



THE COMPUTER CONNECTION

SAUK COMPUTER USER GROUP

FEBRUARY 2022

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January
MEETING MINUTES
DATE 1/8/2022

Open Meeting:

Neal opened meeting with greeting of Zoom and in-house members.

Question and answers:

-Club has purchased our own Zoom license, which can also be used by members to host their own meeting by getting access to club account from board member.

-Terry would like to continue teaching classes on Zoom. He has had several requests so far.

-New WCSC director, Susie Welch, seems to be very acceptable to our club and additional activities at center.

-For getting rid of junk mail, right click on item and mark as spam or as good mail. Also, you can setup so that anything not received from one of your contacts is sent to junk mail. You need to occasionally check to make sure no good messages are being deleted.

-Problem with defender and not allowing update was corrected by clean installation of operating system. Another error code could not be corrected in same manner; should try using CCleaner to run computer scan.

-To open memory space on your phone, you can log into the cloud and delete any unneeded items,

or purchase additional cloud space. You can also backup your phone to your computer and then delete those items off your phone.

-We viewed tour pictures of our visit to MIT when the old analog Heathkit computer was donated to them.

Treasurer's report:

Was presented by Joe, and reviewed and approved by members.

(Continued on Page 2)

Old business: - Need to pay club membership dues for 2022. Special offer to additionally join WCSC no longer applies. -Detective meeting program presentation was cancelled for

Club Information

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An International
Association of Technology
& Computer User Groups

Drawing

February drawing will include a chance at 4-\$25 gift cards from local restaurants plus some misc.

January because of his scheduling issues. Program is planned for February meeting.

New business: -Members attending meeting on Zoom will be able to participate in drawings. More information to follow.

-We plan to continue to offer option of attending monthly meetings on Zoom.

-Neal will continue to host Friday night Zoom meeting.

-Fall cruise trip for October was reviewed.

-Club elections were held. Results were: Neal Shipley- President, Joe Schmitt- VP, Tom/Nancy Rich- Secretary, Joe Fornero- Treasurer, Travel - Glenda MacLennan, Member rep to WCSC- Terry/ Tom, Webmaster/voting board member- Howard Paysen, Board members at large- Gloria Schneider, Cheryl Johnson, Art Bendick, Terry MacLennan & Lorraine Armstrong.

Adjournment: Motion made and seconded.

Program: -Viewed what various webcams were available online around the area and further for viewing of wildlife, trains, weather,

etc.

-Viewed YouTube video on how to use Windows clipboard and how it can retain up to 25 items.

-Viewed video on how to record on screen activity while using MS PowerPoint.

Next month's program:- Rock Falls Detective Tanner Wilhelm program on security and scams.

January Board Minutes
01/12/2022

Meeting was called to order by: Neal

Attending the meeting were: Neal Shipley, Joe Fornero, Joe Schmitt, Lorraine Armstrong, Gloria & George Schneider Tom & Nancy Rich & Howard Paysen

Treasurer's report was presented by: Joe F.

Discussion Highlights:

- 1) The first Hybrid meeting with Zoom worked well. SCUG will continue future monthly meetings this way.
- 2) The SCUG cabinet was picked up by Rueben Arnold.
- 3) Some HP printers will be available to club members.
- 4) Ideas for and/or presenters are needed for future club meetings.
- 5) There is a need to research better software for the club website.

Future Programs:

Detective Tanner Wilhelm to give program on security & scams.

Adjournment

Complete Robocall Deterrence Part 3

By John Krout

(Approx. 1977 words)

COMPLETE ROBOCALL DETERRENCE

A two-step approach: prevent the ring and convince the robocaller that your line is disconnected.

Part 3 of a 3-part article series

By John Krout, Presenter & Newsletter Contributor

Potomac Area Technology and Computer Society

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INTRODUCTION

In Part 1 of this series, you learned how to configure your smartphone so that only your Contacts will ring your phone, a Whitelist strategy.

In Part 2, you learned robocall systems respond to the Special Information Tones (SIT) that begin certain phone network messages, such as the number has been disconnected, by removing the dialed number from the robocall systems internals list of known valid numbers. In addition, you learned how to obtain a recording of SIT, how to record your voice, and how to combine SIT and your voice recording into a complete voicemail greeting using Audacity.

In this conclusion, you will learn how to record that complete greeting as your custom voicemail greeting, using your computer to play the combined greeting while your phone "listens." The key to this puzzle is that the smartphone and the recording system for voicemail greetings expect greeting sounds to come in through the smartphone's microphone.

There are at least three ways to feed audio from your computer into the smartphone microphone.

THE SIMPLE APPROACH

The low-tech, low fidelity way is to use your computer to "speak" into the phone.

The steps are simple: prepare to play the combined greeting on your computer speakers. Then, on your phone, work through the steps to begin recording your customized voicemail greeting. Hold the phone up to the computer speaker, tap the final Record button on the phone, and immediately start the audio playback on the computer. When the combined greeting playback is done, tap the Stop Recording button on the phone.

There are problems with this simple approach. First, this approach also records environmental sounds such as air conditioning or heating, other people, or passing vehicles. Second, the quality of the recording is limited by the quality of the speakers. The weakest link in any audio system is the speakers. Third, we need to make sure the high frequencies of the SIT are faithfully recorded so that robocaller systems, when they reach voicemail, will have no doubt that robocallers have heard and recognized SIT at the start of your greeting.

THE WI-FI APPROACH

Complete Robocall Deterrence Part 3 (cont.)

It is possible to connect and transfer audio from my computer to the microphone device of my Android phone. Using this approach, the phone can record the incoming audio from the computer, just as if the audio was being delivered through the microphone. However, since speakers are not involved, the audio received is high quality. Simple improvements can further increase audio quality.

To make this happen, I found and tested an Android app called **SoundWire**, and its corresponding personal computer application called **SoundWire server**. Both are freely available. There are versions of SoundWire Server available for Windows, Linux, and Raspberry Pi. The app is available on the Google Play Store, and SoundWire Server can be obtained from this URL: <http://georgielabs.net>.

The basic idea is that the SoundWire Server captures audio being played on your computer and sends captured audio via your Local Area Network Wi-Fi to the SoundWire app on your phone. The SoundWire app on your phone then injects the incoming audio into your smartphone's microphone device and plays it on your phone's internal speakers.

To accomplish the SoundWire connection of the app and the server, you must not run a Virtual Private Network (VPN) client on your computer or phone. Using a VPN client means the two cannot be connected via your WiFi.

STEP 1. Start the SoundWire Server application on your computer. Initially, SoundWire Server will display a window like that shown in **Illustration 1**. Note the status **Disconnected**, which appears in red and is circled. That status is normal at startup.

STEP 2. On your computer, start the audio playback application, which will play your combined audio greeting. Then, load the combined audio greeting in that application.

STEP 3. On your Android smartphone, start the SoundWire app. It will look like the app shown in **Illustration 2**. Note the big wire-filled button which dominates the app screen.

STEP 4. This step connects the SoundWire app and the SoundWire server application across your Wi-Fi.

On your smartphone, tap and hold the wire-filled button in the SoundWire app for about 1/3rd second. The SoundWire Server application status should change to Connected on the computer, as shown in **Illustration 3**.

The SoundWire connection method described above is known as the **automatic method**. If it does not work for you, try the **manual method**, as follows.



Note the IP address displayed by the SoundWire server, in the field Server Address, directly above the Status field. You can see that IP address in Illustration 1.

Type that IP address into the SoundWire app field named Server. Then re-try the long tap on the big button in the app.

When you connect SoundWire for the first time, I suggest you use a smartphone voice recording app to test audio transfer and recording quality on the phone. There is an excellent variety of free voice recording apps available on the Google Play Store for this testing purpose.

THE TEST

After establishing the SoundWire connection, as shown above, start the voice recording app on your smartphone, tap the Record button in that app, and start your audio playback application on your computer. For example, the phone on my WiFi received audio about 1/4 second after the computer played it.

Here are more steps to improve audio quality when using SoundWire. While using SoundWire, the Android phone physical microphone still works. However, it will pick up audio from your computer speakers, which means the voice recorder app will pick up an echo, and it will pick up ambient environmental noises. I strongly suggest blocking the smartphone microphone with duct tape, electrical tape, or the like to prevent that. Also, while doing the test, I strongly recommend listening to the computer audio on earbuds or headphones instead of speakers.

When the computer audio finishes playing, tap the Stop button of the voice recorder app on your phone. Playback the voice recorder recording to make it recognizable, fairly loud, and free of ambient noises and echoes.

USING THE COMBINED GREETING ON ANDROID

Since each carrier and smartphone have different ways of starting and ending an effort to record the customized voice greeting, I must leave those details for you to figure out.

On Verizon Wireless, my Samsung Galaxy S10 phone, running Android 10 (and later 11), the voicemail greeting recording is found in the Voicemail app Settings. I strongly suggest practicing the recording start steps two or three times to become familiar with the somewhat complex sequence of steps before you attempt the actual recording.

Once you figure it out, the recording process is basically the same as the test process above. However, instead of using the voice recorder app, you use the Voicemail app or whatever other app your carrier and smartphone provide for recording a customized voicemail greeting.

ANALOG AUDIO CONNECTION TO IPHONE

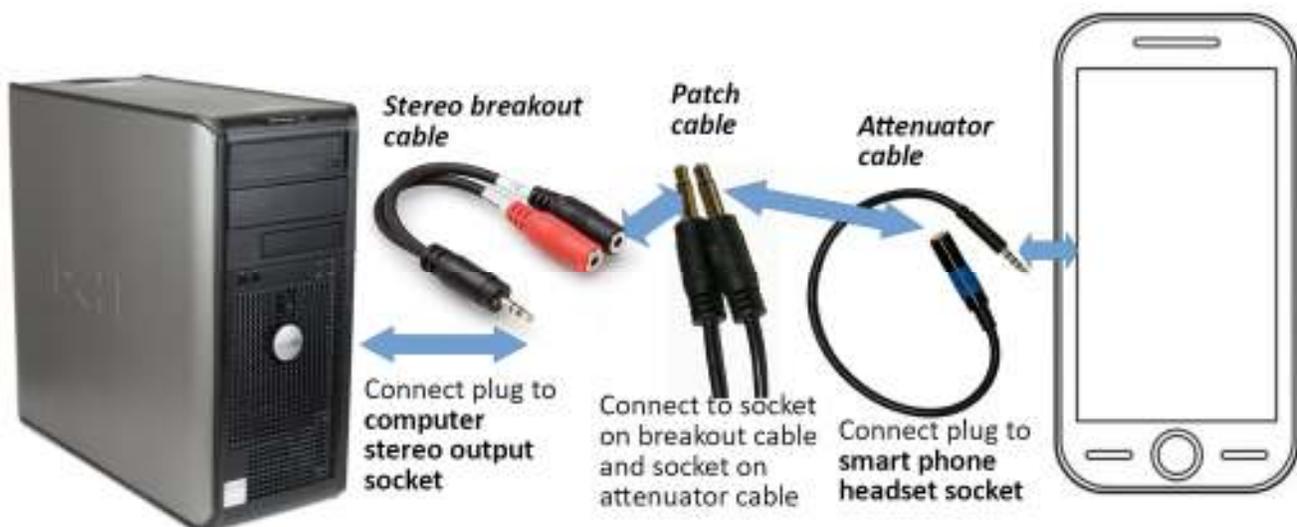
I could not find an iPhone equivalent for SoundWire. So, for iPhones, the approach is to feed analog audio coming from the computer speaker/headphone socket into the headset socket of the iPhone.

Such a technique faces some challenges. First, the audio level coming out from a headphone socket is line level; the audio level expected on the headset socket is mic level, roughly 1/1,000th of the line level voltage.

We need a method to reduce that audio signal voltage. Cables that accomplish this signal voltage reduction are called **attenuator cables**. Second, the iPhone headset socket includes a microphone input connection and two headphone output connections. We need a way to connect the analog audio from the computer specifically to the socket's microphone input connection.

These days, a single cable can resolve both issues. For example, some **attenuator cables** provide a monophonic 1/8th inch diameter phono socket and a 1/8th inch diameter plug for connection to the iPhone headset socket.

The third challenge was more vexing. Even when the Windows 10 audio volume was fully turned up, my audio feed volume to my phone's headset socket was **so low** that Verizon Wireless refused to use my custom voicemail greeting. Instead, Verizon Wireless switched automatically to the default greeting, in which it announces my phone number. Finally, I added a **mixer** in the cable path to amplify the audio signal a bit. I expect few readers will own a mixer, and mixers can be expensive. An alternative way to amplify the signal is to use an analog audio device that may already be in your hands: a **stereo receiver**. But the cable cost is still



substantial. Since I am an audio recording enthusiast, I had a mixer and cables on hand, but most people will have to buy them.

For my initial attempt, during which I found the volume was too low, I used an inexpensive set of cables, as shown in **Illustration 4**. Overall, this cable set costs only about \$35 on Amazon. The most expensive is the Attenuator cable, at about \$22. Please note that the patch cable is monophonic since the microphone input on the phone headset socket is monophonic.

Recently, my son found audio software for his Windows 10 laptop that drives the speaker output to greater audio volume than is possible using the normal Windows 10 audio controls. The software, I thought, could eliminate the sound amplification hardware requirement. That would make the original, least expensive cable set shown in Illustration 4 work.

I found the software my son uses, **Sound Booster** by Letasoft, which works for 14 days as a free trial, though the free trial version drops out the volume boost for 5 seconds once every 2 minutes. Also, Sound Booster is available for Windows only. So, I found some alternatives to Sound Booster. I cannot test all the other options, and I do not have a Mac for testing in any event. Here is a table listing many of the alternatives.

Complete Robocall Deterrence Part 3 (cont.)

Software title	Download from	Works on Mac	Works on Win10	license
Boom 2	https://www.globaldelight.com/	yes	yes	Single payment \$14.99
Sound Booster Lite	https://soundbooster.froyosoft.com/soundbooster.php	yes	no	Free
DeskFX	https://www.nchsoftware.com/deskfx/index.html	yes	yes	Free for personal use

Once you establish a setup like this, I suggest you do some tests with the **Voice Memos app** of the iPhone to find an appropriate volume knob setting on the stereo receiver. You can find that app in the iPhone **Utilities** folder. Fortunately, there is no need to block the physical microphone on the iPhone since connecting audio into the microphone connection in the headset socket disables the iPhone physical microphone.

Before you record your combined greeting as a custom voicemail greeting, I suggest you practice the steps required to start that greeting recording process a few times so the steps become familiar.

THE BOTTOM LINE

If you feel plagued with robocalls and their voicemails, as I did, the results will justify the work and the dollars. As I mentioned in Part 2, while using such a combined greeting on my smartphone, my rate of incoming robocalls has fallen from 25 per week to 2 per week, and my rate of robocall voicemails has fallen from 10 per week to **zero per week**, in about eight months.

Hello All

Neal here. Just wanted to update everyone for my Friday night Zoom meetings.

We will be available for Jan 28 and Feb 4 & 11 at 7:30 pm as usual.

Join Zoom Meeting

<https://us02web.zoom.us/j/3975898877?pwd=RjF5ZTM3R25qNXhHRjdWRVAzQ1M2ZzO9>

Meeting ID: 397 589 8877

Passcode: 4ukxAh

Short History of the Smartphone

By Kurt Jefferson

Back when I was a young child, I kept a dime in my pocket just in case. Of course, I hoped I never had to use it, but I was prepared. That dime was meant for an occasion where I needed to phone someone for help...in an emergency.

I had been taught how to use the phone, turn the dial, and place a dime into the slot in a payphone. Back then, phone booths were all over the place. Fast forward several decades, and you'd be hard-pressed to find a real-life phone booth.

Public phones are still available in airports, some shopping malls, and sports arenas. But, for the most part, phone booths belong to an earlier era. They've been replaced by the smartphone—iPhones and Android models making up the bulk of smartphones in America.

The Oxford Dictionary describes a smartphone as “a mobile phone that performs many of the functions of a computer, typically having a touchscreen interface, Internet access, and an operating system capable of running “downloaded apps.”

While Apple and Samsung are responsible for getting modern smartphones into the hands of most Americans, IBM also played a major role in the development of the smartphone.

ThoughtCo.com reports, “IBM had conceived of the idea for a computer-style phone as early as the 1970s, but it wasn't until 1992 that the company unveiled a prototype at the COMDEX computer and technology trade show in Las Vegas. Besides placing and receiving calls, the Simon prototype could also send facsimiles, emails, and cellular pages. It even had a nifty touchscreen for dialing numbers. Extra features included apps for a calendar, address book, calculator, scheduler, and notepad. IBM also demonstrated that the phone was capable of displaying maps, stocks, news, and other third-party applications, with certain modifications.”

Sadly, IBM's Simon was not going to be a major success. As ThoughtCo.com writes, “Tragically, the Simon ended up in the heap pile of being too ahead of its time.”

One of the major reasons for Simon's failure? Price. It cost \$1,100 in the 1990s. As a result, far too few fans bought it. ThoughtCo.com reports that Simon's distributor, BellSouth Cellular, would eventually cut the price to \$599 with a two-year contract. Even after that, only around 50,000 were sold.

After IBM's Simon came noteworthy products, including the popular Palm Pilot made by the California-based Palm Inc. and Apple's Newton, and don't forget Handspring, a personal digital assistant (PDA) made by the folks who founded Palm. They founded Handspring after becoming unhappy with the direction of Palm Inc. after 3Com took over the company.

Meanwhile, Nokia's 9000 Communicator and Ericsson's R380 also made major advances toward the smartphones we use today.

And who could forget the leap forward made by Canada's RIM (Research In Motion) with its BlackBerry brand of smartphones? Wikipedia writes, "BlackBerry was one of the most prominent smartphone brands globally, specializing in secure communications and mobile productivity, and well known for keyboards on most of its devices. At its peak in September 2013, there were 85-million BlackBerry subscribers worldwide. After that, however, BlackBerry lost its dominant position in the market due to the success of the Android and iOS platforms; its numbers had fallen to 23-million in March 2016."

But it was in 2007 when Apple's Steve Jobs took to the stage to introduce a revolutionary new product called the iPhone "that set an entirely new paradigm for computer-based phones," writes ThoughtCo.com. It adds, "The look, interface, and core functionality of nearly every smartphone to come along since is, in some form or another, derived from the original iPhone's innovative touchscreen-centric design."

The same year Apple introduced its iPhone, Android Authority reports, "Google was still working on Android in secret, but in November of that year, the company slowly started to reveal its plans to compete with Apple and other mobile platforms." In October of 2008, the first Android phone went on sale in the U.S. It was dubbed the "T-Mobile G1" (also called the HTC Dream outside the U.S.)

As iOS has improved and added features over time, so did Android. Its first codename was Cupcake in 2009. Later versions of the Android operating system were Donut, Eclair, Froyo, Gingerbread, Honeycomb, Ice Cream Sandwich, Jelly Bean, KitKat, Lollipop, Marshmallow, Nougat, Oreo, Pie, and Android Q, officially known as Android 10. Versions 11 and 12 followed.

I no longer carry a dime in my pocket. Instead, it's been replaced by an iPhone SE – Apple's least expensive smartphone.

Yet, I still marvel at how far technology has advanced since that ten-cent piece was my security blanket resting in my pocket. Today's youngsters no longer carry dimes. Those coins are replaced by shiny Galaxy smartphones and iPhone 11, 12, and SEs in their pockets. We've come to a remarkable distance in the development of smartphones since the era when phone booths stood on street corners in most American towns and cities, and operators stood at the ready to assist.

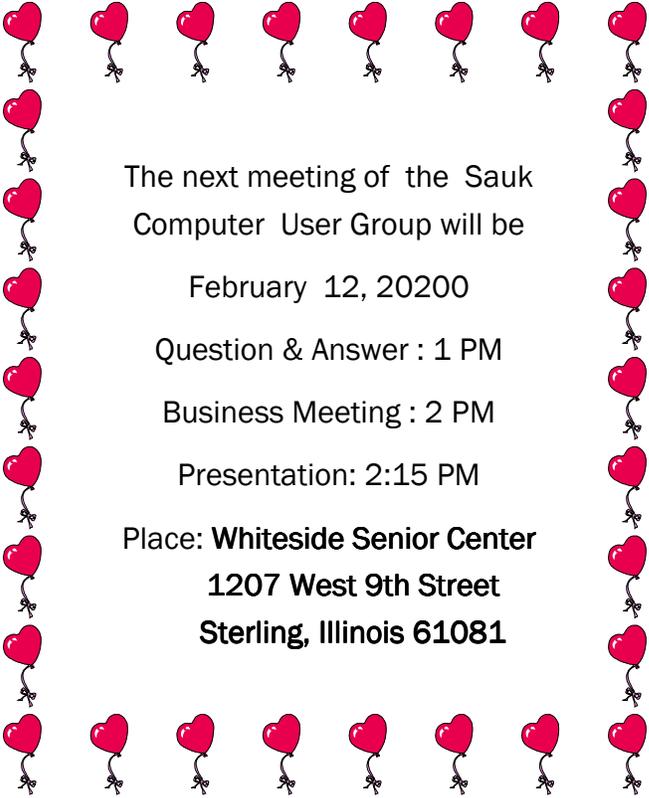


*By Kurt Jefferson, Editor, Central Kentucky Computer Society
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There will be a Question & Answer. Bring any questions you have about your computer or problems you may be having.

It will be conducted by:

Neal Shipley



The next meeting of the Sauk
Computer User Group will be

February 12, 2020

Question & Answer : 1 PM

Business Meeting : 2 PM

Presentation: 2:15 PM

Place: **Whiteside Senior Center**

1207 West 9th Street

Sterling, Illinois 61081

**FEBRUARY PRESENTATION WILL BE:
SECURITY & SCAMS BY DETECTIVE TANNER
WILHELM FROM STERLING POLICE DEPT.**