SIP and VoIP Adventures

Finding And Signing Up With A VoIP Service So I Can Use A Program That Pretends To Be A Dial-Up Modem Over A SIP Connection To Talk To Another Computer.

Why?

What brought that on? UUCP.

Not UUCP again, sigh ...

Sorry.

I'm fascinated with UUCP because it was the Internet before there was the Internet - and it worked over dial-up lines. For any possibility of having a bunch of machines to talk to each other in some way without 100% dependence on TCP/IP, UUCP and its typical way of being setup seems like the way to go.

Previously, I wrote [UUCP in 2022](#) - a how-to guide on what UUCP is, and how to get it working over SSH, and serial ports if one really wanted to.

Distraction: UUCP is cool for other reasons, of course, for example:

- UUCP's call model allows things to work completely asynchronously and both sides have a lot of control when communication happens. I love that calls result in exchanges between both initiator and receiver.

- UUCP's send and receive methods utilizes existing UNIX user and system infrastructure in a way that initiating and receiving transactions can operate very differently from each other.

And UUCP isn't all roses and sunshine:

- It's not real time by any stretch of the imagination

- Message sending is implemented through asking the other side to execute a command - UUCP would be better with request types that explicitly support messages, in my opinion.

- Dealing with UUCP messaging means dealing with UNIX email MDAs and MTAs, which isn't *too* bad with postfix these days but I pity anyone who was working with this stuff in previous decades when it was actually relevant.

Anyway, I would love to play with UUCP over dial-up.

I actually would just like to play with a dial-up modem at all, with or without UUCP, to be honest.

I have a couple of modems, but this is 2022 and phone lines are hanging on by a thread.

No place I've lived in since 2005 has had landline service. And I don't even know who to call to try to get it for my current residence. It may not even be possible. A friend's house of mine doesn't even have phone wiring to the house--it's fiber.

But phone lines are still out there - defintely for businesses. Think fax-loving industries such as hospitals and other lovers of ~~cheapness~~ legacy tech.

Then I ran into this from a company called Aon's Cyber Labs:
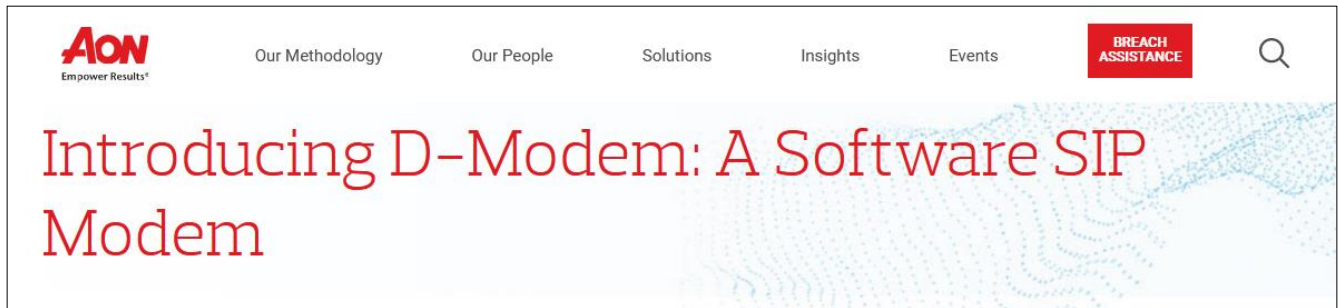
Do my eyes deceive me? Is that ...

... a software SIP modem?

Hell yeah.

I might not be able to get a phone line in 2022 for my residence, but I can get a SIP account.

I Was Previously Fascinated With Dial-Up Stuff (And It Was Out Of Date Then, Too)

I think I first had interest in this type of thing around 2010 - at that time I had a Comcast service bundle that included a landline phone - available through a phone jack on their provided deivce: an Arris TM602.

I also think I was looking into things like Bellard's linmodem - so I knew there were those out there trying to make Linux able to do all the things a real dial-up modem does.

But I actually scoured E-bay for a real external 56k voice modem, and played around with things such as VOCP and something that escapes me that enabled me to send a fax.

I'm glad those sites are still up, but the copyright dates on them show their age. Getting kinda dusty.

I didn't keep that phone line for very long. Years later we dropped the cable TV as well.

Preparing D-Modem

So I pretty much immediately went to Aon's [github](#), downloaded and followed the easy build instructions on my Debian Linux box.

There is a catch - receiving calls is not supported. That's just fine. (If I really was going to get UUCP working over this, it wouldn't matter anyway.)

Noteworthy there is the snippet of communication with NIST's atomic clock:

```
Finally, dial the number of the target system. Below shows a connection to the NIST atomic clock:

atd303-494-4774
CONNECT 9600
National Institute of Standards and Technology
Telephone Time Service, Generator 1b
Enter the question mark character for HELP
                      D  L
 MJD  YR MO DA HH MM SS ST S UT1 msADV         <OTM>
59515 21-10-28 21:40:18 11 0 -.1 045.0 UTC(NIST) *
59515 21-10-28 21:40:19 11 0 -.1 045.0 UTC(NIST) *
59515 21-10-28 21:40:20 11 0 -.1 045.0 UTC(NIST) *
59515 21-10-28 21:40:21 11 0 -.1 045.0 UTC(NIST) *
59515 21-10-28 21:40:22 11 0 -.1 045.0 UTC(NIST) *
59515 21-10-28 21:40:23 11 0 -.1 045.0 UTC(NIST) *
```

Minutes later I had an executable `slmodem` and `d-modem` just waiting for... working SIP credentials.

I won't lie, I did look for and try out some free SIP providers, but didn't have much luck. I suspect free SIPs work only if the two parties are Internet-accessible. If you want to reach something on the PSTN then I'm betting payment will always be involved.

And now you know what this text is really about - my journey in selecting a SIP provider and what I had to do to get it functional with Aon's D-Modem.

Going To The Google (site:reddit)

So I did the next logical thing: I googled things like "SIP provider" and "VoIP provider" and various other combinations.

Initial searches seemed to give me results for SIP trunking providers - and I know I didn't want. Trunking involves PBXs and phones that have local extensions that may want to dial out and ..someday, but not right now.

Further searches continued to lead me mostly toward purchasing SIP trunking or business-level service. Not what I wanted, all I wanted was one little SIP account and number for personal use. Certainly that's out there, right?
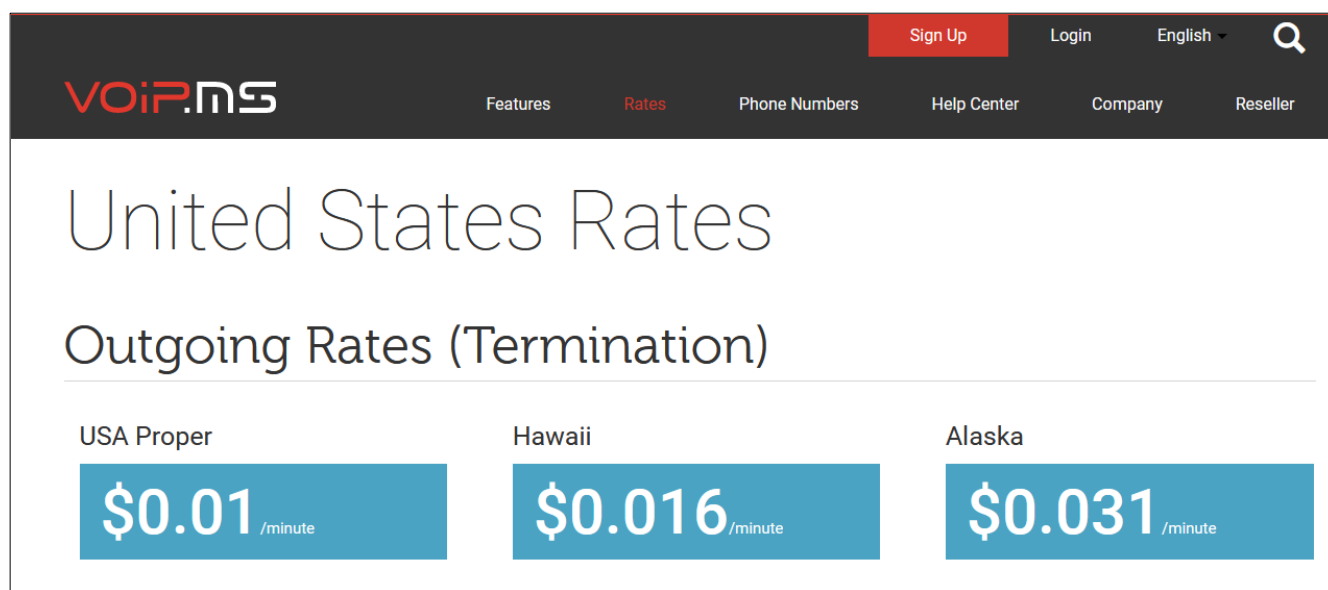
After I a while, I put "site:reddit.com home SIP VoIP provider" into Google and got this [reddit](#) thread (from r/homelab).

The first recommendation I saw was voip.ms, so I decided to take a closer look at that.
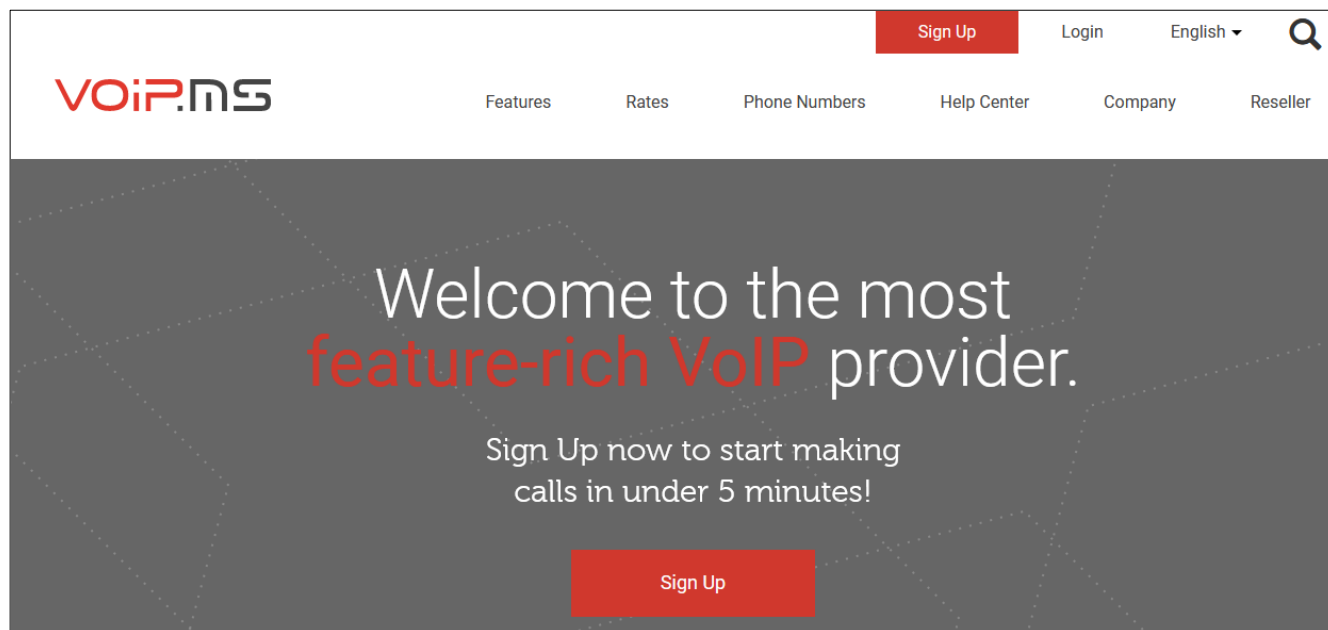
Hmm ... seems legit I guess.

Being curious about the rates, I click on that.

1 cent a minute to the continental U.S.? I can afford that. Let's sign up!

Then I'm presented with an account - with no funds. Let's Add Funds.

These options present themselves:

Well, for my purposes, PayPal is perfect.

I went ahead and gave VoIP.ms $15.

That's not a big financial commitment for something I don't really know how to use and want to play with.

Starting The Journey

clicking Sign Up, I ended up being asked for expected and usual personal information.

I put 'Residential' for the type of account and filled this out.

It wanted my name, address and a working email address, which I provided.