 900-plus antique cameras which he donated to the Western Museum of Photography in the mid-1980s. He is married to Rita (64+ years), and they have three daughters and a son, eight grandchildren and one great-grandchild.

He started teaching Digital Photography at Emeritus College in Santa Monica and continues to this date. He often buys two, three or more new digital cameras a year. He is the faculty advisor to a camera club at Emeritus which he started in 2013.

He also travels extensively worldwide two or three times a year. He has visited such diverse places as Cuba, Panama, Peru, India, Africa, Morocco, Jordan, Israel, Vietnam, Thailand, Burma, Italy, Russia, England, Scotland, Ireland, Spain, Portugal, France, Germany, and the Baltic countries.

Jerry is a long-time member of LACS.

Dr. Heshmat Laaly

Heshmat attended primary, high school and college in Iran. He earned bachelor, masters, and Ph.D. degrees in chemistry from the University of Stuttgart, Germany. He studied inorganic, organic, physical, analytical and textile chemistry and physics, metallurgy, crystallography and industrial economics.

His professional activities from 1963 - 1984 included research and development of test methods for polishing wax and detergents, water analysis and treatment, quality control and research in textiles, research and analytical chemist for Gulf Oil, and testing and evaluation of roofing materials at the National Research Council of Canada. He was concerned with ion exchange resins and the measurement of chemical, physical and mechanical properties of materials in Germany and Canada. He speaks Farsi (Persian), German and English fluently and can get by in French.

Heshmat was engaged from 1983 - 2005 as a roofing consultant. He has written a two-volume book, *The Science and Technology of Traditional and Modern Roofing Systems*. He has lectured at colleges and universities, gave presentations at symposia and authored numerous scientific papers and articles. He has received many rewards and patents. He is listed in *Who's Who in California*, *Who's Who in the West*, *International Leaders in Achievement* and *Who's Who in the World*.

Heshmat has rented a four-room office in Los Angeles, and continues his research and lifelong pursuit of knowledge. He maintains an immense collection of catalogued technical books and literature.

Hobbies include service to humanity, reading, traveling, collecting of noble sayings, cobbler, automotive enthusiast, and office ergonomist. He is a long-time member of LACS.

Ros Cirlin

Faced with the reality of earning a living, I dropped out of NYU's Theater Arts Department in 1949 and started looking for a full-time job after taking a Speedwriting course. Later I earned an AA at Santa Monica College at night.

After a series of administrative or executive secretarial jobs which included United Features, Concert Hall Society, Westminster Recordings, I got a dream job at Benrus Watch, a co-sponsor of "The Show of Shows" and others, as secretary to the Advertising Director. Harvey Bond and I shared an office and, among other events, I was there when Harvey was in conference with Carl Reiner and his watchmaker dad who had come up with a new idea.

A family upheaval resulted in my moving to Los Angeles, leaving a job I dearly loved.

During the following years, my main jobs included five years each at United Cerebral Palsy, The Motion Picture Relief Fund, and UCLA. At UCLA, I first managed the office as secretary to a neurologist and then devised and carried out an insurance/billing procedure for six of nine urologists.

Meanwhile, I completed courses on the Mag Card, Displaywriter, etc. and wanted to use these skills. After leaving UCLA, temporary assignments followed. They included Exxon, Welton Becket, McCulloch Oil, Gruen & Associates, Hilton Hotels and Arthur Anderson.

Finally, over 60, a temporary assignment at RAND turned into full time. This was my second most significant job. When my boss took medical retirement, the situation changed, and it was followed by almost five years at a property development and management company.

Retirement found me teaching basic computer courses as a volunteer, first at the Pasadena Senior Center, and then at the former Culver City Senior Center location. It was at CCSC that I learned of LACS. I was active with the club from about 1996 to the early 2000s. When I had to give up my car, participation dwindled dramatically. Now I follow what's happening through LACSLIST and User Friendly. ♦

DIGITAL PHOTO SIG REPORT

By **Elliot Silverstein**, LACS

The presentations were made by Elliot Silverstein and Gilbert Ialongo. The information shown was chiefly from tutorials and other information sources obtained from YouTube, Wikipedia, or similar places. We displayed material that we had previously recorded onto USB flash drives rather than relying on WiFi obtained from our MiFi source, because, at the previous meeting in February, the MiFi signal was too weak to provide usable results.

The material shown included the following:

First, there were two spectacular YouTube movies of the Northern Lights.

Next, we showed several examples and explanations of the rolling shutter effect observed when most cameras with CMOS sensors are used to photograph rapidly moving subjects, or when photos are taken by rapidly moving observers. It is useful to be aware of this effect when using a CMOS camera that has a rolling shutter, and most current CMOS cameras do use a rolling shutter.

We showed a tutorial on adjustment layers, which allow one to make edits to a photo in Photoshop Elements or similar programs, and to then make changes in these edits without having to eliminate prior edits, which could involve having to start the entire process over again.

We then showed a tutorial of the "Expert" mode of the recent version of Elements, version 15. This version is quite similar in capabilities and function to the earlier versions of Elements, but it was useful to see some of the techniques and some of the things that can be done with it.

Another interesting demonstration showed what can be done in Elements and similar programs by using the gradient map feature. Gradient maps can not only produce a gradient in color or density, such as what one might use to lighten the sky while leaving the ground dark. It also has another useful feature that I had not known about. When converting a color photo to black and white, a gradient map can be used to make fine adjustments to the darkness/lightness of the converted scene based on the lightness values of the original colored scene. This provides a great amount of control over the density and contrasts throughout the monochrome scene. In addition to creating black and white images, this can also be used to achieve other effects, such as sepia tones.

We only had an audience of two, plus the two presenters. This can be at least partly attributed to the fact that three of our fairly regular attendees were on vacation. ♦

BASICS AND BEYOND SIG REPORT

By **Leah Clark**, LACS

Paula Van Berkom presented several interesting topics. I always learn something at these meetings.

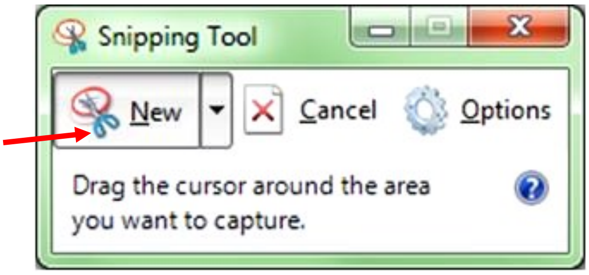
Character Map

Often, when we write, we need special characters that aren't on the keyboard. This will include things like foreign currency, diacritical marks in English and foreign languages, foreign alphabets, and legal and mathematical symbols. Paula showed us "Character Map." There are hundreds of characters to choose from, including Chinese, Hebrew, and Greek script.

It is simple to copy and paste the character you want into your document. You can even choose the font that you are using, so it blends in with your writing. Paula suggested copying and pasting frequently used characters into a document and saving, so you don't have to look it up each time. Many of the characters have alt codes, that is, a number you can type while holding down the Alt key. You must have a numeric keypad to do this. Example: é can be typed by holding down the Alt key and typing 0233. But it is so easy to copy it from the Character Map. The program icon can be put on the desktop or taskbar for quick access.

Snipping Tool

You can hold down the Alt and the Print Screen Keys together to copy the whole window. With the Snipping Tool, you can select part of a screen to copy. It is available on Windows 7, 8 and 10. Click on the Start button and type "Snipping Tool." in the search box. Click on "New," then draw around what you want to capture. You can choose from free-form, rectangular, window or full screen snips. Save or print the capture. There are several options you can choose, even the color of the line you draw to select the capture. You can write or draw on or around the snip. A capture is automatically saved to the clipboard, so it's easy to paste it into a document, as I did for this report. I put the program icon in my taskbar. Note: The screenshot above is from Windows 7; there are more options in Windows 10.



Drag the cursor around the area you want to capture.

NotePad and WordPad

Paula then explained the difference between NotePad and WordPad.

NotePad is very basic. Plain text only is available with no formatting options.

WordPad lets you use many of the same formatting tools found in Word. Both will save documents as .TXT files. You can also save WordPad documents as .RTF files which will keep the formatting. Neither have a spellchecker.

LibreOffice

LibreOffice is a free, open source office suite. Files can be saved in many formats, and it can print envelopes. LibreOffice includes Writer, a word processor; Calc, a spreadsheet; and Impress, a presentation program. OpenOffice is no longer supported.

There were eight people at this busy, informative meeting. ♦

FUTURE LACS MEETING TOPICS: REQUEST FOR VOLUNTEERS

By **Stephanie Nordlinger**, Vice President, LACS

Aside from some special topics, I think we could have a series of meetings on various aspects of the Internet. While a decade or two ago, the new developments were in software (and occasionally hardware), now most of them are found on the web. I propose to have 2 - 3 general topics per meeting (mostly led by members) so that we can share information and educate our members about the best websites and research strategies for various categories of information.

For example (in no particular order):

1. **Entertainment**
   a. Movies, TV, Streaming Media
   b. Live Theatre, Dance, Music
   c. Art and other museums and galleries. See shows without going to them.
   d. Reviews
   e. Venues, how to get tickets (best, cheapest ways; hard to get tickets).
2. **Sports**
3. **Travel** – programs on domestic, international, ecological, specialty tours, cruises, booking flights, hotels, transportation, reviews. How to save money and have a great trip. If you can't travel, how to get some of the same benefits from the web. Create a spreadsheet for a complex trip.
4. **The Environment** – activities, politics, the most authoritative but clear scientific analysis of various issues.
5. **Medicine and Health** – Using both software and the web to maintain and improve your health. I have, but have not read, a book called "Fitness for Geeks."
6. **Hobbies** – Gardening, Genealogy, Arts and crafts, Antiques, Collecting, etc.
7. **Local activities** – getting on and off email lists from local groups, museums, etc. Social networks and list serves like Nextdoor and LARecycle@YahooGroups.com.
8. **Shopping tips** – Finding something local. Best online sources. Prices online and off.
9. **Estate Planning** for Digital Accounts – I might be able to get another attorney to volunteer and summarize information on specific websites. I could research and present it myself at a later time.
10. **Computer hardware problems**
11. **Internet Privacy** – Federal legislation? Lawsuits? Cell phone use, Sandboxie, Firefox and other options.
12. **Watching TV on my computer?** On my tablet? How much will it cost? How do I find programs?
13. **Digital Photography** – Bring members up to speed to learn to do more.
14. **Financial Issues**
    a. Stocks and bonds; ETFs, mutual funds.
    b. Retirement Planning and calculations.
    c. Handling real property.
    d. Tax and tax preparation websites.
    e. Economic and technical.
    f. Why using a cheap online legal form may cause unexpected results.
    g. Publications online.
    h. Organizations – e.g. AARP, American Association of Individual investors.
15. **Research on organizations**
    a. Companies you might invest in.
    b. Companies to do or not do, business with, i.e. Angie's List.com, BBB.org.
    c. Charities: Charity Navigator.org.
    d. Political, governmental and international groups and organizations.
16. **Research on individuals**
    a. Get an address or a phone number for free? Or is Intellius controlling previously independent websites?
    b. Biographical? Genealogical? Political? Listings of licensees: attorneys, contractors, medical people, etc.
    c. Google.
    d. Way Back.
    e. Find individuals on Better Business Bureaus, Angie's List, etc.
    f. Find and communicate with your public officials/ representatives, etc.
    g. Indirect research – based on surroundings, relatives, employers,
17. **Social Media** – How to be effective and not hurt yourself in the process.
18. **Organizing your records** and your life for accessibility now and later (i.e., after you are disabled or pass away.) ♦

LACS NOTICES

WELCOME ALL

George Wolkon
Data Base Manager, LACS

New Members (1)

Lisa Wilson

Renewals (14)

Richard Balsam	Henry Harris
Loling Beckman *	Demetrios Liappas
Sylvia Davis	Marcia Maiten **
Bob Downing	Jack McGruder
Hedy Downing	Karl Springer
Patricia Downing	Rich Waters
Carolyn Griswold	Patrick Zilliacus *
* Contributor	** Benefactor

HOW TO CHANGE YOUR CONTACT INFORMATION

Go to www.lacspc.org. Click on **Member Forms** in the bar under the picture. Under **Membership Update,** select **Click Here** for either the DOC or PDF form. Fill it out and bring it to a meeting or mail it. Or send your changes to membership@lacspc.org.

LACS HAS JOINED MEETUP

Our Meetup group is called:
"***Los Angeles Computer Society and Technology Meetup.***"

Go to http://www.meetup.com/Los-Angeles-Computer-Society-and-Technology-Meetup/ and click on "**Join Us.**" Also, **RSVP** for our general meetings**.** Please join - it's free. If others see that a lot of people are interested, they will be encouraged to join LACS. We hope this will result in new members.
We need someone to contact those who have expressed an interest, but have not come to a meeting.

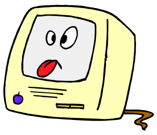
LACS IS ON TWITTER

On **Twitter**, follow us at:

https://twitter.com/LA_CompSoc

The LACS board voted to discontinue the **Facebook** page for now.

FIX YOUR PC FOR FREE?



Jim McKnight has an open offer to all LACS members to diagnose, repair, disinfect, or upgrade members' PC's for free. There are certain limitations to Jim's offer, so see the details by clicking the "Fix my PC for Free?" link at www.jimopi.net .

Non-members can wisely invest in a one-year LACS membership ($40.00), and Jim will fix your PC problem, too.

GENERAL MEETING PRESENTATIONS

May 9: Exploring the Internet: Two Movie Sites and Travel Websites.

June 13: TBA

July 11: TBA

Note: This schedule is subject to change. Check email and *User Friendly* for updates.

PODCASTS

Listen to the podcasts of our general meetings. Go to http://www.lacspc.org/category/audio-files/. Click on the session you wish to hear.

GENERAL MEETING SNACK SCHEDULE

By **Sylvia Q. Davis**, Hospitality Chair

Refreshments and socializing will be at **7:00**, with the meeting starting at **7:30**. Please bring refreshments at **7:00**.

May 9:	J through N
June 13:	O through S
July 11:	T through Z
August 8:	A through D

Bring **finger-food** treats such as fresh fruit, veggies, nuts, cookies, cold drinks and the like. LACS provides hot drinks.

See your email for updates and reminders.

Please pick up your left-overs and serving pieces at the end of the meeting.

MAY 2017

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1 Board Meeting 7:00 PM	2	3	4	5	6 Virtual Tech. Conf.
7	8 Basics & Beyond SIG 7:00 PM	9 **General Meeting 7:30 PM**	10	11	12	13
14 Happy Mother's Day!	15	16	17	18	19	20
21	22 Digital Photo SIG 7:00 PM	23 Daytime SIG 1:00 PM	24	25	26 Ramadan	27
28	29 memorial DAY	30	31			

Watch your email for the dates of possible future meetings at the Microsoft Store.

This Calendar may change.
Check your e-mail or with the SIG leader before attending a meeting.

General Meeting: Fellowship Hall on the 2nd Tuesday of the month at 7:30 PM.

Most SIGs meet at the Santa Monica College Bundy Campus, room **235**, unless otherwise noted.
The **Daytime SIG** meets at the Felicia Mahood Senior Center.
The **Board** may meet at Charlotte Semple's home or at Santa Monica College. Members in good standing are welcome to attend.

SPECIAL INTEREST GROUPS (SIGs)

SIG meetings are led by and for LACS members. Visitors are welcome to attend.
For information about a SIG, check your e-mail or call the contact person in advance.

Basics & Beyond SIG	Paula Van Berkom	310-398-6734	2nd Mon. 7 PM SMC, Bundy Campus
Daytime SIG	Jim McKnight	310-823-7829	4th Tues. 1 PM, Felicia Mahood Ctr.
Digital Photo SIG	Nancy Cattell	310-452-2130	
"	Elliot Silverstein	310-670-1544	4th Mon. 7 PM, SMC, Bundy Campus

New SIGs can be created if there is sufficient interest and leadership.

ADDRESSES

Felicia Mahood Senior Center, 11338 Santa Monica Blvd., West LA 90025 (at Corinth)

Fellowship Hall, Westchester United Methodist Church, 8065 Emerson Ave., Westchester 90045

Santa Monica College Bundy Campus, 3171 S. Bundy Drive, LA 90066 (west on College Dr., 1 block South of Airport Avenue, 2 blocks North of Rose.) Our room number may change each semester. Look for it on a sign opposite the elevator on the first floor.

MEMBERS HELPING MEMBERS

LACS members volunteer to help other members solve hardware and software problems by telephone during the hours listed below. Select the topic from the list and then call a person whose number is listed next to it. Or you may use a Helper's e-mail address, found in your LACS Roster. We hope that you find this free service useful. ***If you are experienced using a particular program or topic, please volunteer to be a consultant.*** To volunteer for this list or to make corrections, please e-mail or call Leah Clark at Leahjc (at) sbcglobal.net or at 310-677-2792. More Quick Consultants are always needed. You may decline or postpone a call if it comes at an inconvenient time.

Adobe Creative Suite: PDF, InDesign, PhotoShop, etc. - 17
Android Smartphones - 5
Apple devices - 15
Anti Malware - 12
Digital Imaging, Editing - 8, 14
Digital Photography - 8, 14
Dragon Naturally Speaking - 4
Genealogy - 5, 7
Hardware - 12
iPhone, iPad, iPod - 15
L.A. Free Net - 6
Linux - 11
Lotus Word Pro, Approach - 12
Mozilla Firefox, Thunderbird - 12
MS Excel - 3, 15
MS Word - 3, 4, 10
MS Outlook - 5, 15, 17
MS Outlook Express - 15
MS PowerPoint - 15
MS Publisher - 2, 7
Open Office - 16
Photoshop - 17
Picasa - 14
Quicken - 3, 5
Thunderbird - 12
Visual Basic - 13
Websites - 13
Win 7 - 16
Windows - 5, 12
WordPerfect - 5

No.	Name	Preferred Phone for Calls	From	To
2	Mercer, Bob	310-837-5648	9:00 AM	10:00 PM
3	Wilder, Joan	310-472-8445	9:00 AM	9:00 PM
4	Hershman, Irv	310-397-9453	11:00 AM	11:00 PM
5	Nordlinger, Stephanie	323-299-3244	5:00 PM	10:00 PM
6	Springer, Karl	424-646-3410	10:00 AM	10:00 PM
7	Clark, Leah	310-677-2792	9:00 AM	5:00 PM
8	Silverstein, Elliott	310-670-1544	10:00 AM	10:00 PM
10	Beckman, Loling	310-471-7893	10:00 AM	6:00 PM
11	Hughes, Bill	424-259-1818	Any	Any
12	McKnight, Jim	310-823-7829	8:00 AM	7:00 PM
13	Ialongo, Gilbert	310-641-7906	9:00 AM	5:00 PM
14	Schneir, Jerry	310-451-4140	9:00 AM	10:00 PM
15	Van Berkom, Paula	310-398-6734	9:00 AM	5:00 PM
16	Johnson, Carol	310-372-8535	10:00 AM	9:00 PM
17	Rozek, E.J.	310-823-3811	Noon	8:00 PM

OFFICERS, DIRECTORS AND LEADERS

Title	Name	Term	Telephone
President	Stanley Johnson	2017	424-216-6984
Past President	Maurice Stephenson	2017	310-625-0450
Vice President	Stephanie Nordlinger	2017	323-299-3244
Secretary	Lee Freehling	2017	310-837-4022
Treasurer	Charlotte Semple	2017	310-398-5052
Director	Leah Clark	2018	310-677-2792
Director	Jim McKnight	2018	310-823-7829
Director	Emil (E.J.) Rozek	2018	310-823-3811
Director	Paula Van Berkom	2017	310-398-6734
Director	George Wolkon	2017	310-459-2671
APCUG Rep.	Leah Clark		310-677-2792
Car Pools	Vacant - Please volunteer		
Changes	Karl Springer		424-646-3410
"	George Wolkon		310-459-2671
Corporate Counsel	Stephanie Nordlinger		323-299-3244
CCSC Computer Lab	Loling Beckman		310-471-7893
Hospitality Chair	Sylvia Davis		213-924-4927
Asst. Hospitality Chair	Vacant - Please volunteer		
Membership Database	George Wolkon		310-459-2671
Newsletter Editor	Leah Clark		310-677-2792
Program Chair	Stephanie Nordlinger		323-299-3244
"	Stanley Johnson		424-216-6984
Publicity	Mark Presky		310-398-0366
Quick Consultants	Leah Clark		310-677-2792
SIG Coordinator	Vacant - please volunteer		
Webmaster	Paula Van Berkom		310-398-6734
Welcome Chair	Irene Mussack		310-672-3077
Asst. Welcome Chair	Linda La Roche		310-645-4546

Contact Information

Website	www.lacspc.org	**Newsletter Editor**	Leahjc (at) sbcglobal.net
Voice Mail	1-310-398-0366	**Webmaster**	sitemaster (at) lacspc.org
e-mail	ContactUs (at) lacspc.org	**Change of Address**	membership (at) lacspc.org

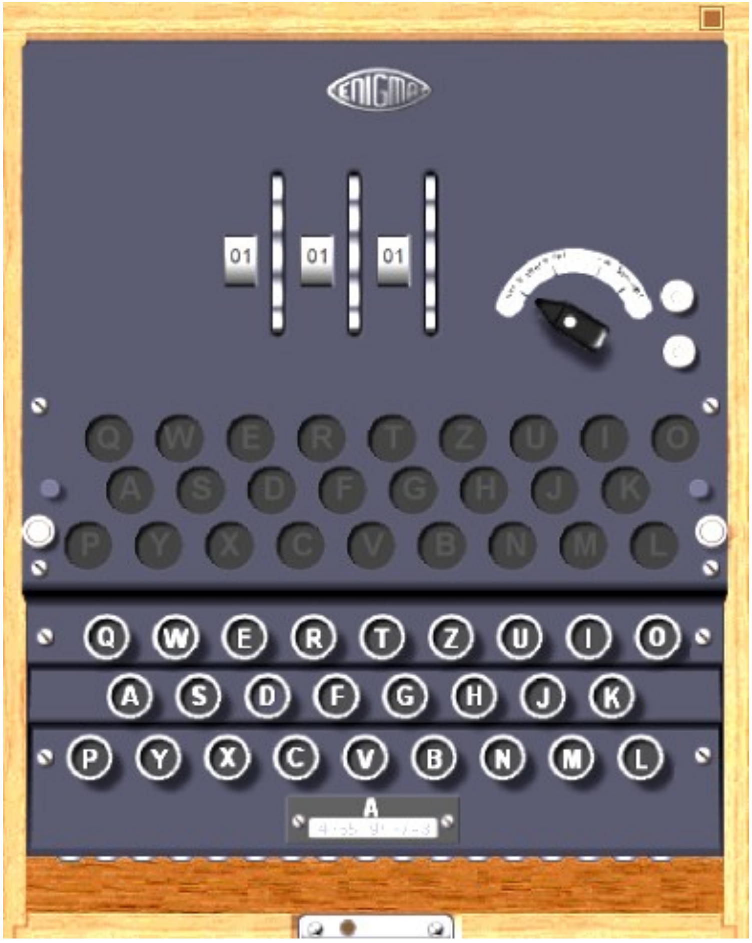
The **ContactUs (at) lacspc.org** address goes to our **president** and **vice-president.**
If the message is for another board member, they will forward it to the correct person.
To contact other officers, directors, leaders or members directly, members may use our roster for phone numbers and e-mail addresses.

CRYPTO SIMULATION

By **Dick Maybach**, Member
Brookdale Computer Users' Group, NJ
BUG Bytes, September 2016
www.bcug.com
n2nd (at) att.net

Most children are fascinated by encryption; certainly, I was. I still remember having to ask my dad for help in learning to use my Captain Midnight Code-O-Graph, which encoded messages by replacing letters with numbers. Given the popularity of documentaries and movies about the British efforts to decode German Enigma messages during World War II, many adults, including me, retain this interest. Understanding modern encryption requires a sophisticated math background, and slogging through a description can be truly tedious. The simple mechanical devices used during World War II are more approachable and have much historical interest. A fascinating way to learn about them is to run simulations on your PC. You can follow the same procedures and tap the same keys that WWII German and American soldiers did, and by doing so obtain a much better understanding of the processes than by watching a movie or reading a book.

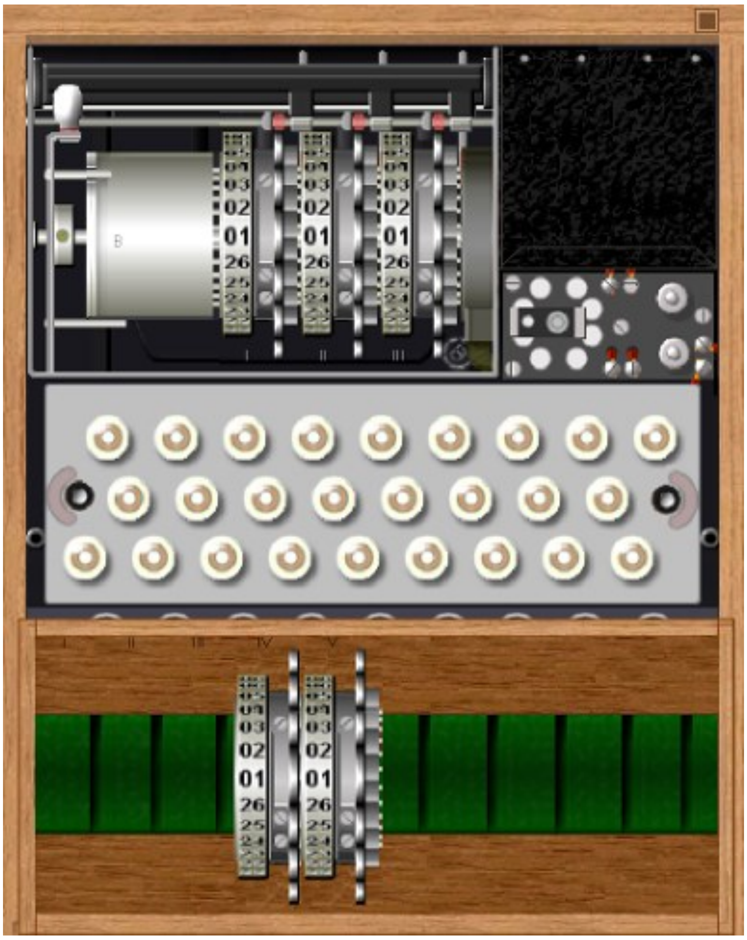
The Enigma is probably the most famous cryptographic device ever. Not only was it effective at the time, but it also significantly influenced World War II. Thousands died as a result of the successes and failures of attempts to decrypt messages encoded by it. The best way to learn about Enigma is to use one. While actual units are available, they are expensive. Instead, you can download an excellent free simulator from http://users.telenet.be/d.rijmenants/index.htm, a site in Belgium maintained by Dirk Rijmenants. Here you can find simulators for several historic crypto machines, instructions for using them, and their histories. These are Windows programs, but OS X users can run them using Crossover and Linux users can use Wine. Like all similar devices of that era, the Enigma is a mechanical device, which used a set of disks to scramble the connections between the 26 letter keys of a keyboard and 26 lamps. At least one disk moved at each key press, so that pressing the same key twice produced two different output letters. A battery was needed only to illuminate the lamps. Mechanical connections between the keys and the rotors moved the latter.



Screen 1. Enigma Panel

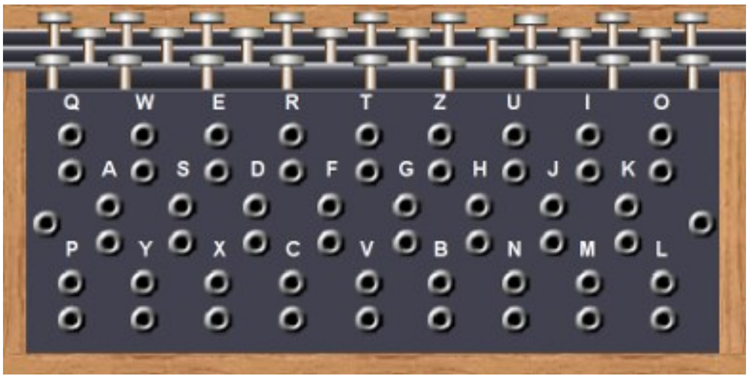
Screen 1 shows the keyboard, the (unlit) output indicator lamps, the edges of the three rotors, the power switch, and the terminals for external power. There are some complications, but basically the operator selected three (of the five available) rotors and inserted them in the correct order. Then he rotated them to a given starting position and began typing. The indicator lamps remained lit only while the key was pressed, and a second operator was needed to record the output.

Screen 2 shows the same machine with its cover lifted. The three installed rotors are at the top and the two unused ones in a rack at the bottom. The unused rotors were stored in a separate box, which the simulator shows sitting on top of the keyboard mechanism. The empty space to the right of the rotors is for the battery.



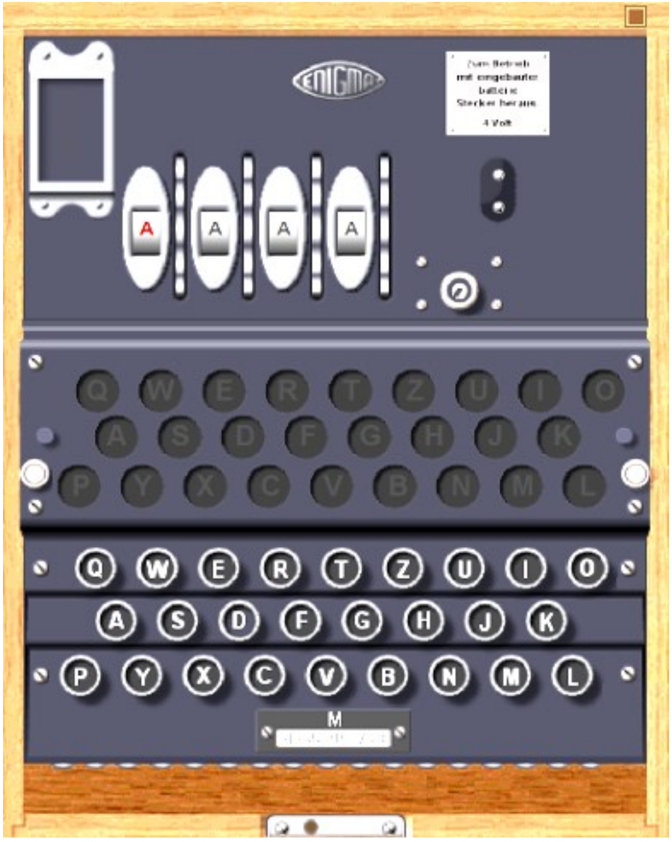
Screen 2. Enigma Interior

A further complication was provided by a plugboard, **Screen 3**, that scrambled the connections between the keyboard and rotors. The simulator also includes this feature to allow setting the Enigma up exactly as it was used.



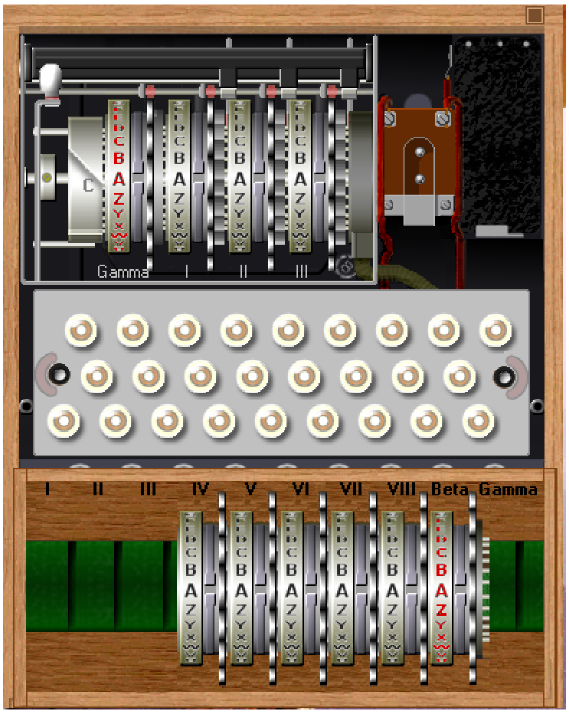
Screen 3. Enigma Plugboard

Enigma was really a family of devices. **Screen 4** shows a model used by the German navy. It had no internal battery, and used a plug instead of screw terminals for power.



Screen 4. Enigma Model Used by the German Navy.

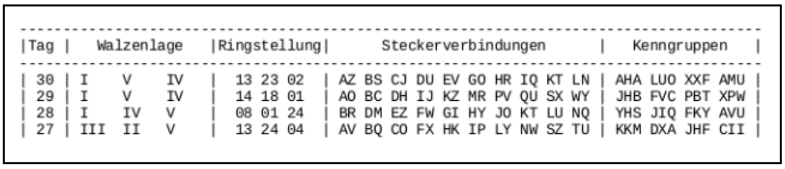
This used four rotors instead of three, and as a result was more secure.



Screen 5. Interior of the Navy Enigma

As shown in **Screen 5**, navy operators had more rotors to choose from, although only the Beta and Gamma units (those with red letters) could be used in the fourth slot.

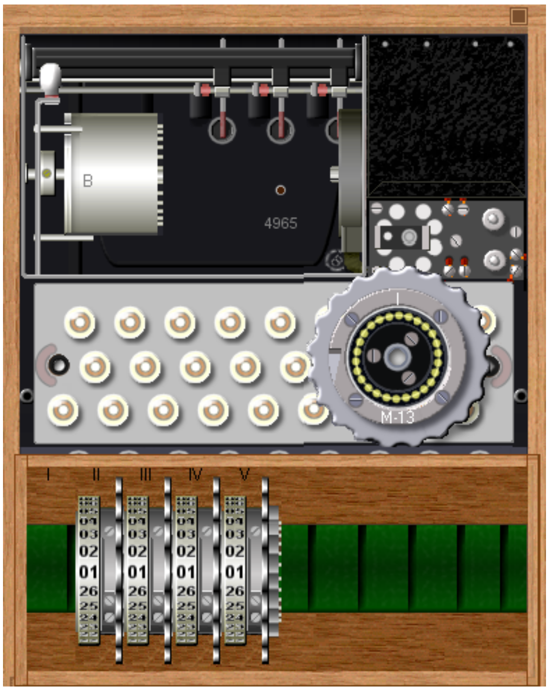
To see how the Enigma was used, let's work through an example. The first step is to consult a codebook, **Screen 6**, for the machine settings of the day. There was a separate page for each month, with a line for each day (Tag in German). Using the sample, we see that for the 30th of this month we are to use rotors I, V, and IV, with offsets of 13, 23, and 02, respectively. The offset is how much the rotor should be rotated with respect to its outer numbered shell. (If you download the Enigma simulator, be sure also to get the Enigma Code Book Tool, which generated this example.



```
------------------------------------------------------------------------------------
|Tag |    Walzenlage    |Ringstellung|       Steckerverbindungen         |   Kenngruppen   |
------------------------------------------------------------------------------------
| 30 | I     V     IV   |  13 23 02  | AZ BS CJ DU EV GO HR IQ KT LN | AHA LUO XXF AMU |
| 29 | I     V     IV   |  14 18 01  | AO BC DH IJ KZ MR PV QU SX WY | JHB FVC PBT XPW |
| 28 | I     IV    V    |  08 01 24  | BR DM EZ FW GI HY JO KT LU NQ | YHS JIQ FKY AVU |
| 27 | III   II    V    |  13 24 04  | AV BQ CO FX HK IP LY NW SZ TU | KKM DXA JHF CII |
```

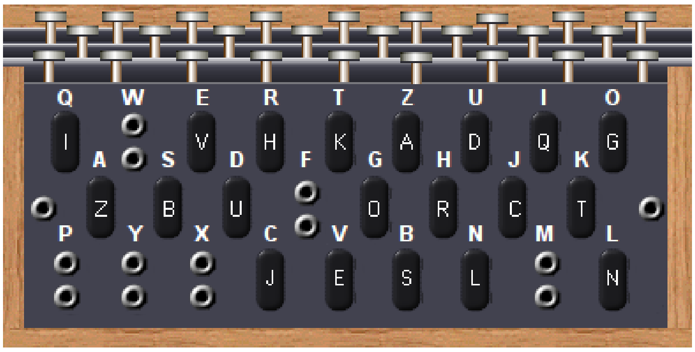
Screen 6. Enigma Codebook Sample

Screen 7 shows a rotor I removed from the case (by right-clicking on it) and offset by 13 (with repeated clicks on the upper part of the rotor). We'll put it back in the case by right-clicking on the empty position and then set rotors V and IV similarly.



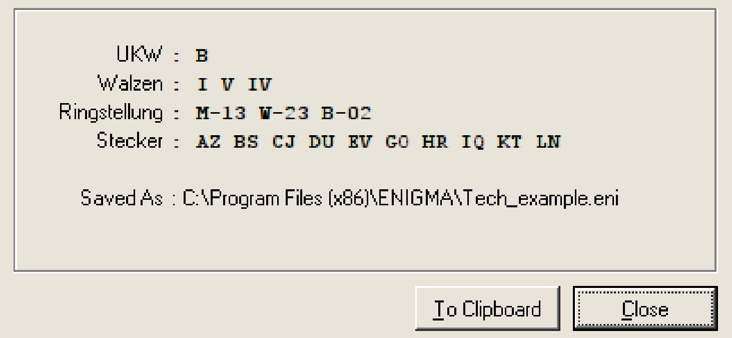
Screen 7. Enigma Being Configured.

The Steckerverbindungen column shows the plugboard connections. It tells us to swap A with Z, B with S, and so on. On the simulator, click on the lower edge of the keyboard to show the panel, **Screen 8**. (Note that the jacks are arranged like a QWERTY keyboard.) On the actual machine, A and Z would be swapped by connecting the A and the Z jacks with a cord; on the simulator, just click first on A then on Z. The screen-shot shows the panel set-up complete. Note that the A-jack pair is covered with a black shape labeled Z and that the Z pair has a shape labeled A. This is true for all 10 swaps called for in the codebook.



Screen 8. Configured Plugboard.

The simulator provides a check of the setup -- shown in **Screen 9**. It shows we've used a B reflector (the cylinder to the left of the rotors and the only one available for this model), the arrangement of the rotors, their offsets, and the plug settings. It also allows us to save the settings for later use.



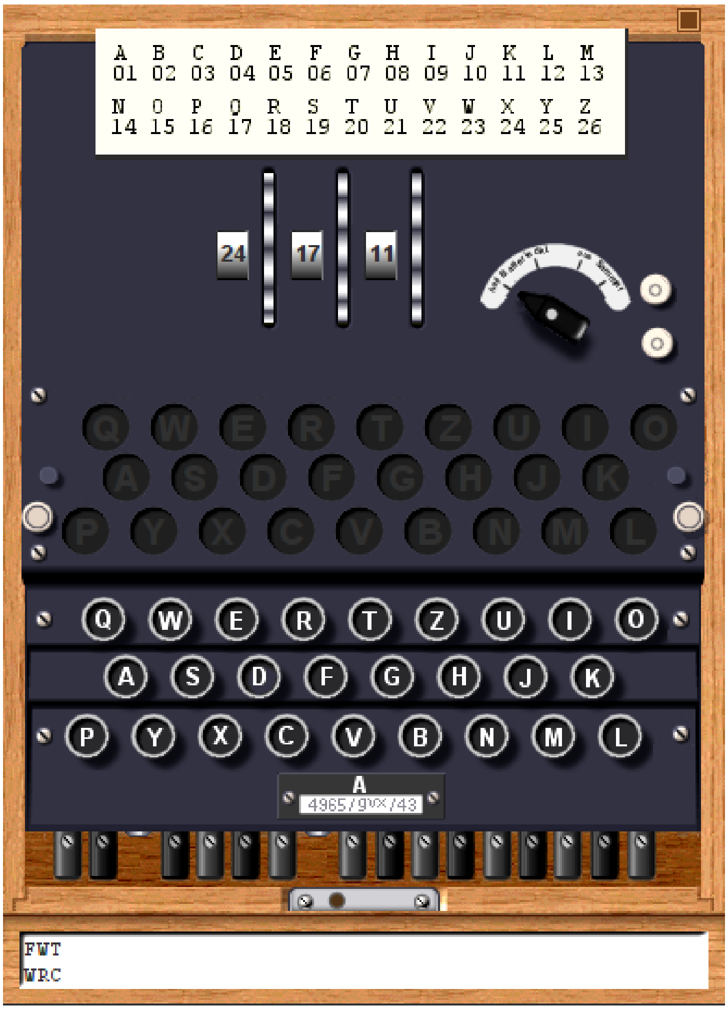
```
         UKW :  B
      Walzen :  I V IV
Ringstellung :  M-13 W-23 B-02
     Stecker :  AZ BS CJ DU EV GO HR IQ KT LN

    Saved As : C:\Program Files (x86)\ENIGMA\Tech_example.eni
```

Screen 9. Enigma Simulator Check Screen

While the settings from the codebook were typically used for one day, each message has its own key. To send a message, the sender first chose two three-letter keys, for example, XPH and FWT and used the first to encode the second. In effect, XPH is the key for a three-letter message. For Enigma, a key is the initial setting of the three rotors. Although the keys are specified as letters, the rotors are labeled by numbers, so there was a table attached to Enigma relating the two. The simulator can display this, as shown in **Screen 10**. The window at the bottom shows the input and output, where we see that FWT has been encoded as WRC. The sender then composes a message header, such as the one shown below.

F7Z DE WN 1340 = 38 = XPH WRC =



A	B	C	D	E	F	G	H	I	J	K	L	M
01	02	03	04	05	06	07	08	09	10	11	12	13
N	O	P	Q	R	S	T	U	V	W	X	Y	Z
14	15	16	17	18	19	20	21	22	23	24	25	26

```
FWT
WRC
```

Screen 10. Enigma Simulator in Use

The sending station is WN, the receiver is F7Z, the time is 1340, and there are 38 characters in the message. Only if the receiving Enigma is set up exactly the same as the transmitting one, will it produce the correct message key, and because only three characters are coded, breaking it is nearly impossible. (Although some lazy operators reused keys, and the British made use of this.) The transmitter now resets the rotors to FWT and encodes the message, in this case, “Preserve wildlife. Pickle a squirrel.” Note that there are no number, punctuation, or space keys. Words will be run together, and we'll use X to end sentences, as did the Germans. If there were digits, we would have to spell them. A complete encrypted message appears below. As is customary the letters shown as five-letter code groups, and they were sent this way via Morse code.

F7Z DE WN 1340 = 49 = XPH WRC =

RTXXF GXBZV GNOVX VFMKK GIXMT SEFLM IVUFW IMG.

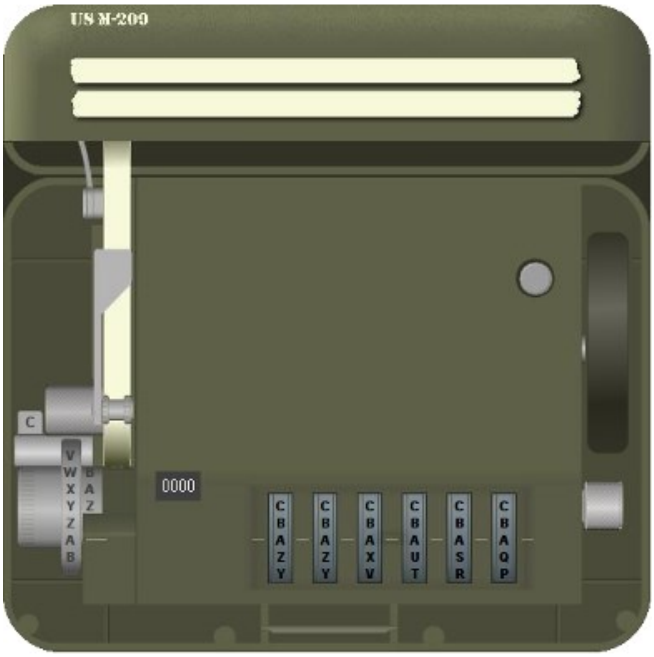
The first code group shows which codebook setting was used. (Note the column “Kenngruppen” in **Screen 6**.) The operator chooses one of the entries for that day and prepends two random letters to make a five-letter code group. Although this group is included in the word count, the receiver doesn't enter it. It sets the rotors to FWT and enters the coded message to produce the result, “PRESERVEWILDLIFEXPICKLEASQUIRRELX”.

Some punctuation could be represented as letter groups, but we'll skip over that in this quick introduction.

Hopefully, this brief discussion has given you some idea of what the Enigma really did. A few experiments with the simulator will make things much clearer, as will a few minutes spent exploring the Website.

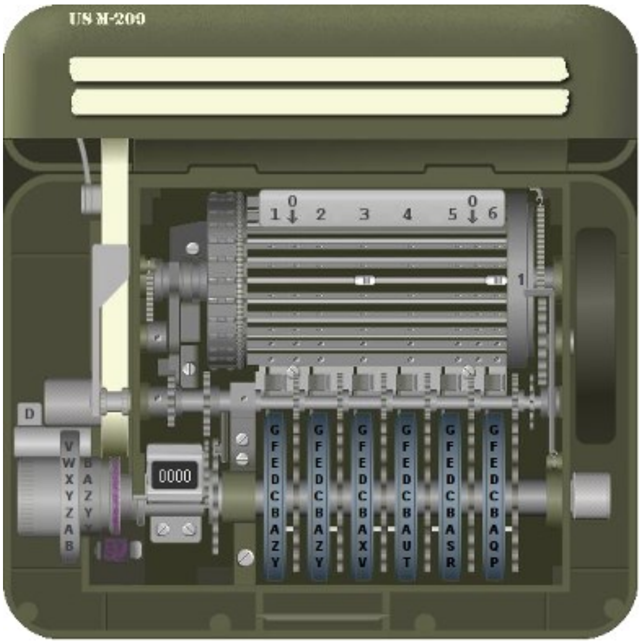
Fortunately for the Allies, the Germans greatly overestimated the strength of their machines. Their primary error was in thinking that its construction was secret, when in fact the allies obtained working Enigma replicas from the Poles in 1939 and captured several during the war. In addition, some operators, especially in the Luftwaffe, were careless or poorly trained, and this allowed the British in particular to deduce codebook settings and changes in the equipment. Finally, many services used the same codebooks, and some, such as trawlers, who were providing weather information in the North Atlantic, were vulnerable to capture.

The U.S. rough equivalent of the Enigma was the m-209, although it was known to be much weaker, as the Germans could decode its messages in about four hours. It was thus used only for tactical communications; strategic information was encrypted using other means. The m-209 was smaller (3 x 5 x 7 inches) than the Enigma, did not need a battery, and printed its output on paper tape, making it usable by only one operator. Besides being cryptographically weak, it was tedious to configure and slow to use. Despite these drawbacks, it was used through the Korean War and well into the 50s. Like the Enigma, you can buy models of the m-209, but a better approach is to experiment with a simulator from the same Website that has the Enigma simulator. **Screen 11** shows the simulator as an operator would see while using it.

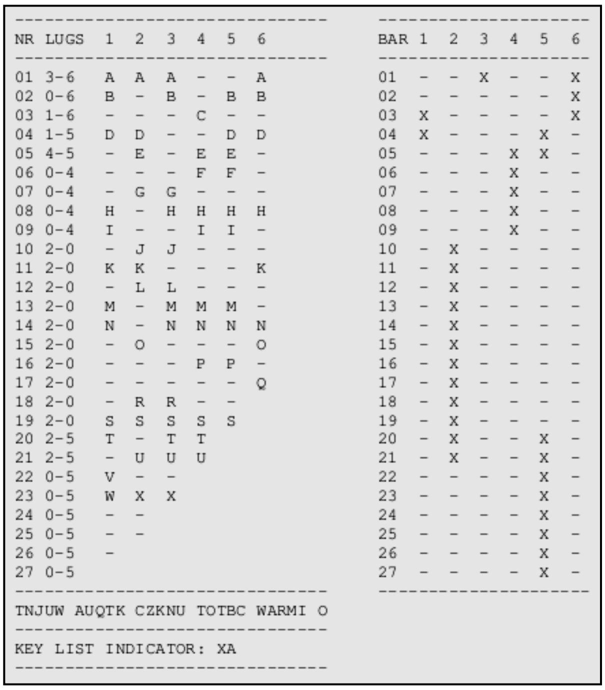


Screen 11. m-209 Crypto Machine

Characters are entered by twisting the knob at lower left until the desired letter is opposite the index (A in this case). Then the black lever on the right is pressed. This advances the six rotors (visible at the bottom) and prints the output letter on paper tape (to the right of the input wheel). The simulator displays two tapes at the top; the upper one is a record of the input characters, and the lower one the output. The current output character is also visible just to the right of the input wheel (Z in this case). There is a character counter (here showing 0000), and a round button to reset the machine. Finally, just above the input wheel is a tab marked C, showing the machine is in encrypt mode. This must be flipped to D for decoding. You can get a hint of how tedious it is to set up the m-209 from its internal view, **Screen 12**.



Screen 12. m-209 Crypto Machine Interior



```
-----------------------------       --------------------
NR LUGS  1  2  3  4  5  6           BAR 1  2  3  4  5  6
-----------------------------       --------------------
01 3-6   A  A  A  -  -  A           01  -  -  X  -  -  X
02 0-6   B  -  B  -  B  B           02  -  -  -  -  -  X
03 1-6   -  -  -  C  -  -           03  X  -  -  -  -  X
04 1-5   D  D  -  -  D  D           04  X  -  -  -  X  -
05 4-5   -  E  -  E  E  -           05  -  -  -  X  X  -
06 0-4   -  -  -  F  F  -           06  -  -  -  X  -  -
07 0-4   -  G  G  -  -  -           07  -  -  -  X  -  -
08 0-4   H  -  H  H  H  H           08  -  -  -  X  -  -
09 0-4   I  -  -  I  I  -           09  -  -  -  X  -  -
10 2-0   -  J  J  -  -  -           10  -  X  -  -  -  -
11 2-0   K  K  -  -  -  K           11  -  X  -  -  -  -
12 2-0   -  L  L  -  -  -           12  -  X  -  -  -  -
13 2-0   M  -  M  M  M  -           13  -  X  -  -  -  -
14 2-0   N  -  N  N  N  N           14  -  X  -  -  -  -
15 2-0   -  O  -  -  -  O           15  -  X  -  -  -  -
16 2-0   -  -  -  P  P  -           16  -  X  -  -  -  -
17 2-0   -  -  -  -  -  Q           17  -  X  -  -  -  -
18 2-0   -  R  R  -  -              18  -  X  -  -  -  -
19 2-0   S  S  S  S  S              19  -  X  -  -  -  -
20 2-5   T  -  T  T                 20  -  X  -  -  X  -
21 2-5   -  U  U  U                 21  -  X  -  -  X  -
22 0-5   V  -  -                    22  -  -  -  -  X  -
23 0-5   W  X  X                    23  -  -  -  -  X  -
24 0-5   -  -                       24  -  -  -  -  X  -
25 0-5   -  -                       25  -  -  -  -  X  -
26 0-5   -                          26  -  -  -  -  X  -
27 0-5                              27  -  -  -  -  X  -
-----------------------------       --------------------
TNJUW AUQTK CZKNU TOTBC WARMI O
-----------------------------
KEY LIST INDICATOR: XA
-----------------------------
```

Screen 13. m-209 Configuration Table

If you look carefully at the rotors, you can see small pins in the A row. Think of a pin to the right as a one; a pin to the left as a zero. The A row is set to 111001. Setting the rotor pins is only part of the configuration. There are also 27 bars, each with two sliders that must be set. Here Bar #1 has been set to 36. **Screen 13** shows a complete setup, usually used for one day.

If a letter appears, the pin in that row should be to the right (or set to 1); a dash indicates that the pin should be to the left (or set to 0). Note that rotor 1 has 26 letters, rotor 2 has 25, rotor 3 has 23, rotor 4 has 21, rotor 5 has 19, and rotor 6 has 17. The LUGS column shows the slider positions on each bar, and the table on the right also shows this, but in a different form. It's a real credit to our soldiers that they were able to perform this intricate configuration under combat conditions. I need several tries to do it at home, in an easy chair, with soft music and a cup of coffee.

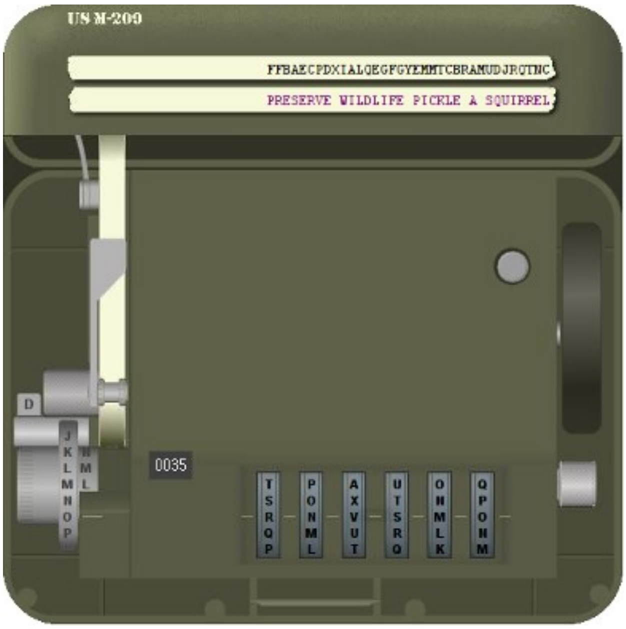
When complete, the operator would set the rotors to AAAAAA and encode 26 As. If correctly set up, the result should be the 26-letter sequence below the tables. Every configuration was assigned an indicator (XA for this one) that was attached to the encrypted messages, and the receivers used this to be sure that had their equipment properly configured.

Because it's so tedious and repetitive, I won't go through a configuration. Download and run the simulator if you want to experience this. I do think it will be helpful to run through encoding and decoding a message. For this, assume the machine is configured as described above. Like his German counterpart, the American soldier had to generate message key, and he used a similar procedure, encrypt the message and include an encrypted version of it with the message. Only if the receiver has an m-209 with the identical configuration can he recover the key to decrypt the message.

Again, we'll send the message, "Preserve wildlife. Pickle a squirrel." We choose CVQIMK, set the rotors to it and encode SSSSSSSSSSSS to produce IDJWE PNWFW XU, which will be our key. Our message will include both CVQIMK and SS, so the receiver can generate the same message key. Why 12 characters when we need only six? Recall that most of the rotors have fewer than 26 characters. In this case, when we go to set the machine, we'll find there is no W on rotor 4, so we'll just skip that letter. As a result, the actual key will be IDJEPN. The Americans replaced every space with a Z, but had no standard for punctuation. (If every sentence ended with "PERIOD," it would aid those trying to break into the messages.) We'll just eliminate the periods in this simple example. Our input becomes PRESERVEZWILDLIFEZPICKLEZAZSQUIRREL, and produces FFBAE CPDXI ALQEG FGYEM MTCBR AMUDJ RQTNC. However, we have to add SS CVQIMK XA, where SS shows the letter we used to produce the key, CVQIMK is the setting to produce the key, and XA is the setup. We'll regroup these 10 letters to SSCVQ IMKXA, because encrypted messages always appear as five-letter code groups. We'll also repeat this important information at the end of the message. Thus, the complete message becomes the following.

SSCVQ IMKXA FFBAE CPDXI ALQEG FGYEM MTCBR AMUDJ RQTNC SSCVQ IMKXA

The receiver uses an identical procedure to develop the message key. That is, he sets his rotors to CVQIMK and encodes SSSSSSSSSSSS to produce the message key. He, too, has to discard a W. He then flips the code/decode tab to D and enters the encrypted message. **Screen 14** shows the result.


FFBAECPDXIALQEGFGYEMMTCBRAMUDJRQTNC

PRESERVE WILDLIFE PICKLE A SQUIRREL

Screen 14. m-209 Simulator in Use

Note that the m-209 has replaced Zs with spaces. They would also be replaced in such words as "zero," but this would be evident from the content.

A little experimenting with these simulators will reward you with a better understanding of the difficulties of communicating securely before the computer age. ♦

CASH FLOW

As of March 31, 2017

Charlotte Semple, Treasurer

Receipts		
Member Dues		1,007.00
Total Gross Receipts	$	1,007.00
Expenses		
Newsletter		232.80
Facilities Rental		60.00
Verizon Wireles		100.16
Total Expenses	$	392.96
Current Total Assets	$	8,335.90

Get 40% off print & 50% off ebooks at oreilly.com.
Code: PCBW
Orders over $29.95 qualify for free shipping in the US.
O'REILLY®

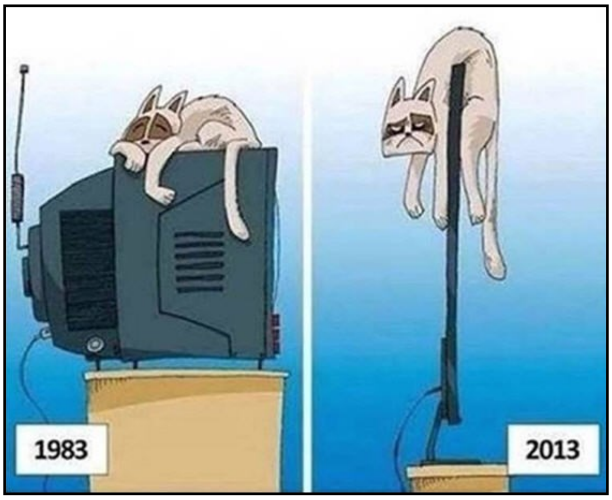
Any works by Leo Notenboom of Ask Leo! that are printed in User Friendly are licensed under a Creative Commons Attribution-NonCommercial - NoDerivatives 4.0 International License. User Groups have permission to use them.

NOTICE

The columns, reviews and other expressions of opinion in *User Friendly* are the opinions of the writers and not necessarily those of the Los Angeles Computer Society. LACS became a California non-profit corporation on July 17, 1991. Its predecessor was the UCLA PC Users Group.

The Editor of *User Friendly* will accept contributions of any suitable length from members. Send articles to Leahjc (at) sbcglobal.net as plain text in an e-mail message or as a Word document. The deadline for submitting articles is the **20th of the month.**

LAUGHING OUT LOUD



COPYRIGHT © 2017

MEMBERSHIP INFORMATION

Annual membership Dues:

Regular	$ 40
Family-Associate	12
Students	18
Six- Month Trial	25
Renewal, Electronic Newsletter	30
Contributing	50
Supporter	75
Benefactor	100

A subscription to *User Friendly* is included with membership.

Associate members are those who live in the same household or work for the same company as a regular member; they do not receive their own subscriptions to *User Friendly*, but may read it on the LACS website.

Students must prove full-time status.

In addition to monthly general meetings, members enjoy these special benefits:

-- **Monthly Newsletter** *User Friendly*. We publish your article submissions or free classified ads to buy or sell your computer items.

-- **Get FREE help** by phone from knowledgeable members who are Quick Consultants listed in *User Friendly.*

-- **Get help by e-mail** by using our LACSLIST Yahoo Group Mail List. Send your questions by e-mail to lacslist (at) yahoogroups.com.

-- **Receive important news** and announcements via LACS's Yahoo Group e-mail lists.

-- Occasional **product discounts**, special offers, etc.

-- **Special Interest Groups** (SIGs) on various selected topics to help to you learn, to share interests, and to solve your computer problems.

-- **Information** on training, swap meets and trade shows.

-- Occasional **Free software and computer books**, if you review them for *User Friendly*.

-- **Rewards** for recruiting; LACS will extend your membership for three months for each new regular member you recruit.

-- **Annual Holiday Party**

-- **Field trips**

-- **Social Interacting** with others who have like interests in computers and technology.

-- **Computer Conferences**

-- **Virtual Technology Conferences**

LACS Membership/Renewal Application

Please bring your dues and this form to a meeting or mail them to:

Los Angeles Computer Society, **11664 NATIONAL BLVD. #343, LOS ANGELES CA 90064-3802**

Please PRINT Clearly [ ] New [ ] Renewal

[ ] Regular - $40.00 [ ] Associate - $12.00 [ ] Student - $18.00

[ ] Renewal with electronic, no paper, newsletter - $30.00 [ ] 6 month trial membership - $25.00

[ ] Contributor - $50.00 [ ] Supporter- $75.00 [ ] Benefactor - $100.00 [ ] Other $_______

Name: First Last

Name of Associate: First Last

Address:

City, State, Zip + 4

Day Phone: Evening Phone:

[ ]Do not publish in roster

e-mail Address:

Who invited you to join LACS?

Revised: January, 2017 ljc

First Class Mail

Editor………………. Leah Clark
Electronic Editor ..Karl Springer
Indexer ………….. Leah Clark
Podcast Transcriber: Irv Hershman
Photographer…….Vacant
Proof Readers ……Lance Hegamin,
Jim McKnight, Stephanie Nordlinger and
Charlotte Semple

FREE!
Earn 3 months of free
membership for every new regular
member you bring in.

User Friendly is published by the Los Angeles Computer Society.
11664 NATIONAL BLVD, #343 LOS ANGELES CA 90064-3802

Voice-mail: 310– 398-0366. Web site: http://www.lacspc.org

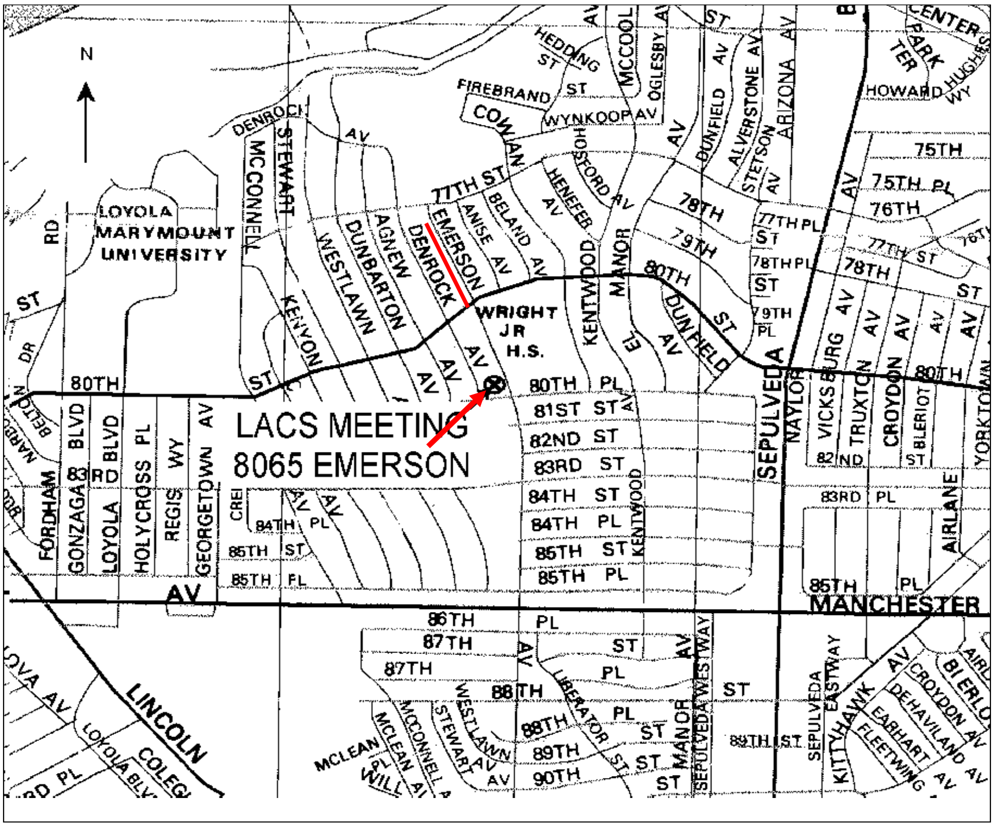
Directions to General Meeting

Westchester United Methodist
Church Fellowship Hall
8065 Emerson Ave.
Los Angeles CA 90045

***From the North*:**

Take Sepulveda Blvd. SOUTH to W. 80th St. Turn WEST/right. Go about one mile to Emerson Ave. Turn SOUTH/left. Go one long block to W. 80th Place. It is on the Northwest corner of Emerson and W. 80th Place.

From the South, East or West: Take Manchester Ave. to Emerson Ave. Turn NORTH. Go about eight blocks to W. 80th Place. Fellowship Hall is on the Northwest corner of Emerson and W. 80th Place. There is street parking and a small parking lot West of the church.


N
LACS MEETING
8065 EMERSON
LOYOLA MARYMOUNT UNIVERSITY
WRIGHT JR H.S.
80TH ST
80TH PL
81ST ST
82ND ST
83RD ST
84TH ST
84TH PL
85TH ST
85TH PL
86TH PL
87TH ST
88TH ST
89TH ST
90TH ST
77TH ST
78TH
79TH
75TH
76TH
MANCHESTER AV
SEPULVEDA
LINCOLN
EMERSON
DENROCK
AGNEW
DUNBARTON
WESTLAWN
KENYON
STEWART
MCCONNELL
ANISE AV
BELAND AV
KENTWOOD
MANOR
DUNFIELD
FIREBRAND ST
WYNKOOP AV
COWAN
HEDDING ST
MCCOOL
OGLESBY AV
ALVERSTONE AV
ARIZONA AV
NAYLOR
VICKSBURG
TRUXTON
CROYDON
BLERIOT
AIRLANE
YORKTOWN
FORDHAM
GONZAGA BLVD
LOYOLA BLVD
HOLYCROSS PL
REGIS WY
GEORGETOWN AV
HOWARD
KITTYHAWK
EASTWAY
WESTWAY
DEHAVILAND AV
EARHART
FLEETWING