

## *What is ClockSynch?*

Here's a little problem that bothered me, maybe it bothers you?

1. I have two Macs on my desk, both have clock displays thanks to the public domain MenuClock INIT.
2. The two clocks never agree!
3. There's AppleTalk wire connecting the two computers, so...

Let's write a program that synchronizes the two clocks by sending messages over AppleTalk.

Here it is. It's called ClockSynch.

## *Using ClockSynch*

Run a copy of ClockSynch on every machine that you want to synchronize. Pick one machine, sit down in front of it.

Select the Alarm Clock desk accessory from the `Apple menu` and set the correct time and date. Close the Alarm Clock.

Now select the Set All Clocks command from the ClockSynch menu. Notice that the cursor turns into a rolling beachball. When it changes back to an arrow all the clocks have been set. Now return to all the computers and quit from ClockSynch.

There is a best time to run ClockSynch -- when there's little or no network traffic to slow down the clock “messages”. There are no fancy algorithms at work here -- the main machine (the one you issue the Set All Clocks command on) just reads its clock and sends the value to all the other machines. They set their clock to that time.

The main machine is a little ahead of all the others -- by the amount of time it took to send the message over the network. The slower the network the less perfect SetClock is. So set your clocks at a time when the network is fast.

## *Caveats*

I have only been able to test this program on my two-Mac network. Does it work on a more-than-two-Mac network? It's supposed to. But that has never been tested.

If you decide to try the program out on a larger network, please let me know how it goes. I can be reached at 76244,120 on CompuServe and on MCI Mail at “DWINER”.

If it worked, let me know how many Macs you are using and in what kind of configuration. If it didn't work, let me know what the symptoms are.

## *How to respect the copyright of this program*

This program is copyrighted, but you may use it and distribute it at no cost. I learned a lot about AppleTalk while writing this program, that was reward enough for something that took just a couple of days to hack together. However, if you choose to distribute the program, please do so with this instruction file, and do not modify the program or its messages in any way. **One other thing: you may not charge anything for the use of ClockSynch.**

## *What Changed in Build 4 (June 11, 1988)*

Not much. I just got some reports that the program wasn't initializing properly on some machines. The problem, if you're technical enough and interested, was a missing 'atpl' resource. The fix -- ClockSynch now includes the resource.

## *What Changed in Build 5 (June 16, 1988)*

A new command was added -- Quit All ClockSynchs. When you select this command, a message goes out to all other copies of ClockSynch on the network telling them to quit immediately. After you've synchronized all the clocks, why should you have to walk around the office quitting from all the copies of ClockSynch? You shouldn't -- that's why we have the Quit All ClockSynchs command.

Now, if we could arrange it so that it automatically started up from one workstation -- that would be the ultimate in convenience and efficiency. It's certainly possible, using a small INIT resource that's loaded when each machine boots. Unfortunately, I don't know enough about INITs to make one myself, but if someone wants to team up and provide enough code to do the INIT part, I'd be happy to do the network part.

June 16, 1988 – ClockSynch Program  
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## *How about a little discussion on CompuServe?*

The program has been downloaded over a hundred times from DL4 in CompuServe's MACPRO Forum. How about a message or two from people who downloaded the program? Does it work? Any suggestions or comments?

I'm also thinking about releasing the source code to the program. Any interest?

Hope you (still) like it!

Dave Winer

PS: ClockSynch is written entirely in THINK's LightspeedC.